WHAT DOES IT MEAN TO YOU WHEN YOU SAY "IT WORKS"? USER PERSPECTIVES ON STIMULANT AGONIST THERAPY (STAT)

by

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Abstract

Since the 2016 declaration of the overdose crisis in British Columbia (BC), over 16,000 people have died from using the toxic drug supply (BC Coroners Service, 2025). Although the driver of this public health crisis is illicit fentanyl, users of drugs beyond opioids are impacted. For instance, after fentanyl, the second and third-most detected substances within posthumous toxicology testing are cocaine and methamphetamine. These fatality cases are likely either users of both illicit opioids and stimulants who succumbed to an unpredictable dose of the former substance, or opioid-naive stimulant users unintentionally exposed to fentanyl cross-contamination. In either case, at least half of those dying from unregulated drugs are using stimulants. Because of this, in order to reduce exposure to the toxic drug supply, pharmacological alternatives to stimulants should be explored.

One potential intervention is stimulant agonist therapy (STAT): pharmaceutical stimulants commonly prescribed to treat attention deficit hyperactivity disorder (ADHD) used to replace or control the use of illicit stimulants. STAT options were included in provincial prescribed safer supply (PSS) guidelines first released in 2020. Presently, less than 10% of PSS patients receive stimulants. Prescribers have decried a lack of evidence, citing meta-reviews for randomized clinical trials (RCTs) for stimulant replacement therapy (SRT) that show limited efficacy. However, not only do these meta-reviews include RCTs for a number of non-stimulant medications, but are the tested outcomes of these RCTs congruent with lived successes of STAT patients?

To explore this question, ten STAT patients throughout BC were recruited between October 2021 and February 2022 to participate in remote semi-structured qualitative

interviews that focused on what it meant to them for STAT “to work”. For most participants, using STAT in preferred formulation, dosage, and route of administration resulted in significant increases in quality of life, including functionality, mental wellness, connection, and paid employment, as well as reduced illicit stimulant use. Notably, despite these changes, almost none would be successful RCT participants, as even occasional illicit stimulant use would disqualify them according to the primary measure of evaluation: drug cessation within the study period.

This research reveals patterns and strategies of successful STAT use that contradict the design of SRT RCTs and challenge their relevancy as evidence against STAT, as well as interrogates the methodological appropriateness of RCTs to evaluate the effectiveness of STAT at all.

Keywords: stimulants, substance use, harm reduction, addiction treatment, toxic drug crisis, prescribed safer supply

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Glossary

Agonist: A pharmaceutical substance that has the same psychoactive properties as the illicit substance being substituted: "An 'agonist' medication would have a similar pharmacologic and behavioral effect as the drug of abuse, providing relief of craving and other symptoms of acute and protracted withdrawal, which are main factors responsible for the maintenance of drug use and for relapse following periods of abstinence" (Tardelli et al. 2020, p. 2234).

Amphetamine: A psychoactive drug that stimulates the central nervous system (DrugBank, n.d.).

Benzodiazepine: A chemical class of drugs typically prescribed for sedative (anxiety-reducing) and hypnotic (sleep-inducing) purposes. Examples include Ativan™ (lorazepam) and Xanax™ (alprazolam) (Hart et al., 2019). A common adulterant in the current illicit fentanyl supply in BC (Russell et al., 2023). Often referred to as *benzos.*

Benzodope: Local vernacular referring to "synthetic benzodiazepine-laced opioid" (Russell et al., 2023, p.1); a smokable or injectable substance in the British Columbia underground drug market that is a combination of illicit fentanyl and usually a high-dose novel benzodiazepine analogue that has never been approved for human consumption, such as etizolam (Russell et al., 2023) or bromazolam (BC Coroners Service, 2025).

Ceiling Effect: A point of maximum effect of a psychoactive substance (often a pharmaceutical medication) at which any increase in dosage does not increase its effect (Baker, 2004).

Cocaine: A powerful psychoactive drug that stimulates the central nervous system and is normally accessed through the illicit drug market in Canada. Its effect is increased pleasure and alertness and decreased sleep and appetite. Normally insufflated or injected, but called **crack** when in smokable format (Hart et al., 2019).

Compassion Club: A members-only non-profit program that allows for the sale and distribution of illicit substances, with measures taken to mitigate potential harms of the unregulated supply (Nyx & Kalicum, 2024; Starr et al., 2023).

Crack: See **Cocaine**.

Crystal meth: See **Methamphetamine**.

Dextroamphetamine: A pharmaceutical stimulant and sympathomimetic agent usually prescribed for the treatment of attention deficit hyperactivity disorder (ADHD) or narcolepsy that is included in provincial guidelines as an alternative for illicit stimulants such as methamphetamine and cocaine (BCCSU, 2020a; Drugbank, n.d.).

Detox An in-patient facility where those with chemical dependencies to psychoactive

substances can receive medically managed withdrawal care but can also refer to the process of withdrawing a psychoactive substance, sometimes not by choice but due to a loss of access to that substance (Hart et al., 2019): Verb: The process of experiencing **withdrawal.**

Dilaudid: See **hydromorphone.**

"Down": A term commonly used in the drug market vernacular of BC that refers to illicit opioids. Once referring to heroin, it now refers to a smokable or injectable illicit substance containing the opioid fentanyl, often other adulterants such as high-dose designer benzodiazepines or a tranquilizer (Kalicum et al., 2024; Russell et al., 2023).

Drug User Liberation Front (DULF): A non-profit organization based in Vancouver's Downtown Eastside that ran a compassion club with 47 members who could purchase, at-cost, tested and labelled doses of heroin, cocaine, and methamphetamine between August 2022 and October 2023 (Nyx & Kalicum, 2024). The compassion club was approved by the Vancouver city council (Kulkarni, 2021), reduced overdoses among its members (Kalicum et al., 2024), but was raided by the Vancouver Police Department and its founders are facing criminal charges (Greer, 2024).

Fentanyl: A high-potency opioid analgesia commonly used in anesthesia; within the last decade, has become a frequent and often-fatal contaminant in illegal drugs (Drugbank, n.d.-c). Has completely replaced the underground heroin supply in BC and is the primary driver of the province's toxic drug crisis (BC Coroners Service, 2025).

Heroin: "Diacetylmorphine, a potent derivative of morphine" (Hart et al., 2019, p. GL-2). Once was the most common illicit opioid used in BC and was first adulterated with then replaced by fentanyl (Lupick, 2017).

Heroin-Assisted Treatment (HAT): prescribed pharmaceutical heroin, usually administered under supervision. Available to about 300 patients with opioid use disorder in BC (Howell, 2020; McNair et al., 2023; NAOMI Patients Association, & Boyd, 2012).

High Affinity: A property of drugs that allows them to bind strongly to the target receptors, which blocks other drugs in that chemical class with less affinity from binding to that receptor, reducing the effect of the drugs with lower affinity (Hart et al., 2019).

Hydromorphone: A semi-synthetic opioid agonist prescribed and used for analgesic (pain-killing) purposes (Hart et al., 2019). Used successfully in clinical trials as a replacement for heroin (NAOMI Patients & Boyd, 2012). Included in provincial guidelines as a pharmaceutical alternative for illicit opioids; manufactured under the brand name Dilaudid (BCCSU, 2020a).

Insufflate (verb) / Insufflation (noun): A mode of consumption for psychoactive substances referring to "snorting," as in consuming through the nasal passages (BC Coroners Service, 2025).

Methadone: A synthetic opioid with a very long half-life, extending their effects (Hart et al., 2019, p. GL-3). The first pharmaceutical opioid used for opioid agonist therapy (OAT) (Mulla & MacDonald, 2007).

Methamphetamine: A highly potent and cheaply produced amphetamine with long-lasting effects, primarily available in illicit form. It can be smoked, snorted, or injected, but is also available pharmaceutically in the United States as Desoxyn (Hart et al., 2019). Also called crystal meth or, locally, **"side."**

Methylphenidate: "(Ritalin); a stimulant used in treating ADHD" (Hart et al., G-3). A pharmaceutical stimulant included in provincial guidelines as an alternative for illicit stimulants such as methamphetamine and cocaine (BCCSU, 2020a).

Naloxone (Narcan™): An opioid antagonist drug, meaning it removes or block opioids from the opioid receptors, quickly reversing its effects. Used to reverse opioid overdoses (Hart et al., 2019).

Opioid: A substance obtained from opium—such as morphine and codeine— or a synthetic compound that mimics the effects of opioids–such as oxycodone (Hart et al., 2019, p. GL-3).

Opioid Agonist Therapy (OAT): An evidence-based pharmacological treatment for opioid addiction that helps manage withdrawal symptoms and reduce cravings for other opioid substances like heroin, oxycodone, hydromorphone (Dilaudid), fentanyl, and Percocet. OAT medication choices are generally long-acting, to reduce the frequency of needed doses, and include methadone (Methadose); buprenorphine (Suboxone); or slow-release oral morphine (Kadian). OAT has been shown to help individuals with opioid dependency stabilize their lives and minimize the risks associated with their drug use. (CAMH, 2016).

Opioid Overdose: A phenomenon that occurs when the body contains an excessive amount of opioids, or a mix of opioids and other substances, leading to a lack of response to stimuli and/or insufficient breathing. This happens because opioids bind to certain receptors that also regulate the body's breathing process. Can lead to death if the overdose is not reversed with the opioid antagonist naloxone (NHRC, 2024).

Overamp: "An acute adverse event related to a high dose of stimulant use relative to an individual's tolerance" (Mansoor et al., 2022, p. 2)

Overdose prevention site (OPS): A legal designation for a low-barrier supervised consumption site operating within BC requiring the authorization of a local medical health officer (BC Coroners Service, 2025). This designation allows for an easier process than the traditional application to Health Canada for a supervised consumption site exemption (Lupick, 2017).

Overdose: An event in which the body is overwhelmed by a harmful amount of a single drug

or a combination of drugs (NHRC, 2024). Usually associated with **opioid overdose**.

Peer: An individual who uses their lived experience and knowledge of past or present substance use to guide and inform their professional practice and who is regarded as an expert based on their experience; sometimes also called PWLLE: people with lived/living experience (BCCDC, 2018).

Pharmaceutical Alternatives: See **Prescribed Safer Supply (PSS)**.

Prescribed safer supply (PSS): A legally authorized and regulated distribution of substances that alter the mind and body, which were previously only available through the illegal drug market (CAPUD, 2019). PSS is the medicalized vein of safer supply, sometimes referred to as pharmaceutical alternatives (Slaunwhite et al., 2024). Provincial clinical guidelines for PSS were released by the British Columbia Centre for Substance Use (BCCSU) in 2020.

PWUD: an acronym for "people who use drugs."

Risk Mitigation Guidelines (RMG): A document released by the BCCSU in 2020 comprising guidelines for pharmaceutical alternatives for opioids, stimulants, as well as nicotine, benzodiazepines, and alcohol, in order to assist people with dependencies to illicit psychoactive substances to adhere to provincial health orders during the COVID-19 pandemic (BCCSU, 2020a).

Side: Local vernacular term for methamphetamine (Xavier et al., 2023).

Stimulant: A category of psychoactive substances that excite the body's central nervous system (Hart et al., 2019).**Stimulant Agonist Therapy (STAT)**: A term created by Alex Betsos, drug policy researcher and friend of the thesis author, to refer to the use of pharmaceutical stimulant medications primarily developed for the treatment of ADHD used to alleviate withdrawal and craving symptoms associated with prolonged use of illicit stimulants; the stimulant counterpart to opioid agonist therapy (OAT).

Taper: A medical process of slowly decreasing the dose of a medication to either lower or stop its use, typically aimed at preventing or minimizing withdrawal symptoms that occur due to the body's adaptation to the drug (Hart et al., 2019).

Titrate: The process of gradually adjusting the dosage of a medication—usually a cautious, paced increase while starting a psychoactive substance such as OAT or STAT—to achieve the optimal therapeutic effect while minimizing the risk of negative side effects. (Maxwell, 2013).

Toxic Drug Crisis: An epidemic of overdoses and deaths caused by the adulteration of the illegal drug supply with novel synthetic analogues of opioids, benzodiazepines, and other psychoactive substances with sedative properties, making the drug supply highly variable and

its use very unpredictable (Fischer & Robinson, 2023; Ivsins et al., 2020).

Urinary Drug Screening (UDS): The primary method clinicians use for measuring the absence or presence of a psychoactive substance (Bhatt et al., 2016; Castells et al., 2016; Hart et al., 2019; Tardelli et al., 2020).

Withdrawal: The process of detoxification from a psychoactive substance after a period of sustained use (Hart et al., 2019). Also referred to as **detox.**

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Dedication

This thesis is dedicated to the memory of everyone we've lost to the drug war, both from the toxic drug supply and the pervasive stigma and stereotypes about drug users that block access to timely medical care. In particular, I dedicate my work to two separate supportive and loving figures in my life whom I lost during my time doing this research and deeply miss: Travis Cross (1983-2020), my stepbrother, best friend, and mentor, and Andy Vandal (1973-2023), my colleague, boyfriend, and partner.

Chapter 1: Introduction

Background

As of 2025 in British Columbia (BC), we are entering the tenth year of an epidemic of deaths caused by toxic drugs, which is currently the leading cause of death for people aged 10–59 in the province (BC Coroners Service, 2023). Over the past decade, over 16,000 people in BC have died from unregulated drug supply and it continues to kill an average of five people every day (BC Coroners Service, 2025).

The **toxic drug crisis** disproportionately impacts remote, rural, and First Nations communities. While the provincial death rate from illicit drugs in 2024 was 41 deaths per 100,000 persons, that rate is much higher amongst Northern, remote, and First Nations communities. Prince George, the northern city where the main campus of the University of Northern British Columbia (UNBC) is located, has the highest urban Indigenous population in the province (Statistics Canada, 2022) as well as an **overdose** death rate of 115 per 100,000 (BC Coroners Service, 2025). First Nations people are five times more likely to die from toxic drugs than non-First Nations people (FNHA, 2024). Overall, the Northern Health authority region has the highest health authority overdose death rate in the province: 71 per 100,000 (BC Coroners Service, 2025). This is nearly twice the rate of the Vancouver Coastal Health Authority, which is 44.4 per 100,000 (BC Coroners Service, 2025).

A toxic drug crisis means the unregulated, illicit, underground drug supply is poisoned, either by unpredictable ingredients, potencies, or both (BCCDC, 2025; BC Coroners Service, 2023; Burton et al., 2022; CAPUD, 2019; FNHA, 2017; Fischer, 2023; Ivsins et al., 2022; Slaunwhite et al., 2024). To put it more simply, the drugs that people buy illegally in BC are often laced with drugs the buyer did not intend to consume, or are much

stronger than expected. When this involves very high doses of **opioids** (the painkiller drug—e.g. **heroin, fentanyl**, codeine, morphine, oxycodone) or **benzodiazepines** (the relaxation/sleep drug—e.g. Ativan, Valium, or Xanax), this might cause someone to stop breathing, depending on their tolerance to that drug (Hart et al., 2027). An **overdose** can be reversed with oxygen or **Naloxone,** a drug that blocks opioids from accessing the brain's receptors, but only if someone is present to administer it (Hanson et al., 2020). However, if someone is consuming toxic drugs in isolation, either because they are alone at home, or hiding their drug use from shelter or housing staff, police, or bylaw officers, they will likely die if no one is able to respond in time (Hanson et al., 2020; Wojcicki, 2019). It is rare for someone to survive more than ten minutes without oxygen (Spinal Cord Team, 2020). An estimated 225,000 people in BC use illicit drugs (BC Coroners Service Death Review Panel, 2023), which equates to 4% of the province. This means that 1 in 25 of us is at risk of being poisoned and killed by illegal drugs.

BC's toxic drug crisis is sometimes erroneously referred to as an opioid crisis (Green, 2024), which is unsurprising given that the primary and most common contributor to drug-related death is fentanyl, which is a very strong synthetic opioid that has been detected in 85% of drug-related deaths tested toxicologically since 2020 (BC Coroners Service, 2025). When overdoses deaths became an epidemic in 2016, this was mostly caused by fentanyl being cut into the street heroin supply (FNHA, 2016). Fentanyl was also showing up in counterfeit pills pressed to mimic pharmaceutical opioids like Oxycontin™, as well as benzodiazepines such as Xanax™ (Laanela & Merali, 2016). Additionally, people were experiencing fentanyl overdoses when consuming **stimulant** drugs like **cocaine** (Petrescu, 2017). Almost a decade later, fentanyl has completely replaced heroin (Kalicum et al., 2024;

Nyx et al., 2024). Once an adulterant itself, fentanyl is currently the primary sought-out opioid sold on the street in BC, but is now often adulterated by other substances, usually high-dose designer benzodiazepines that were never intended for human consumption (Russell et al., 2023). So, while opioids are the most affected illicit drug and fentanyl, an opioid, is the most common drug detected amongst drug toxicity deaths, to call it an "opioid crisis" invisibilizes that users of other types of drugs are impacted and that other classes of drugs are now being cut into opioids. Moreover, it is not the opioids per se that are causing so many sudden deaths—it is that many types of drugs, including opioids, are often sold at toxically high doses or contain an unpredictable ingredient that can poison its user (Fischer, 2023; Ivsins et al., 2020). For these reasons, this epidemic of deaths resulting from using the illicit drug supply is more accurately characterized as a toxic drug crisis.

While there are certainly risks associated with long-term or excessive use of pharmacological replacements for illicit drugs (Bahji et al., 2023), research shows that making these available would be an effective way to immediately reduce the onslaught of sudden deaths caused by unpredictable and unregulated drugs (Brothers et al., 2022; Ivsins et al., 2020; Ledlie et al., 2024; Slaunwhite et al., 2024). However, replacement interventions have disproportionately focused on opioids (Alexander & Tsou, 2001; Fleming et al., 2020), which fails to address fatalities among those dying while using other substances, particularly drugs such as **crack**, cocaine, **amphetamine,** and **methamphetamine**. Stimulants are a class of drugs that increase activity in the central nervous system, causing alertness and wakefulness (Hart et al., 2017). In theory, stimulant replacement medications for those with an addiction to illicit stimulants have been available as part of the **prescribed safer supply** (PSS) framework, a type of prescribing that has gained much traction in Canada since the

beginning of the COVID-19 pandemic, when service sites offering PSS quadrupled from 21 in March 2020 to 81 just two months later (Glegg et al., 2022). While there are locations throughout the country, the majority of these sites (70%) are in BC (Glegg et al., 2022).

PSS medications prescribed as alternatives to illicit opioids, such as **hydromorphone,** are a national controversy (Michaud et al., 2024) and were a hot-button issue of the most recent BC Provincial Election (Rustad, 2024), despite evidence that they greatly reduce the risk of dying among recipients (Slaunwhite et al., 2024), as well as non-fatal overdoses and hospitalizations (Ledlie et al., 2024). Stimulant options, however, have remained largely outside the public discourse. The replacement stimulant options in the provincial guidelines are pharmaceutical stimulants typically prescribed for ADHD, such as **methylphenidate** (Ritalin) and **dextroamphetamine** (Dexedrine). For this purpose, such medications are intended to help people reduce or replace their use of stronger, more dangerous, and potentially contaminated unregulated stimulant drugs (Alexander & Tsou, 2001; BCCSU, 2020a; BCCSU, 2020b; Bhatt et al., 2016; Castells et al., 2016; Mulla & McPherson, 2007).

Terminology Choice

While the medications within the ***Risk Mitigation Guidelines*** document published by the BCCSU (2020a) are commonly referred to as ***prescribed safer supply*** (PSS) (Glegg et al., 2022) and the vernacular I used in my research recruitment material was "stimulant safer supply" (See Appendices B-E), as I wrote the final thesis from this research, I chose to primarily refer to this type of stimulant replacement prescribing as **stimulant agonist therapy (STAT)** for several reasons. First, while different opioid options of PSS may be closer in effect to the desired illicit version, the stimulant options are typically much milder

and longer-acting (Xavier et al., 2023), making such prescribing more akin to a stimulant version of **opioid agonist therapy** (OAT) (an umbrella term for opioid replacement interventions such as **methadone** and **buprenorphine,** which I explain in more detail in the next chapter). Second, while I believe that STAT medications can reduce overdose deaths and improve the lives of those who take them (much like both OAT and opioid PSS options), I think that using the terminology of "safe(r) supply" for **pharmaceutical alternatives** detracts from the importance of providing an actual safer supply: regulated, predictable, and non-adulterated versions of the still-illegal psychoactive substances people die from using (CAPUD, 2019). Third, public understandings of the stimulant section of the RMG (BCCSU, 2020a) have been subsumed by the publicity around the efforts of the Drug User Liberation Front (DULF), wherein for just over a year, a closed group of 47 DTES residents were able to access a community-regulated safer supply compassion club at which members could purchase pure and tested amounts of stimulants such as cocaine and meth (as well as heroin) (Kalicum et al., 2024; Nyx & Kalicum, 2024). This, combined with perhaps some strategic disinformation around the specificities of PSS (Michaud et al., 2024), has led to people believing that stimulants being included in the PSS guidelines meant that the government is supplying people with free crack, cocaine, and methamphetamine.

Such disinformation about stimulant RMG options has been communicated by several politicians and parties on the right side of the political spectrum as a way to criticize BC's approach to the toxic drug crisis. On the social media platform formerly known as Twitter, the BC Conservative Party wrote that "The BC NDP… have promoted the so-called 'safe supply' of deadly drugs. Let's be clear - there is no such thing as a 'safe' supply of crack" (Appendix A). On the same platform, the Federal Conservative Party leader Pierre Poilievre

claimed that “The radical NDP/Liberal agenda of flooding the streets with heroin, fentanyl, & crack has more than tripled overdose deaths in BC” (Appendix A). In 2021, members of the Alberta UCP government, which have often juxtaposed their recovery-focused drug policies against BC’s harm reduction focus (Boyd & Mosleh, 2022), proposed having a committee to examine the evidence around safe supply; then-Minister of Mental Health and Addictions Mike Ellis told CBC News that this was to address “concerns raised by medical professionals regarding a lack of evidence to support widespread government distribution of narcotic drugs like opioids, *cocaine, methamphetamine”* [emphasis mine] (Bellefontaine, 2021, para. 9). Indeed, the explicitly stated mandate of Alberta’s Select Special Committee to Examine Safe Supply was to examine “the concept of ‘safe supply’ defined as the provision of pharmaceutical opioids, heroin, **crystal methamphetamine,** cocaine or other substances to people who are addicted to or dependent on these substances” (Legislative Assembly of Alberta, 2022, para. 3). From these descriptions, it is evident that it is understood that for opioids, prescribed safer supply can exist in the form of a pharmaceutical alternative; however, this understanding has interestingly not been extended to stimulants.

This misunderstanding about the stimulant component of safer supply is not limited to politicians, however. It has been repeated by those in positions one might assume to have more integrity, such as journalists and academics. Daphne Bramham wrote in the Vancouver Sun that “[i]n June 2021, B.C. became the first jurisdiction in the world to offer free pharmaceutical grade [sic] heroin, benzodiazepines, methamphetamines, and alcohol to addicts by prescription but without the requirement that they be taken under medical supervision” (2022, para. 7). *The Financial Post* published an opinion column by Susan Martinuk, which claimed that in BC, “[t]he approach goes so far as to distribute drugs like

heroin and cocaine free of charge" (2024, para. 5). While misunderstandings among those outside the field may be understandable, they have even been echoed by scholars within the addictions and drug policy fields. Dr. Keith Humphreys of Stanford University, who served on the White House Office of National Drug Control Policy, wrote that "safe supply initiatives embrace a reduced need for health care professional consultation, supervision, and/or the need for a formal prescription to directly provide people who use drugs with pharmaceutical-grade medications including opioids, benzodiazepines, cocaine, and/or methamphetamine" (Roberts & Humphreys, 2023, p. 644). While this information may be correct in the context of community compassion clubs, the next sentence begins "[a]s an example, a recent safe supply proposal in Canada" and provides a reference to a Health Canada website listing federally funded PSS programs.

Even local researchers have reified this disinformation. Simon Fraser's Centre for Applied Research in Mental Health and Addiction was commissioned by Alberta's provincial government to write a report on the evidence for safer supply, which they relabel as *Public Supply of Addictive Drugs* (PSAD) *(*Moniruzzaman et al., 2022). In this, the authors write that "[t]he intervention and target population are defined as follows: The provision of pharmaceutical opioids, heroin, crystal methamphetamine, cocaine, or other substance" (p. 4). Stimulants, however, are then omitted from the scoping review section of the report. However, in a later section on possible adverse outcomes of PSS, or "PSAD," it includes that "[c]hronic cocaine and methamphetamine use result[s] in neurocognitive deficits and multiple psychiatric adverse events including psychotic disorders, mood, and anxiety disorders" (p. 28). To clarify, they are not discussing the illicit drug supply here, but rather the potential harms of regulated or prescribed supply.

To summarize, the stimulant arm of PSS has been largely ignored or mischaracterized to either suggest or explicitly say that the provincial guidelines or publicly funded programs include crack, cocaine, or meth. To be clear, research shows that a compassion club offering stimulants such as cocaine and meth (but not crack) at a reduced cost to its members was associated with reduced overdoses (Kalicum et al., 2024; Nyx & Kalicum, 2024). This suggests that government-supplied free crack could actually also be an effective, life-saving policy for stimulant users. However, that is not the scope of the present research study. Given this confusion about what "stimulant safer supply" actually is, combined with the politicization and backlash against safer supply (see Appendix A), using such terminology within the title and abstract of this thesis has the possibility of making me a target of harassment, even though I have not researched what the opponents of "prescribed stimulant safer supply" might imagine or assume I have researched (Bramham, 2022; Roberts & Humphreys, 2023; Martinuk, 2024; Moniruzzaman et al., 2022). This might put me at risk of being expected to answer for a research topic that is not actually my area of expertise. The present research project explores how people who largely identify as having a problematic relationship with those stronger illicit stimulants have used milder pharmaceutical ADHD treatment medication to mediate or control their relationship with stronger stimulants. This is why I am choosing to use the vernacular of stimulant agonist therapy (STAT) for the use of psychostimulant medication as an alternative to illicit stimulants in this thesis, while I do continue to use prescribed safer supply (PSS) when discussing prescribed opioid alternatives. As well, because STAT guidelines were released as part of the clinical guidelines that are often referred to PSS, which I describe below, and STAT options were largely rolled out in clinics that also offered controversial PSS options for opioids, the distinction between the

two categories is very blurry.

Risk Mitigation Guidelines

As mentioned above, STAT has theoretically been available across BC since March 2020, when the *Risk Mitigation Guidelines* (RMG) document was released by the British Columbia Centre for Substance Use (BCCSU, 2020a) in response to rapid social changes intended to reduce the spread of the COVID-19 virus in the early days of the pandemic. The pandemic, and its restrictions, had three serious implications for users of the illicit drug supply, who were already at increased risk of overdose events and deaths due to the ongoing toxic drug crisis that began in 2016 (BC Coroners Service, 2023; FNHA, 2017). First, the closing of social services and public health orders to remain at home increased the chances of someone dying from an **overdose,** because it was more likely for someone to use alone and unsupervised, with no one present to administer naloxone or oxygen to reverse the overdose or call emergency services (Fischer, 2023; Wojcicki, 2019). Second, dependency on illicit drugs and the potentially serious health risks from withdrawal would potentially impede someone from remaining in quarantine, isolation, or lockdown, increasing the chances they might contract COVID-19 or spread it in their community (BCCSU, 2020a). Third, border closures increased the toxicity and unpredictability of the drug supply, making it even more dangerous than it was pre-pandemic (Foreman-Mackey et al., 2023). The RMG provided clinical guidelines for physicians and nurse practitioners to prescribe controlled pharmaceuticals legally as alternatives to toxic and unregulated drugs to people who fit the criteria of having a substance use disorder and being at risk of infection or exposure to the COVID-19 virus (BCCSU, 2020a). The guidelines comprise instructions for prescribing

replacements for both illicit opioids and illicit stimulants[1]. However, many PSS clinics do not offer stimulant options. Out of the 81 Canadian service sites that offered PSS in 2020, 56 offered stimulants and 84% of those sites were located in BC (Glegg et al., 2022). Additionally, particularly in BC, a disproportionately small number of PSS patients receive them. As of December 2024, 3892 were on any type of PSS: 3665 on opioids and 373 on stimulants (BCCDC, 2025).

Research Purpose

Interventions for stimulants warrant attention in the province. Stimulant drugs are the second and third-most detected drugs in toxicology testing amongst drug-related deaths that have occurred since 2020: cocaine and methamphetamine were present in 47% and 42% of deaths, respectively (BC Coroners Service, 2025). While these are not necessarily discrete categories and there is some overlap, we can estimate that at least about half of the people who die from toxic drugs in the province are stimulant users. This is not to suggest that the crisis of overdose deaths is driven by cocaine or methamphetamine—although it is certainly possible to die from overuse of either drug, and long-term use of highly potent stimulants increases the risk of cardiac events (Hart et al., 2017; Mansoor et al., 2022). Rather, these statistics suggest that people who are dying from the toxic drug supply are often using stimulants, either additionally to or independently of opioids. Those in the latter group are particularly vulnerable to toxic drug poisoning because of their opioid naivety, unlike those

[1] As well as pharmaceutical benzodiazepines and medications to help alcohol use disorder (BSSCU, 2020a).

in the former group who survived the first waves of the toxic drug crisis, which increased their opioid tolerance as they continued using while the supply evolved from heroin to fentanyl and became stronger and more toxic. For those who remain opioid-naive, trace amounts of fentanyl cross-contamination on packaging and scales can cause an overdose event or death (Fleming et al., 2020; Humphreys et al., 2022; McNeil et al., 2022; Palis et al., 2022). Those in the former group—polydrug users—remain vulnerable to dying from the rapidly changing opioid supply. Some may be struggling to remove themselves from the toxic drug supply or to stop purchasing illicit drugs, despite engaging with treatments for opioid dependence, such as opioid agonist therapies (OAT) or opioid PSS, because of a lack of a widely available equivalent available pharmaceutical option for stimulants (Fleming et al., 2020). Population-based research in the United States (US) around the early part of the century found that 60% of methadone patients were also cocaine users, and this variable made them three times more likely to drop out of OAT treatment in the first month (Demaria et al., 2000). Additionally, the use of methamphetamines has risen amongst opioid users to counteract the sedating properties of new benzodiazepine analogues in the drug supply, increasing the number of people dependent on stimulants (Fleming et al., 2020). Finding treatment options for stimulants is integral in order to help dependent users separate themselves from the toxic unregulated drug supply when they wish to do so, whether or not they use stimulants concurrently with opioids.

Furthermore, regardless of the toxicity of the unregulated drug supply, some stimulant users may have a substance dependency they feel unable to control, or simply may be seeking something less potent to meet their needs. Illicit stimulant addiction is associated with higher rates of infectious disease (Palis & MacDonald, 2024), and it is estimated that

over 40% of methamphetamine users have experienced psychosis (Bahji et al., 2023). When comparing success rates of pharmacology-assisted treatment for opioid addiction programs versus abstinence-based inpatient rehabilitation, the pharmacology pathways decrease overdose death risk (Wakeman et al., 2020), whereas inpatient treatment programs that do not offer pharmacological options can actually increase the risk of overdose death (Ravndal & Amundsen, 2010). Opioid addiction and use differ from stimulants in that even in the absence of today's toxic drug crisis, when an opioid user takes their usual dose again after a period of unmedicated abstinence, consuming that dose can cause an opioid overdose event or death (Sordo et al., 2017; Wakeman et al., 2020). Stimulant tolerance, in comparison, does not fluctuate as much, making users less vulnerable to dying from using a dose that their body cannot tolerate (Mansoor et al., 2022). However, these comparative studies show that patients with substance use disorder are less likely to use an illicit opioid when given a medication that reduces craving and withdrawal symptoms. A similar study cannot be done on stimulant treatment programs because in the absence of approved pharmacological treatments for stimulant addiction, inpatient treatment centres are not offering this. A recent population-based retrospective cohort study on recipients of RMG medications found that those receiving stimulants showed reductions in acute medical care need, but a low number of patients receiving them made it difficult for these outcomes to reach statistical significance (Slaunwhite et al., 2024).

A possible reason for a limited number of stimulant patients under the RMG framework is that prescribers say that the research shows that they simply do not work (Bahji et al., 2023). This concern was shared by so many prescribers in BC, in fact, that it was addressed by the BCCSU in an FAQ document released later that year as a supplement

to the RMG (BCCSU, 2020b). Indeed, the majority of randomized clinical trials (RCTs) on stimulant replacement therapy—and the meta-analyses and systematic review summarizing the findings of such trials—have concluded that there is little evidence to show it "works", and that the evidence available is lacking quality (BCCSU, 2020b). However, stimulant replacement therapy (SRT) is not quite the same as STAT because these meta-reviews more often than not include RCTs conducted on medications that are not necessarily stimulants, but have mild psychostimulant effects—for example, the antidepressant bupropion (Bhatt et al., 2016; Castells et al., 2016). Second, as harm reduction advocates have argued, the stimulants being tested are at dosages too low to meet the dependency needs of illicit stimulant users (Alexander & Tsou, 2001; Fleming et al., 2020; Mulla & McPherson, 2007). Third—and the crux of why I chose to research this topic—these RCTs are usually testing for two particular research outcomes. First, are the provided pharmaceutical stimulants statistically associated with treatment retention (the clinical trial itself, essentially)? Second, are the provided pharmaceutical stimulants statistically associated with complete drug cessation within the study period? These outcomes felt very incongruent with the goals of the RMG: allowing drug users to access medication that will prevent craving and withdrawal in order to allow for quarantining, social distancing, and adherence to provincial health orders, as well as decreasing use of the illicit street drug supply and reducing overdose events and deaths in a toxic drug crisis (BCCSU, 2020a; BCCSU, 2020b).

Research Question

What is missing from the above binary are the perspectives of the users themselves—how do the users of the medications define or understand them as "working" in the context of their lives, particularly their illicit drug use? My aim was to highlight the perspectives of my

participants and *their* markers of medication success. I asked them: What does it mean to you for STAT to work? What are the signs that it is working? How has it changed your health? What about your quality of life? When and how do you use them? The research question for this project is: "What are user perspectives on stimulant agonist therapy (STAT) and what it means for STAT to work?"

Positionality Statement

My relationship to this topic has evolved throughout the process of proposing, researching, and writing this thesis. In the spring 2023 version of this introduction, I wrote that my understanding and interest in this topic were informed by my positionality and lived experience as a frontline support worker in the harm reduction and substance use sector, in which I had worked since the genesis of the overdose crisis in 2016. While employed as a housing support worker in Downtown Eastside (DTES) between 2016 and 2018, the most significant changes and successes I witnessed were among clients accepted into the Crosstown Clinic's prescribed heroin program. This fueled an interest in, and vocal support for, opioid safer supply. In 2019, I relocated to Prince George to begin graduate studies, and this was where I had the privilege to be employed with two different grassroots organizations, where I worked alongside current **PWLLE** (people with lived or living experience) in policy, research, housing, outreach, and overdose prevention sites. These experiences culminated in close relationships with people currently or recently dependent on the toxic unregulated drug supply, leading me to witness the arduous and often frustrating journey of accessing substance use services such as detox (in-patient withdrawal management), OAT, culturally safe treatment and rehab, and of course, both opioid and stimulant PSS. One of those people was my now-late partner, Andy, who had weaned

himself off street **benzodope** by switching over to diverted opioid safer supply upon my request in 2023 after he experienced an overdose in our home.[2]

My interest in STAT was first piqued in spring 2020, when the COVID-19 pandemic began and the RMG was released. I was surprised to see ADHD medication options included for stimulants, some of which I had previously taken as part of pharmacological treatment for ADHD. I had heard of ADHD medications *causing* stimulant addiction, but had never considered their potential as an offramp from illicit stimulant use. At the time, I was in a lockdown bubble with someone living with bipolar disorder who was experiencing a manic episode involving heavy cocaine use. I had witnessed these binges before, but this one was even worse, especially because access to any support services or even other households was abruptly cut off. He was spending hundreds of dollars a day on cocaine. He was having psychosis and seizures. I had moved out of our shared apartment but came back so I could help him get into the **detox** unit at the hospital, as I had done before, intending to go back to my new home two weeks after he left for his camp job. I was genuinely afraid he would die. However, he was asked to leave detox within a day for breaking new rules implemented to reduce COVID-19 spread, and then the chaos continued.

Then, one night, inspired by the guidelines, instead of buying a new bag of cocaine, he **insufflated** 14 Ritalin™ 10mg pills. "I can't believe it," he told me. "I don't want to buy cocaine. I'm free." And the chaos became very calm for a while.

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[2] He was successful in doing so but then died of an aneurysm, the symptoms of which were mistaken for opioid withdrawal.

Now, as I come back to this thesis, I have personal experience with RMG prescriptions in a way I never would have imagined when proposing the topic: I am now an opioid PSS patient, despite never feeling particularly drawn to opioids before in my life or ever using any drug regularly besides cannabis and caffeine. My relationship to opioids rapidly changed at age 39 when I began consuming opioid pills regularly after my partner Andy suddenly died in our home in June 2023. Within six weeks of his death, I was presenting signs of dependency and withdrawal. Home detoxes off opioids would not last long or would soon result in developing a dependency to another substance. So, I did what I would recommend to any client or loved one in the same situation: I went on OAT. Months later, I resumed using pills. As this put me at risk of toxic drug poisoning from pressed counterfeit tablets, I was provided with an opioid PSS prescription, on top of the OAT medication.

So now I understand replacement medications in a way I did not before. The psychoactive substance has a function: it has a calming function for co-existing with some very complex trauma and loss. But I do not want to use excessively, I do not want to give up my life for opioids, and I am not seeking the most extreme rush imaginable. Having this prescription, I am able to focus on other things in my life because my brain is not screaming at me to go figure out where to buy pills. I am able to work, take care of myself and my dog, pay current market rent in a new home in a major city, and now even work on my thesis.

I am also diverting profits away from organized crime, and I deeply value that the criminality element has been removed from my experience. While I understand systematic reasons for engaging in criminal activity, I personally find the process of engaging with drug dealers extremely stressful and filled with the stressful expectation of speaking in riddles—

something I have never been good at. Although RMG medications are not free per se, they are covered for many recipients as part of Plan C (pharmaceutical coverage for people on social assistance) or Plan G (psychiatric medication coverage for people in financial need) (Province of BC, 2025) and for me, are mostly covered by my extended employment benefits. But having these substances provided through the pharmacy means avoiding inflated street prices, even without a coverage plan.

My relationship with replacement prescribing is deeply personal: I have seen it change the lives and enhance the safety of those I care about in times of crisis, including myself. This could understandably be perceived as causing a bias in favour of STAT and PSS in general. First, I would like to emphasize that the data for this research was collected, coded, and analyzed, and *Chapter 4: Findings* was drafted before I became a PSS patient myself. Second, as I outlined below in my *Chapter 3: Theory and Methods*, I used several strategies to ensure my data analysis was reliable and valid regardless of my preconceptions. Moreover, rather than seeing this level of bias as a hindrance to research quality, some qualitative theorists argue that prolonged exposure can actually enhance research validity (Rose & Johnson, 2020). Third, I am not attempting to prove if STAT works or not with this research; rather, through the synthesis of participants' interview data, I am suggesting that the way RCTs evaluate whether STAT 'works' often fails to reflect how users themselves understand it. As well, while I do have experience with STAT medications because of ADHD treatment, I am a recipient of opioid PSS. A premise of this research is that while interventions for opioid addiction are generally well-established and supported by research, those for stimulant addiction are missing from the public narrative and have less of an evidence base.

Research Gap

This research fills a gap in qualitative data on the perspective of patients who take prescribed stimulants to reduce or replace their use of illicit stimulants, specifically on the medications themselves. Since my initial proposal, one qualitative article on this subject has been published, although this study was conducted in order to garner feedback on a very specific pilot program at a pharmaceutical heroin clinic wherein the respondents were given witnessed doses of one formulation of prescribed stimulants, which were taken orally. In contrast, the present research study comprises interviews with people using pharmaceutical stimulants in more varied and flexible ways as a tool to improve their lives. Additionally, many of my participants were not concurrent opioid users. One major difference in substance use patterns of non-opioid stimulant users and polydrug users is that those in the former group may not necessarily use substances every day, whereas someone with an opioid dependency likely does. The inclusion of non-opioid users and the examination of patterns and strategies of use from outside a clinical context has allowed for the emergence of very divergent use patterns from my data, whereas in the prescribed heroin STAT study (Palis et al., 2021), participants were commenting on a schedule and regimen of STAT use imposed by the study.

Another strength of conducting non-clinical research is that some of the participants in the present study purchased their pharmaceutical stimulants illicitly. Some bought extra doses in order to supplement what they were already prescribed, and others relied entirely on purchasing diverted pills sold illegally. The value of this data is that it gives a snapshot of the spectrum of pharmaceutical stimulant doses that effectively allow patients to meet their goals

outside the constraints of clinical dosing regulations, which are often risk-averse. This is especially valuable when the goal is to promote a reduction of illicit stimulants which not only are much more potent than prescribed stimulants and thus have much higher risk of adverse effects, but also may be contaminated and potentially lethal. As well, many of the consumption methods amongst my participants would not be permitted in clinical studies. Some injected their medication, others snorted it, and two participants crushed and chewed their pills. This level of patient-centred perspective has been missing from the literature on stimulant replacement prescribing.

In my next chapter, I will provide a review of some of the clinical literature. I briefly discuss the history of replacement prescribing in the addiction medicine field and offer a more in-depth look at the research published on stimulants specifically, including some recent evaluations published on PSS and community regulated safer supply programs that included stimulants. Chapter 3 outlines the theoretical framework and methodology used for this research study, including recruitment, ethical considerations, data collection, and analysis. It also describes the safeguards I used to ensure the validity and reliability of the research. In *Chapter 4: Findings*, I first outline the demographics of the participant group, which medications and dosages they used, and the way in which they consumed their medication. I then explain my research findings, which include themes such as motivations for accessing STAT, use patterns, perceived benefits, and participants' critical feedback on both the RMG clinical guidelines and their experiences as STAT recipients. *Chapter 5: Discussion* looks at the discrepancies between my findings and those from the STAT RCTs and why the RCT format may not be appropriate for addiction treatment modalities. This chapter ends with implications of this research for social work practice.

Chapter 2: Literature Review

This review begins by exploring the development and implementation of addiction replacement medications, examining both opioid substitution therapies and emerging approaches to stimulant use. It then considers the growing advocacy for stimulant replacement options, highlighting key arguments for expanding access to such treatments, such as reducing the spread of blood-borne infections like human immunodeficiency virus HIV and reducing accidental opioid overdoses among stimulant users. Evaluations of prescribed safer supply programs that incorporate stimulant alternatives are reviewed, alongside recently published literature on an illicit substances **compassion club** offering stimulant options outside of traditional clinical models. Together, this literature provides the foundation for understanding the context, challenges, and potential of stimulant agonist therapy as a component of comprehensive substance use care.

Addiction Replacement Medications

Opioids

Replacement therapy to treat addiction is not a new concept, either globally or locally. Opioid agonist therapy (OAT) for instance, has been recognized as the most life-saving treatment for opioid use disorder (Sordo et al., 2017). In BC, a person is 3.4 times more likely to die if they stop their OAT medications than if they stay on them (Pearce et al.

2020).[3] The first OAT medication was methadone, an opioid **agonist** that was first developed in 1937 by German scientists who wanted a synthetic opioid source to treat pain without relying on the international poppy supply (Hart et al., 2017). After the war, researchers in North America realized methadone's long half-life—over 24 hours compared to about three for heroin (Mulla & McPherson, 2007)—was useful for treating heroin withdrawal, which led to the opening of the first-ever methadone maintenance clinic in Vancouver in 1963. Nine years later, in 1972, national guidelines for methadone prescribing were released which formalized and allowed for methadone maintenance treatment across the country (Mulla & MacPherson, 2007).

A second replacement therapy, buprenorphine (commonly known as Suboxone™) has been available for use as opioid replacement therapy in Canada since 2007 (Mulla & MacPherson, 2007). In the decade after its release, buprenorphine began usurping methadone as the first line of treatment in many regions due to its superior safety profile.[4] Buprenorphine has a **high affinity** for the opioid receptor, meaning it blocks other opioids from binding and reduces their effects. However, it is also a partial agonist, meaning it produces less of the opioid effect itself (Hart et al., 2019). It also has a **ceiling effect,** decreasing the chance of overdose occurring from overuse of the medication. Additionally, it is usually manufactured in a tablet or film format with naloxone added to deter injection use,

[3] This death risk was 2.1 times before the beginning of the toxic drug crisis (Pearce et al., 2020).
[4] In BC, buprenorphine became first-line treatment for OUD in 2016 but guidelines changed in 2023 to indicate that both options be presented to the patient

as the naloxone can precipitate withdrawal if injected (Hart et al., 2019; Sordo et al., 2017). Both of these features reduce the risk of overdose from buprenorphine itself. However, they also reduce its potency, making it less effective for people dependent on very strong opioids, such as fentanyl. As a result, it may be less successful at preventing overdose from other opioids in those cases. A 2017 meta-review pooled 19 studies with a combined total of 122,885 participants accessing OAT (Sordo et al., 2017). It showed significant reductions in overdose and all-cause mortality in those retained on their OAT medications but noted that retention was sometimes challenging, especially with buprenorphine.

There is another kind of opioid replacement therapy that has a less robust body of evidence, but the available evidence shows it has similar benefits to OAT, with a higher rate of retention: **heroin-assisted treatment (HAT)** (CAPUD, 2019; Fischer et al., 2007; McNair et al., 2023). Both the limited available evidence and availability are likely due to the difficulty of obtaining medical diacetylmorphine, both logistically and politically/lawfully (Fischer et al., 2007; Howell, 2020; McNair et al., 2023). In Canada, for instance, there is currently no licensed domestic producer and therefore the pharmaceutical version of heroin, diacetylmorphine, is imported from Europe (Howell, 2020). A recent HAT meta-review was only able to identify eight studies with a combined 2,331 participants (McNair et al., 2023). However, all these identified studies showed myriad positive outcomes, such as substantial reductions in illegal drug use and high rates of retention, particularly when compared to OAT. For instance, the Vancouver-based SALOME study, which evaluated both HAT and injectable **hydromorphone** treatments, had a retention rate of over 80%, which is particularly impressive considering all injections were required to be supervised. In comparison, patients in BC on OAT medications, which often include take-home doses, only

have a retention rate of about 35% after a year (PHO, 2017). An earlier Vancouver-based HAT study, NAOMI, showed similar effectiveness (Fischer et al., 2007). After the end of these HAT studies, participants fought for continued access to HAT, arguing that it was unethical to have their medications cut off, especially given the proven improvements in their lives (Boyd & Murray, 2017). This eventually led to the opening of a HAT clinic called Crosstown Clinic in Vancouver, where around 150 clients self-inject diacetylmorphine and another 36 are on other forms of unconventional OAT (Providence, 2022). A second clinic with comparable capacity has opened in Surrey (Howell, 2020). Although the availability of any prescription heroin was a huge success for the survivors of the NAOMI and SALOME trials, currently only 300 people out of an estimated 70,000 people in the Province with OUD are able to access this very effective and life-saving treatment. This speaks to how greatly caution and morality still guide opioid addiction treatment in the province, despite an ongoing deadly toxic drug crisis. As we look at the evidence and history of stimulant replacement medication, we can see a similar vein of cautiousness dictating policy, clinical practice, and the research surrounding both of those.

Stimulants

Compared to the evidence for opioid substitutes, the evidence base for any stimulant replacement therapy is certainly less robust. Regardless, local proponents for other forms of addiction substitution treatment have been calling for decades for the development of pharmaceutical alternatives to illicit stimulants. In the early 2000s, calls for stimulant-focused interventions emerged as a response to HIV outbreaks in BC. In the last decade, this call has resurfaced in response to the overdose/toxic drug poisoning epidemic.

In 2001, Bruce Alexander—a doctor of psychology known for his “rat park”

experiments in the 1970s (Lupick, 2017) that shifted the conceptualization of opioid addiction to being rooted in environmental causes rather than exposure and availability of the drug—co-authored a paper titled "Prospects for Stimulant Maintenance in Vancouver" (Alexander & Tsou, 2001). It argued that a lack of approved substitution medication for stimulants had been instrumental in causing the proliferation of the HIV epidemic in Vancouver's Downtown Eastside (DTES) despite previous decades of methadone availability, due to a lack of comparable medication to offer cocaine and polydrug users who remained dependent on the illicit supply. Because cocaine is often injected far more frequently throughout the day than other drugs such as heroin, cocaine users require more syringes (Lupick, 2017). At the time, access to sterile injection supplies was still fairly new and based on a one-for-one exchange model, with strict limits on the number of syringes available to each recipient per day (Hyshka et al., 2012). The high frequency of cocaine injections, combined with restricted syringe access, made it more likely that users would share or reuse syringes, increasing their chances of contracting a blood-borne infection (Alexander & Tsou, 2001).

In addition, Alexander and Tsou (2001) argued that many sex workers were coerced into sex work in order to afford their stimulant addiction, which was also contributing to the HIV outbreak. Thus, by supplying a regulated pharmaceutical option for people with stimulant addiction, survival sex workers would be able to stop doing this work under duress, which could reduce the spread of HIV in Vancouver.

The paper discussed both medication and replacement options, but in either case

emphasized encouraging a reduction in injecting in order to reduce overdoses[5] and the transmission of blood-borne infections (such as HIV/AIDS). However, it acknowledged it would be difficult to conduct trials around a safe supply of cocaine due to sensationalism around stimulants wherein crack and cocaine users were portrayed as violent monsters, despite research showing that 97% of violent crimes linked to the drug were caused by prohibition, not the drug's pharmacology or effects. Despite political barriers to testing, some evidence came from the unique case of the United Kingdom (UK), where amphetamine substitution prescribing was practiced even in the absence of controlled studies. A 1995 survey of community pharmacy practices showed that almost 10,000 patients were receiving either dextroamphetamine tablets or liquids to treat their stimulant addiction. Data from the outcomes of this prescribing showed comparable results between methadone maintenance patients and dextroamphetamine maintenance patients. In the methadone group, 67% had ceased injecting and 21% were injecting less; of the stimulant group, 70% stopped injecting and 27% injected less. (Charnaud & Griffiths, 1998). But clinical trials in North America were not showing the same success. The paper posited that this was because most trials were using Concerta, a slow-release version of Ritalin, because of its decreased habit-forming potential, despite the recipients already having a stimulant addiction. Alexander and Tsou (2001) question why it is necessary to protect people with stimulant addiction from stimulant

[5] Stimulant overdoses are often now called overamps to delineate the over-consumption of stimulants from those of opioids, benzodiazepines, etc., because of the differences in presentation and response (Mansoor et al., 2022).

addiction. While the authors acknowledge the potential in methylphenidate maintenance treatment, they argue that additional formulations must also be tested in clinical trials, as maintenance medications are most effective when they meet the same needs as the drug they are intended to replace.

Some of these sentiments were included in a backgrounder report for the city of Vancouver that was authored in 2007 by Canadian drug policy pioneer Dr. Donald MacPherson, as part of a strategy to expand substitution programs in order to reduce the open drug market in the Downtown Eastside (DTES). The report concurred with Alexander and Tsou's assertion that providing pharmaceutical stimulant substitution was integral to slowing down the spread of HIV in the DTES community by lessening injection cocaine use and reducing the number of people forced into exploitative sex work because of their addiction. Clinical guidelines for regulated pharmaceutical stimulants could provide a way for people with stimulant addiction to move away from the illicit drug supply and then, for some, also a way to be able to stop doing survival sex work. The report noted that, at the time, research on stimulant replacement was still in its infancy and that many clinical trials suffered from high attrition. However, it also highlighted early successes from amphetamine replacement prescribing in the UK.

In the past decade, as overdose and drug poisoning deaths have increased in North America, attention to stimulant interventions has resurged. In 2020, a commentary (Fleming et al.) was published in *Harm Reduction Journal* which argued that many people with stimulant addiction have significant health and psychiatric concerns that may not be resolved with pharmacological substitutes. However, solely offering psychosocial modalities—such as cognitive behavioural therapy and contingency management—frames stimulant use as a

behavioral problem. The authors argue that this "overlooks evidence that stimulant use is largely driven by structural and environmental factors, including instrumental uses of stimulants" (p. 3), noting that this minimizes the role that stimulants play in providing focus, energy, and pleasure. Especially because stimulant users who do not concurrently use opioids are at high risk for overdose from fentanyl adulterants, a safer supply is needed. Like Alexander and Tsou, the authors argue that pharmacological interventions tested in clinical trials have been unsuccessful because of the focus on providing medication options in extended-release formats because of reduced addictive properties, but medications with more intense psychoactive effect would more successful: "Given that many stimulant users desire the 'high,' any proposals for stimulant safe supply would need to acknowledge and emphasize user agency in diverse consumption practice" (Fleming et al., 2020, p. 4). Importantly, they stress, meaningful input from people who use stimulants in the design of clinical trials and programs is necessary.

This commentary (Fleming et al., 2020) draws on a United Nations Office on Drugs and Crime (UNODC) discussion paper (2019) on the treatment of stimulant use disorders, which provided a rationale for pharmacological treatment in the absence of successful clinical trials. Repeated exposure to cocaine and methamphetamine, it argues, increases the levels of the neurotransmitters dopamine and noradrenaline in the brain, which in turn reduces the brain's production of them. This can lead to long-lasting changes in neural circuitry and functionality, which may impair a user's impulse control and ability to engage with behavioral interventions. A psychostimulant medication provides "dopaminergic stimulation" (p. 37) without drastic psychoactive effectspatients have less craving, in comparison to stronger illicit stimulants: "psychostimulants may have a normalizing effect,

reversing the underlying deficits in the functioning of the dopaminergic system without further dysregulating the system. As a result, patients have less craving, have less impulsivity, and can abstain from illicit stimulants" (p. 38). However, the paper maintains that this intervention is not safe for everyone, particularly for those with severe hypertension, angina, or arrhythmias (UNODC, 2019). Locally, Palis and MacDonald (2023) provided similar commentary for the *Canadian Medical Association Journal,* arguing that despite the absence of approved STAT protocol, updated evidence shows that providing higher dosage psychostimulants—generally above 60 mg for both methylphenidate and dextroamphetamine—shows promise in reducing illicit stimulant use and are not reported to be causing adverse effects. The authors note concerns about the provision of psychostimulant but argue that psychosis, for instance, is much more likely to occur from consumption of illicit stimulants than regulated psychoactive ones. By implementing STAT into care for patients with stimulant use disorders, prescribers can help generate the evidence needed to establish this model as an approved pharmacological approach.

Clinical Trials. In the mid-2010s, two meta-reviews were published on the topic of psychostimulant drugs in the Cochrane Database of Systematic Reviews. The first (Bhatt et al., 2016) focused specifically on the treatment of methamphetamine use disorder and found no effect of psychostimulants on abstinence; the second (Castells et al., 2016) focused on the treatment of cocaine use disorder and concluded that there were mixed results. These reviews were cited in a supplement to BC's clinical guidelines for PSS (BCCSU, 2020b), which noted that although the evidence did not strongly support this prescribing model, providing pharmaceutical stimulants to people using illicit ones was not associated with significant adverse events. Given this finding, providing such prescriptions was a reasonable response

within the context of the dual crises of toxic drugs and the COVID-19 pandemic. However, a close examination of these two meta-reviews shows that the conclusion that pharmaceutical stimulants are not associated with benefits for illicit stimulant users should be interpreted with caution. The included RCTs were often testing medications irrelevant to STAT, often at low doses. As well, the RCTs were almost always testing a treatment course that included weekly (at minimum) mandatory group therapy, usually cognitive behaviour therapy (CBT). Moreover, the conclusion that the SRT "doesn't work" is partially based on methodological issues of the studies rather than results of the studies themselves. Finally, because these studies primarily test for abstinence, they fail to capture positive changes along the spectrum of stimulant use—from compulsive use to reduction or partial cessation. This is especially significant given that the average study length in both reviews was only 12 weeks.

The review looking at methamphetamine use disorder interventions (Bhatt et al., 2016) included 17 studies, the majority of which did not actually test pharmaceutical stimulants but instead evaluated "psychoanaleptics with mild stimulant results" (Bhatt et al., 2016, p. 1). Nine fit into this category: six studies tested bupropion and three were testing modafinil. Eight RCTS tested actual stimulants, but the six testing methylphenidate chose the slow-acting formulation, known commonly as Concerta™. Only two RCTs were researching medications included in the RMG or used by any of my participants: dextroamphetamine. The cocaine meta-review has an even higher proportion of mildly stimulating psychoanaleptics. It comprises 26 studies, with only 42% evaluating stimulant medications. It includes the same medications as the methamphetamine review, and some additional stimulants—methylphenidate in instant-release formulation (4), pharmaceutical methamphetamine (1), mixed amphetamine salts (1), and lisdexamfetamine (1)—as well as

some additional non-stimulants—selegiline (1) and Mazindol (4). While this one includes more stimulant options, these RCTs comprise less than half of the studies in the review. The possible impact of these included non-stimulant medications becomes clearer when we look at more recent meta reviews that focus on actual stimulants. For instance, a more recent meta review (Tardelli et al., 2020) that focused exclusively on studies testing actual stimulants found different results than the earlier meta reviews, which the authors attested to newer studies using higher doses of more targeted medications, within higher-quality study conditions. The review concludes that the more potent drugs provided at more potent doses successfully contributed to sustained abstinence of illicit stimulants, particularly for those using cocaine.

Another reason to interpret the conclusions of these two key meta-reviews with caution is that their findings are influenced more by methodological limitations than by the study results themselves. For instance, a subgroup analysis within the cocaine meta-review found that psychostimulants had a statistically significant impact on cocaine abstinence, but the high dropout rates within these studies impacted the validity of this evidence. In fact, attrition was an issue across most studies in both reviews: most of the studies had a dropout rate of greater than 50%, making it difficult to interpret the results, which downgrades the quality rating of those studies. However, some of the poor grading of evidence was inherent to the medications being tested and could not be improved by the study conditions. Because these RCTs were being conducted on psychoactive medications that can possibly be felt by the participants, it is difficult to achieve the double-blinding condition required within RCTs: “Since the pharmacological interventions studied have powerful behavioural effects that may reveal the assigned intervention, we could not rule out the risk of performance and detection

bias on subjective outcomes" (Castells et al., 2016, p. 15). This means that any study these reviewers looked at on this subject would be rated as low-quality evidence, no matter how successful the RCT was. While attrition and performance bias issues are legitimate concerns that impact the validity of the RCTs in the reviews, this does not necessarily indicate the evidence shows SRT "doesn't work." Rather, it means that the evidence showing no statistical link between the treatment and the effect should be interpreted with caution and perhaps be re-tested. Importantly, these same methodological issues also undermine the validity of results showing no effect.

In addition to the non-stimulant agonists and the methodological issues across most of the RCTs, another reason these reviews are irrelevant to STAT prescribing is that the studies are not necessarily testing for outcomes that reflect the lived successes of the people who take these medications. Both reviews are looking at two main outcomes. The first is treatment retention, which is whether or not the participant finished the study itself. Whether a person continued visiting a study site to receive witnessed bupropion doses and attend group CBT is arguably not a meaningful indicator of whether pharmaceutical stimulants are positively impacting someone with an illicit stimulant habit. The second outcome was abstinence—measured either as complete (terminal) abstinence or as the number of illicit stimulant-free days—assessed via **urinary drug screenings** (UDSs). The issue with this is that a UDS simply indicates the presence or absence of a drug. It does not capture reductions in use or differentiate between patterns such as binging versus occasional use.

An updated systematic review on SRT was published in 2020 (Tardelli et al.) included 38 RCTs that focused on psychostimulants, like methylphenidate, modafinil, and **amphetamines,** such as dextroamphetamine, mixed amphetamine salts (Adderall™): "All of

the selected medications have similar behavioral effects as abused stimulants" (p. 2236). This review noted that study ratings can be downgraded due to bias; however, the authors note, "ratings can be upgraded if the effect size is large, there is evidence of a dose–response effect, or all plausible confounding is controlled for" (p. 2238). Perhaps these two differences account for why Tardelli et al. (2020) comes to a different conclusion than Castells et al. (2016) and Bhatt et al. (2016), finding that the prescription amphetamines had promising results in its association with abstinence in people with stimulant use disorder, particularly cocaine use disorder, although, unsurprisingly, no significant effect was observed on treatment retention. The authors suggest that more recent studies using higher dosages—guided by the limitations and recommendations of earlier RCTs—help explain the improved outcomes in this review.

Finally, it would be remiss not to include recent efforts to use lisdexamfetamine (Vyvanse™) to replace methamphetamine in a different model of prescribing (Acheson et al., 2022). In Australia, researchers conducted an 'open-label, single-arm, pilot clinical trial' (p. 3) to test a 5-day methamphetamine withdrawal management strategy. The protocol used decreasing daily doses of lisdexamfetamine. Fifteen patients seeking methamphetamine detoxification in a medically supervised unit were recruited. Dosing began at 250 mg of lisdexamfetamine, decreasing by 50 mg each day. Participants were monitored for vital signs and sleep quality, and completed daily questionnaires and interviews throughout the trial. No adverse effects were reported and the treatment seemed to significantly reduce cravings and withdrawal symptoms.

Qualitative research. In 2021, a qualitative paper was published from the research conducted on outcomes of providing dextroamphetamine to 20 patients also receiving

prescribed heroin at the Crosstown Clinic in Vancouver who also had been concurrent illicit stimulant users (either crack cocaine or methamphetamine). Participants were already visiting the clinic at least twice daily to self-administer their injectable heroin and through this pilot, were able to also receive up to 120 mg of dextroamphetamine, split into two doses. The authors found that whether the medication 'worked' depended largely on each participant's personal goals. For instance, if the participant used stimulants for energy, focus, or to manage their ADHD, they found the dextroamphetamine was effective. Those aiming to achieve a rush or a burst of euphoria were less satisfied with the dextroamphetamine. However, even participants who found the medication effective expressed frustration—some with the slow **titration** process, others with the method of administration. The oral tablets were taken under supervision when visiting the clinic. Some felt the effectiveness of the stimulant was hindered by the sedating effects of the heroin and others did not appreciate the lack of flexibility of when they could take their medication due to their personal schedules. For instance, one participant gave the example of stopping into the clinic after a graveyard shift to receive their heroin dose—this is when the dextroamphetamine dose would be offered as well. Participants felt the medication would be more effective if they could receive take-home doses. The clinical guidelines for take-home dextroamphetamine became available the following year when the COVID-19 pandemic began (BCCSU, 2022).

"Safer Supply"

In 2019, the Canadian Association of People who Use Drugs (CAPUD) released a concept document to clarify conceptual and logistical confusion around the meaning of safe supply. It was explained as "legal and regulated supply of drugs with mind/body altering properties that traditionally have only been accessible through the illicit drug market"

(CAPUD, 2019, p. 4). Safe supply is framed as a logical progression of harm reduction, a philosophy and public health model intended to reduce harms of illicit drugs in a criminalized context. Safe supply, however, aims to reduce such harm by removing the criminal element itself, which has historically prevented drug users from accessing a predictable product. The paper posits that safe supply is necessary for the sake of human rights, justice, effectiveness, and safety. It argues that prohibition constitutes a human rights violation, because it criminalizes the substance choices of the poor, and a justice issue, because this criminalization has most severely impacted people of colour. The document bases its case for the effectiveness of safe supply on the success of HAT maintenance trials in Vancouver, which had retention rates of over 80%, compared to under 35% for conventional OAT regimens. The authors also point to the ability of HAT to drastically reduce illicit opioid use as a marker of success, especially given the context of the overdose epidemic caused by unpredictable adulterants of the illicit supply. When this paper was written, 11 people were dying every day in Canada from this crisis. Five years later, as I write my thesis, it is 21 (Council of Chief Medical Officers, 2025).

The CAPUD paper (2019) argues that, while substances offered in a safe supply program should ideally be "a safe version of the drug sought by the client, or a close approximation of the drug being sought" (p. 8), it also concedes that a challenge of safe supply is to "make them palatable to decision makers who ultimately answer to the public" (p. 13). Thus, safe supply programs would need to start with medications and models that have already been tested in clinical trials and then expand to other medications and substances while building an evidence base. Indeed, BC's RMG (BCCSU, 2020a) has expanded since its initial release to include clinical guidance for opioid medications more

closely resembling those in the unregulated market—namely, fentanyl patches. However, some researchers (Moshkforoush et al., 2022) and drug user activists (Nyx & Kalicum, 2024) have argued that the over-medicalization of this model, which depends on the availability of willing prescribers, has hindered expansion and accessibility. Moreover, the available drugs often do not meet the needs of all users, dosage maxes are often too low, and many people are unable to access these medications due to prescriber shortages in their area or because they cannot meet the access criteria (Barker et al., 2025). While prescribed safer supply has continued to exist in British Columbia and has slowly expanded to include more medication options, an alternative path to safe supply—**community-regulated safer supply**—has also emerged. Both are discussed below, with particular focus on the stimulant options provided in each respective model.

Stimulants within PSS Programs

In 2020, due to the sudden need for social distancing prompted by the onset of the COVID-19 pandemic (BCCSU, 2020a; Glegg et al., 2022), as well as the increased toxicity of the drug supply (Foreman-Mackey et al., 2023; McNeil et al., 2022), clinics and programs offering medications under the "prescribed safer supply" (PSS) framework rapidly expanded across the country. Additionally, because of the RMG (BCCSU, 2020a), such medications could be prescribed by primary care physicians in the province of BC. As 69% of these clinics offered stimulant options (Glegg et al., 2022) and stimulants were included in the RMG (BCCSU, 2020a), evaluations of STAT prescribing have begun to appear in the literature since 2020.

For instance, two successful case studies involving STAT medications in BC have been published. One described an unhoused man who used multiple substances and presented

to St. Paul's Hospital in March 2020 with respiratory difficulties (Hong et al., 2022). He had also experienced five overdoses the previous week. When he was confirmed to have COVID-19 and COVID-induced pneumonia, he was asked to self-isolate in a quarantine hotel for unhoused individuals (Hong et al., 2022). While agreeable to this, he expressed concern about managing his withdrawal symptoms for illicit methamphetamine and fentanyl use. With the daily delivery of 40 mg of dextroamphetamine slow release and 20 mg dextroamphetamine instant release, as well as 96 mg of hydromorphone and 300 mg of slow-release morphine and nicotine patches and gum, he was able to successfully self-isolate for nine days. A second case study from the same era described a man who had been using methamphetamine daily for 20 years and approached an outreach nurse to inquire about the availability of prescription stimulants to manage his addiction (Mak et al., 2022). He was referred to the community clinic where he was prescribed a titrated dose of dextroamphetamine. His methamphetamine use decreased as his dextroamphetamine dose increased and as a result, he experienced reduced hallucinations and better sleep. He was also screened for sexually transmitted infections (STIs) and subsequently treated for chlamydia. Additionally, this individual had not been previously enrolled in public health insurance and had recently become unhoused. The clinic's social worker enrolled him in Medical Services Plan (MSP) benefits and helped him file a decade of income tax returns. With his tax return, he was able to secure housing again and now regularly accesses the clinic for medical care for the first time in his life. The authors discuss the meta-reviews by Bhatt et al. (2016) and Castells et al. (2016), stating that "in the current context of dual public health emergencies, the end point of abstinence might be neither practical nor an appropriate first priority for some individuals (Mak et al., 2022, p. 11). The measured outcomes of these meta-reviews,

they argue, are not necessarily the goal of their patients, and thus do not indicate that these medications do not have clinical value.

Evaluations of groups receiving stimulants have also shown promising results. An evaluation of the outcomes of providing the same types of opioid and stimulant medications recommended in the RMG framework to residents of a shelter in Halifax, Nova Scotia, during a two week-isolation period to manage a COVID-19 outbreak in May 2021 showed that more residents were given stimulants (40%) than opioids (35%) (Brothers et al., 2022). During the isolation period, only one person left permanently and there were no overdoses or serious adverse events reported.

A wide-scale evaluation was conducted on all 5,882 recipients of RMG prescribing in BC in the initial 17 months after the guidelines were released (March 2020-August 2021) (Slaunwhite et al., 2024). Although the majority were opioid recipients, the cohort included 1,061 receiving stimulant prescriptions and 535 receiving both opioids and stimulants. Using "high dimensional propensity score matching" (p. 1), a control group was created by matching each cohort member with someone of similar demographics and medical profile who did not receive RMG medications. This retrospective, population-based cohort study found that receiving opioid medications under the RMG framework was associated with reduced risks of both overdose-related and all-cause mortality in the following week. This reduction was especially significant among those who received prescriptions for four or more days. Although the number of stimulant recipients was low, there were no deaths among those who received high-dose stimulant prescriptions. Weekly dispensations were also associated with decreases in overdose-related hospitalizations and acute care visits for any cause. The authors noted that due to the low number of recipients, only 7.6% of individuals

with opioid use disorder and 2.5% of those with stimulant use disorder received RMG prescriptions during this period. Moreover, the number of patients receiving RMG prescriptions has not increased since these positive evaluations were published—in fact, patient numbers have plateaued and even begun to decline since 2023 (BCCDC, 2025).

Barriers to PSS. Research on barriers to receiving RMG medications shows that many people eligible for them were completely unaware that these prescriptions even existed. Three long-standing research cohorts in Vancouver—At-Risk Youth Study, Vancouver Injection Drug Users Study, and AIDS Care Cohort to Evaluate Exposure to Survival Services—implemented questions about RMG awareness between July and November 2020 (Moshkforoush et al., 2022). During that time, 633 respondents who used drugs, primarily residing in the DTES, completed a follow-up interview and were asked if they had heard of RMG prescriptions. More than half—52%—were unaware of these prescriptions; 31% had received them, and 3% had tried to access them but were denied. The researchers posited that forced isolation and social distancing caused a breakdown in networks where such information would be shared. Most who were aware had heard about them through their OAT clinics, meaning that stimulant-only users would have fewer opportunities to learn about RMG medications. Research conducted in 2021 via the Harm Reduction Client Survey (Palis et al., 2024), which is administered at 17 Harm Reduction sites throughout BC, showed that within 491 eligible respondents, only 16.5% had received RMG prescriptions. Although this may reflect the recruitment setting of the participants, receiving RMG prescriptions was associated with accessing overdose prevention sites and drug-checking services.

Despite low levels of RMG awareness within DTES populations and low numbers of

access through the province, research conducted with First Nations people who use drugs and with health planners in Northern BC found that prescribed safer supply prescriptions were often referred to as a "Vancouver thing" (Barker et al., 2025). This research showed that daily dispensing of RMG medications, combined with required frequent clinic visits, created significant access barriers. Living in remote areas, lack of public transportation, extreme weather, and possible exposure to violence when traversing distances, particularly for Indigenous women, made getting to the pharmacy or clinic very difficult. Additionally, the frequency of stigmatization and racism at these sites made them difficult to access. This study highlights the disadvantages of a medicalized model for regulated substance substitution. Additionally, data from the *Harm Reduction Client Survey* was synthesized with interviews and focus groups to better understand safe supply option preferences, in order to make a number of recommendations about safer supply options in BC (Xavier et al., 2023). A key finding was that stimulant users felt that the pharmaceutical options in the RMG were inadequate: "[m]any participants noted that current options do not provide the desired medicinal and/non-medicinal effects, contributing to widespread continued use of stimulants" (p. 6). The final report posited that providing regulated options of cocaine and methamphetamine could reduce overdoses caused by exposure to fentanyl and benzodiazepine-contaminated stimulants. The following section outlines the implementation and outcomes of a non-medicalized safer supply model that included stimulant options.

Stimulants within Community-Regulated Supply Programs

Considering non-pharmaceutical options as safer supply may be imperative given that a summary of survey findings among harm reduction site client regarding preferred stimulant safe supply options found that fewer than 11% of respondents chose either of the available

pharmaceutical options, whereas 61% selected methamphetamine (Ferguson et al., 2023). In 2022, a non-profit in Vancouver's DTES called Drug User Liberation Front (DULF) began an unsanctioned compassion club wherein members of a closed group who were at high risk of overdose were granted access to purchase 14 grams of tested and unadulterated heroin, cocaine, and methamphetamine at prices intended to cover cost of procuring the drugs but not to generate a profit (Kalicum et al., 2024; Nyx & Kalicum, 2024). Despite an endorsement for a such a program from Vancouver City Council in 2021 (Kulkarni, 2021), Health Canada would not approve DULF's exemption to the federal drug trafficking laws in order to sell pharmaceutical versions of heroin in the compassion club model—an approach previously used to provide cannabis and antiretroviral medications for people with HIV/AIDS (Nyx & Kalicum, 2024). DULF proceeded to operate without official sanction, while monitoring outcomes and publishing two academic papers. Presently, the compassion club has been shut down by the Vancouver Police Department and the founding members of DULF are facing criminal trial (Greer, 2024).

The DULF compassion club had 47 members, each of whom completed a baseline survey and then quarterly follow-up surveys, between its inception in August 2022 and its closure in October 2023 (Kalicum et al., 2024). At baseline, 77% of participants had experienced an overdose or drug poisoning in their lifetime, and 72% had done so in the three months prior to their baseline survey. Enrollment in the club, which included stimulants, was statistically associated with reduced overdose events (including **overamping**) and overdose events requiring naloxone (meant to specifically capture opioid overdoses): 38% of club members experienced a non-fatal overdose during the study period, none of which occurred on the club premises where members could purchase and use onsite if they

wished (Nyx & Kalicum, 2024). In total, over 1,000 consumption events occurred onsite under supervision, with no overdoses reported (Kalicum et al., 2024).

Conclusion

This literature review aimed to briefly explore the history of replacement prescribing within addiction and substance use treatment, with a focus on stimulants—specifically, the advocacy around providing stimulant options and a review of stimulant trials. Since I first proposed my topic, new literature has emerged on providing dextroamphetamine to HAT patients (Palis et al., 2021) and using lisdexamfetamine to medically manage withdrawal from methamphetamine (Acheson et al., 2022), both of which were reviewed in this chapter. Additionally, published research on PSS evaluations that include STAT medications, both case studies (Hong et al., 2022; Mak et al., 2022) and program evaluations (Brothers et al., 2022; Slaunwhite et al., 2024), were included, as well as some published research on limitations of a medicalized safer supply model (Baker et al., 2025; Moshkforoush et al., 2022; Palis et al., 2024) and benefits of a non-medicalized model (Kalicum et al., 2024; Nyx & Kalicum, 2024). The present research project supplements this body of literature by providing the input of ten people who identified as having an addiction or problematic relationship with illicit stimulants and wanted to control this use. These participants had the opportunity to use prescription stimulants in diverse ways to meet a diversity of goals. Before outlining the findings of this research, I will first explain the theoretical framework and methods by which it was approached and conducted.

Chapter 3: Theory and Methods

This research project investigated the perspectives of ten people across the province of BC who have used STAT, exploring the question: "What are user perspectives on stimulant agonist therapy (STAT) and what it means for STAT to work?" That is—what do STAT users see as the markers of success for the intervention? How do they define or measure whether it is working? Because this is an under-researched domain and I aimed to elicit a deep and nuanced understanding of how participants conceptualized STAT as successful, both within the context of their lives and through their experiences of using it, I chose an exploratory qualitative research approach (Creswell & Poth, 2016). Qualitative research is especially well-suited to this topic, as it can address questions that cannot be asked in clinical trials, particularly regarding how medications or treatments are used in real-world contexts and the meanings participants ascribe to these practices (Green & Britten, 1998).

Exploratory qualitative research, particularly in the health-care field, is a way in which a researcher can explore a topic with little existing coverage and generate new knowledge and understandings of this topic through the research participants (Hunter et al., 2019). It involves a robust literature review (as provided in the previous chapter), purposive sampling, participant-led semi-structured interviews, and thematic analysis (TA). The latter is particularly important, as both TA and exploratory qualitative research aim to understand the core experiences of participants in relation to the topic of study (Hunter et al., 2019). Before detailing the specific methods used in this study, I will first explain the three theories that form its theoretical framework.

Theoretical Framework

The three theories that guide this research project are harm reduction, social constructivism, and critical realism.

Harm Reduction

The first theory that guides this research is harm reduction. Harm reduction (HR) refers to a spectrum of policies, programs, and philosophies intended to mitigate harms experienced by people who use drugs (PWUD), both medical/biological and structural (Bigler, 2005; Brocato & Wagner, 2003; Hanson et al., 2020; IHRA, 2020; Lavalley et al., 2020). Harm reduction prioritizes the voices, input, and expertise of PWUD (Friedman et al., 2007; IHRA, 2020); promotes public health and human rights; and maintains a neutral stance toward illicit substances, recognizing that the effects of and the relationship with psychoactive substances will be different between different people, and even different within the same person at different times in their lifespan (INHR, 2020). Harm reduction aligns with an exploratory research project surrounding drug use as it enabled me to approach participants with curiosity and openness—to learn about their stimulant use, the perceived benefits of both illicit and prescribed stimulants, how these substances interact with others they use, their motivations for reducing or discontinuing use, and whether prescribed stimulants have been a helpful tool in their lives. This neutral framing allows for the emergence of novel data, in contrast to the traditional approach to substance use research—which, as outlined in the previous chapter, is usually predicated on the belief that improvements among "addicts" are measured by the presence or absence of the illicit substance in the subject's body. A harm reduction lens enabled me to explore improvements in participants' lives in a nuanced way, allowing each of them to construct their own meaning

and understanding of their substance use, both unregulated and regulated.

Social Constructivism

This neutral approach described above—exploring a participant's substance use without pathologizing it, while allowing the participant to construct their own meanings and understandings of it—is congruent with social constructivism, another theory employed in this research. Social constructivism asserts that there are multiple realities, each constructed and interpreted through the lens of the individual (Creswell & Poth, 2018). Qualitative interviews were chosen as the method of data collection in this research because the aim was to explore how STAT users understand and interpret the success of pharmacological interventions. This method reflects social constructivism both ontologically and epistemologically. Ontologically, social constructivism frames the effectiveness of a medication—that is, how and how well it works—as rooted in the subjective experiences of the individuals taking it. Epistemologically, knowledge is best derived through the lens, experience, and expertise of those with lived experience.

Although RCTs are considered the most objective and evidence-based approach to research in the medical field (Creswell & Poth, 2018), there are several compelling reasons why a social constructivist approach using qualitative data is also essential. As Green and Britten (1998) argue, qualitative research "can bridge the gap between experimental trials and clinical practice" (p. 316). That is, examining how treatment regimens unfold in real-world settings can both provide a guide for the design of experimental trials and for suggestions on how the results of experimental trials can be translated into prescribing guidelines. Additionally, they emphasize that qualitative research provides insight into how the use of prescribed drugs may evolve over the course of a patient's illness. Nichter et al.

(2004) note that while quantitative research dominates the substance use field, qualitative data has contributed to academic knowledge about the micro- and macro-aspects of drug consumption, as well as the science and ideology underlying drug use-related interventions. Indeed, there are multiple compelling reasons to employ qualitative research grounded in social constructivism and harm reduction in the field of substance use research.

This stance is even more compelling when one considers both the potential and historical harms of not including the perspectives of PWUD in substance-use related program and research design (NAOMI & Boyd, 2012). First, not including the perspectives of PWUD would ignore an integral source of expertise from a community which has been responsible for essentially inventing widely successful public health initiatives such as syringe access programs and supervised injection sites (Lupick, 2017). Second, as the Canadian HIV/AIDS Legal Network (CHALN) postulates, excluding drug users from providing input on their own interventions further embeds a narrative that drug users are irrational and helpless victims, which is an impedance to both individual emancipation and systemic change. Moreover, it prevents valuable insight into the design and delivery of effective programs and interventions, which require the perspective and input of those accessing such programs (CHALN, 2005). CHALN provides the example of widespread and meaningful involvement of PWUD in HIV and HCV prevention programs in Australia in the late 1980s, which is believed to have prevented a second wave of HIV transmission among injection drug users in Australia, unlike Vancouver and other cities in British Columbia that experienced HIV rates as high as 30% in some neighbourhoods (2005).

Third, an important and relevant area for pursuing the qualitative input of PWUD is for the purpose of designing research for substance use interventions, as not doing so has

historically led to the implementation of harmful research projects in BC that left participants in a worse place than when they were recruited to participate. This was seen in the case of the North American Opiate Medications Initiative (NAOMI Project), wherein diacetylmorphine (pharmaceutical heroin) was provided to research participants in the DTES, which proved to be a very successful intervention, with improvements in health, well-being, and quality of life among those being provided diacetylmorphine (NAOMI & Boyd, 2012). However, the RCT abruptly ended, and participants were abandoned to again be reliant on the unpredictable and expensive unregulated street supply of heroin (NAOMI & Boyd, 2012). In a research project that compiled the voices of the so-called survivors of the NAOMI project, one participant reported losing their skills at "hustling" while participating in the NAOMI trials, which created great hardship and frustration when she lost her source of prescribed heroin. This project (NAOMI & Boyd, 2012) calls for the meaningful inclusion of participants in research design, especially those who are deeply marginalized, in order to avoid reproducing research projects that harm people and neighbourhoods. Accordingly, the present research project aims to synthesize the input, opinions, and experiences of STAT users in order to identify more patient-centered goals of the STAT intervention, which can help establish more meaningful and probably successful ways of producing evidence and testing the efficacy of STAT or designing more effective clinical guidelines.

Critical Realism

Finally, I synthesized these above-described theories with critical realism. As per social constructivism, I believe a person's reality is a subjective experience shaped by one's experiences and position in society (Creswell & Poth, 2018). However, particularly in health-related research, there is also objective, measurable reality outside of ourselves. This is the

premise of critical realism, which posits that while the evidence we collect may be subjective accounts of reality, there is indeed a reality that exists that is mind-independent (Sturgiss & Clark, 2020). This understanding is integral to evaluating healthcare interventions such as STAT—or, in the case of the present project, evaluating the evaluations of healthcare interventions, and proposing new realities to test for. Because while knowledge about problematic substance use, recovery, wellness, and illness are constructed by the research participants and informed by their class, race, ability, and prior experiences, there are also measurable outcomes and tangible aspects of substance use interventions. For example, the medications used, their pharmacology, the psychoactive and filler ingredients, dosage limits, prescription length, are all tangible elements of the prescribed safer supply program. Similarly, measured outcomes such as amount used, numbers of adverse events, caloric intake, number of missed days of work, and hours slept are also objective realities. Furthermore, as Sturgiss and Clarke (2020) write, objective realities might not be entirely tangible; they can also be cultural or social. This is especially true in the field of substance use interventions, wherein concepts like social and internalized stigma are abstract concepts but also widespread accepted realities. While the reality of experiencing these abstract concepts is constructed by my participants, as well as how they understand their experience and how it shapes their identity, internalized and externalized stigma of substance users is a measurable concept. A critical realist approach to my research allows me to approach individual realities and meaning-making with curiosity but also allows for very practical recommendations for improvement in the implementation and delivery of STAT.

Methodology

Using the above-explained theoretical framework, I embarked on conducting my qualitative exploratory study, which entailed conducting semi-structured qualitative interviews with ten people in British Columbia who had used pharmaceutical stimulants to control their use of illicit stimulants. Interviews, which were conducted between October 2021 and February 2022, were done over the phone or via Zoom video call, because of public health policies due to the ongoing COVID-19 pandemic. Interviews were coded using thematic analysis (Braun & Clarke, 2006) and these findings are described in detail in *Chapter 4: Findings.* First, the process of recruiting, interviewing, and analyzing will be described.

Inclusion Criteria

Research participants needed to be over 18 and to have used pharmaceutical stimulants to control their use of an illicit stimulant. To narrow the focus of my research and to examine the impact of the RMG on STAT in the province, potential participants needed to have been living in British Columbia.

Sampling Strategy

My sampling strategy was combination/mixed, meaning I used several different strategies to meet my study needs (Creswell & Poth, 2018). My first strategy was convenience. I was told that it would be extremely difficult to recruit participants for this study, so I initially accepted whoever contacted the study email account who met the criteria. However, these initial participants turned out to be extremely information-rich cases, several of whom worked in the research and drug policy field and felt that stimulants were not getting the necessary attention, especially as this issue deeply impacted them personally. As

well, social and support workers from the field initiated contact that fell into the snowball/chain strategy (Cresswell & Poth, 2018): they were very interested in my study and wanted to inquire about assisting with some particularly information-rich clients they had in mind. When I had completed around six interviews, I switched to a maximum variation strategy. A maximum variation strategy means I purposively recruited participants with specific demographics with the goal of ensuring I included a diversity of participants that represented illicit drug-using populations in the province (Cresswell & Poth). A large proportion of my earlier participants were from two different urban areas, particularly Vancouver, or were men or gender diverse. Nearing the end of my research collection, I did more targeted recruiting, specifically to ensure I recruited women, people from rural areas, and people from diverse health authorities.

Recruitment

A flyer I created (see Appendix B) was disseminated via email and private Facebook groups through my pre-existing provincial professional networks of people working in the harm reduction field, which included overdose prevention sites, outreach services, OAT and prescribed safer supply clinics, and low-barrier housing. As well, the recruitment flier was posted publicly on my social media accounts, especially on Twitter and Instagram. I also distributed printed posters to pharmacies, health clinics that prescribed PSS, and supportive housing in two northern cities: Prince George, where I lived, worked, and attended school, and another northern town, which I travelled to regularly for professional and academic reasons. While this enhanced level of recruitment locally meant an over-representation of participants in the northern region of BC, I was intentionally taking advantage of being known and trusted in these communities and allowing for greater inclusion of the voices of

northern and rural stimulant users and safer supply patients, which was lacking in the available research at the time of data collection.[6]

Interested participants could email me at an email address I created for the project: *stimulantsafesupplystudy@gmail.com*. When interested participants emailed, they were asked their age, location, and which "safe supply medications" they took in order to verify they met the inclusion criteria of the project. If they were over 18, residing in BC, and answered with a medication that fit in the stimulant class of medications, they were sent a study information letter (see Appendix C), a consent form (see Appendix D), and a support resources document (see Appendix E), as well as a link to a scheduling website where they could schedule their interview, with the choice of either phone or Zoom interview.

Compensation, Informed Consent, and Other Ethical Concerns

One strategy employed to encourage recruitment and study participation was to offer fair compensation for the participants' time and energy. Participants were given a $40 (CAD) stipend for completing a research interview. I chose this amount as it aligned with provincial employment standards for short-term engagements with PWLLE of drug use (BCCDC, 2018). This publication recommended that **peers** should be paid at least $25 per hour for advisory work. I anticipated correctly that interviews could be up to 90 minutes and rounded up to $40 to accommodate for inflation and time reviewing consent and information forms.

Stipends were either transferred to participants directly via Interac e-transfer, or e-

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[6]This has somewhat improved in recent years due to province-wide prescribed safer supply evaluation initiative conducted by CISUR

transferred to a person in their life who they trusted would withdraw the funds and pass the funds along to them. I verbally asked or confirmed the participants' preferences at the end of their research interviews. One participant asked that I deposit his stipend directly into his account at a national bank chain with locations in both our cities, which I could do by visiting a local branch. I obliged this request.

Members of my thesis committee raised concerns that the university's research ethics board (REB) may have concerns about paying participants, who are all current and recent illicit drug users, with cash currency. I was able to assuage any potential concerns by attaching a supplementary literature review I wrote addressing common ethical concerns about drug user-focused research. For instance, although other researchers in the substance use field have reported that their institute's REBs have raised concerns about the potential exploitation of marginalized people who were assumed to be disproportionately influenced by the promise of quick cash because of their addiction, a review of the outcomes of offering alternative forms of payments, such as gift cards, shows they are less effective at recruiting participants, thus producing research in the field with reduced credibility and validity, making them less effective in addressing pervasive issues of community concern (Striley et al., 2008). Additionally, alternative payments devalue the knowledge and expertise of the participants and a double standard of offering cash to most research participants but gift cards to the ones who have disclosed substance use reproduces structural economic inequities (Topp et al., 2013). Furthermore, in smaller communities, having and using a gift card can reveal that a participant has participated in a particular project, thus violating their anonymity (Topp et al., 2013). Moreover, focus groups in the DTES with drug users who were frequent participants of research projects found no indication that payment for research was spent on

illicit substances or increased use; conversely, by offering a legitimate source of income that circumvents social assistance income-reporting requirements, cash payment for research participation may actually reduce crime, which improves quality of life for participants by reducing the necessity of participating in such survival crime, which in turn reduces their exposure to violence (Bell & Salmon, 2011).

An unexpected concern from UNBC's REB review of my research proposal was there may be a risk of an overdose occurring during the interview, which needed to be conducted remotely due to pandemic-related public health guidelines at the time. To address this, when introducing myself at the onset of an interview, I would mention that part of my work experience was managing and working in **OPSs**, to indicate that I was both skilled at overdose response and morally neutral about the substance use that might result in an overdose. Several participants were doing their interviews on Zoom from the office of a support person or social worker where staff who were also trained in overdose were nearby. In that scenario, I would make a mental note of the service or agency where they were located in case I needed to make a phone call or direct emergency services should an overdose occur on camera and there was not an immediate staff response. When participants were not in proximity to staff trained in overdose response, I would let the participants know about the concerns of the REB and that it would make these decision-makers more comfortable if I had a plan should someone show signs of an overdose. Largely, the participants were amused by this concern but also appreciative of enhanced understanding of overdose risk and concern for their well-being. Also largely, participants would let me know they had not been using any illicit and unregulated substances in the time frame preceding the interview and did not plan on using during. As most were done over Zoom, I could see

that the participants were alert and not at the precipice of an overdose event. One who had recently used assured me that their partner was in the next room, but gave me their address in case an emergency occurred, which I permanently deleted at the end of the interview.

Another concern raised by the REB was that the participants may not be able to ethically consent to participating in the research project due to reduced cognitive capacity from mental illness or being incapacitated by substance use. Given that my participants were largely those who have been able to reduce their use of stronger, illicit drugs through the use of milder, prescribed ones, I think part of this concern is due to a misunderstanding of the role PSS and STAT has in one's ability to function and be grounded in reality. Lack of capacity and understanding has also been addressed in previous research (Bell & Salmon, 2012) which shows the capacity of drug users to understand the nature of the research project, their role, and the risks associated with participating are not any less than that of populations of non-drug using research participants. However, as I take consent very seriously, I screened participants for their capacity, connection to reality, and understanding of the purpose of the interview. Two participants disclosed they experienced psychotic episodes in their lives; fortunately, they were also members of communities I was very familiar with, and through questioning where they were in the present moment, if they understood who I was, who prescribed their medications, which ones, and where it was dispensed, I was confident they had the cognitive capacity to consent to participating in the research. Importantly, I felt it was important to include them as those diagnosed with a severe mental disorder are excluded from STAT RCTs. Given that substance use disorder, particularly stimulant use disorder, has a higher prevalence among those diagnosed with schizophrenia and other mental disorders that feature psychosis (Tsanos, 2014), it is integral

to find ethical ways to include this population in research, particularly in research concerning possible interventions for those needing or wanting to reduce illicit substance use. One participant in particular wanted to participate as she had related safety concerns for the possibility of psychotic outcomes from combining high doses of illicit stimulants and prescribed stimulants, an experience that occurred for her due to what she felt was a lack of guidance for starting STAT.

There are also interesting research findings surrounding the ethics of drug-focused research not including participants under the influence of drugs**.** Ryan et al. (2019), for instance, write that there is not a lot of evidence that intoxicated drug users have a decreased capacity for understanding compared to other participants. Furthermore, they write, if the research is on the behaviours and beliefs of drug users, then participation in the research while under the influence of their drug of choice will garner responses that are more reflective of their daily lives and thus are more scientifically valid. They add that depending on the length of research involvement, the expectation to remain abstinent has the added danger of greatly increasing overdose risk when the participant uses after. Furthermore, according to participants in a focus group study on the experience of participating in drug-related research (Bell & Salmon, 2011), excluding someone from research for being intoxicated was unethical, as this would potentially eliminate the most marginalized voices from the research results, impacting its generalizability.

Data Collection and Data Security

This research study employed semi-structured, open-ended qualitative interviews. As this was an exploratory study, I was open to hearing about anything participants wanted to tell me about being on or using STAT, but I also used an interview guide I kept on hand to

make sure certain topics were covered (see Appendix F). I started by asking which medications they took, if they were still on these medications, how they learned that **stimulant** replacement medications such as **STAT** even existed, and to tell me about the process of starting this medication. I wanted to know which drug they were replacing. I asked each participant if they felt it worked, with the exception of one who made it clear from the beginning that they felt that stimulant replacement prescribing worked. I would then ask what that meant to them: What physical, emotional, and social changes had occurred for them to consider the medication to be "working"? How did dosage, length of prescription, policies around daily pick-up, and personal attitudes and beliefs around the medication impact how it "worked"? The respondents were invited to share any experience or opinions they had about PSS as well as any recommendations they have for future clinical guidelines.

Data was collected between October 2021 and February 2022. Interviews either took place over the telephone and were recorded with an electronic recording device I stored in a secure locked cabinet in my home office, or on a secured Zoom call scheduled through my personal UNBC account, which recorded through the Zoom application and which I would delete after transcribing.

Interview times varied from half an hour to two hours. Several of the interviews were scheduled by support workers. Having worked in this field, I have done this type of facilitation myself and know that folks are often excited to participate in research and appreciate the help by the support staff and the stipend. However, consent was re-established verbally during the interview to ensure participants wanted to participate in the study, that they understood what they were participating in, and that they knew the risks of participating. However, most if not all participants were not concerned at all about confidentiality. Many of

the participants have published or presented in the addiction medicine/harm reduction field and it is already public knowledge that they are drug users. Nevertheless, because of the terms set up and approved by the UNBC Ethics Board, my participants are not identifiable to the best of my ability. In fact, after presenting on my topic, a colleague approached me and expressed that she wished her cousin had been able to participate in my research study because of their experiences with STAT. Her cousin then approached us: They were one of my participants who I had quoted several times in my presentation.[7]

Data Analysis and Coding

After the interviews were completed, I used a transcribing program to create initial transcripts, which I had to go through and thoroughly edit due to the high amount of jargon and slang used, and the frequent mumbling. The transcriptions were fixed and edited over the course of ten months, then I destroyed the printed-out transcriptions by burning them in a fire. When finalizing the transcriptions, I redacted identifying information such as clinics accessed, prescriber name, workplaces, and city names.

The interviews were coded, on paper, using thematic analysis. I printed out the edited and redacted transcriptions with 1.25-inch margins on the left to allow for notes and 3 inches on the right to allow for coding. I chose to do on-paper coding because of the simplicity but also because on-paper coding allowed me to work off screen, which enabled me to fully immerse myself in the data without distractions.

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[7] During this interaction, my interviewee announced to their cousin that they had participated in my research project, so I am not violating their confidentiality now.

A thesis committee member suggested that I begin coding the transcript that would provide me with the most information. However, I could not make this decision after finalizing and reviewing my transcripts because I felt they were all extremely powerful and provided so much rich data. So, I picked a transcript randomly from my pile. I first re-read each transcript in entirety before coding to regain familiarity with the content of the interview. I then again re-read each respective transcript and underlined pertinent information that related to my research questions, as well as other interesting information, and wrote short descriptors (codes) in the left margins. I then went through the rest of the transcripts and did the same process: first reading through and then reading a second time while coding.

After an initial coding of all the transcripts, I categorized the codes. There was an abundance of information, and after subjecting my committee to a lengthy presentation on all the possible research findings, I was advised to focus on the most pertinent codes for my thesis. My strategy then was to see which of the code categories directly answered my research question: What does it mean for STAT to work? For instance: *What does it work to solve? How does it work?* I made a document with my framework of these new research questions, with further subcategories listed underneath (see Appendix G), intended to be a living document as I went through the coding process. I also began a demographic document where I randomly assigned interviewees with a pseudonym, with the exception of "Bob" who wanted to use their own name, as they publicly write about their experiences with drug use, addiction, and various treatment approaches, and therefore were not concerned about confidentiality. However, because my approval from the university's research ethics board was predicated that I would be ensuring the confidentiality of my participants, I could not do this. They were understanding, but were adamant they wanted to choose their own

pseudonym. Although I had been advised by my committee to not allow participants to choose their own pseudonyms as this increased chances they would be recognized, I felt that giving space for "Bob" to have autonomy on this was integral to reduce the inherent researcher-researchee power imbalance (Hunter et al., 2019).

Along with the pseudonyms for my participants, I tracked basic demographic information including gender, age by decade, ethnicity, health authority, housing status, employment, which medications they had been prescribed for STAT, how they consumed these medications, and whether or not they are a concurrent opioid user. The real names of the study participants were erased from both transcriptions and the demographic page, but a list of the participants' first names linked to their pseudonyms was kept separately on my locked computer, so I would know which interview data to erase in the event that a participant contacted me to withdraw from the study.

I went through each paper transcription a third time to review my coding and see if I missed anything or if I could identify any new codes that fit in these new sub-questions. Finally, I went through the transcription a fourth time next to my computer, with the printed-out coding framework document and a digital copy of the transcription open side-by-side. I typed in and sorted the codes I had hand-written in the transcript in my coding document, as well as cut-and-pasted illustrative or powerful quotes from the transcripts under each code. After this process was completed, I burned all the transcripts in a backyard fire to celebrate finishing the coding stage of my thesis research and to eliminate any risk of being seen by any outsider eyes, as the apartment building in which I lived was in a neighbourhood that several participants frequented, and the communal garbage and recycling dumpsters were high-traffic zones.

Evaluative Criteria

*Evaluative criteri*a are strategies and paradigms in qualitative research that increase the chance of producing high-quality research (Rose & Johnson, 2020). Some evaluative criteria strategies I utilized in my research are reflexivity, including negative case analysis, prolonged exposure, worthy topic, ethical research standards, member-checking, and intercoder reliability.

Reflexivity is a strategy to increase awareness of a researcher's personal bias towards the topic by thoroughly considering their relationship to the subject, their personal stake in the research, and being aware of the power imbalance between the researcher and research participant, both as an inherent result of the dynamics of research and inequities in the social locations of the researcher and those being researched (Rose & Johnson, 2020.). Throughout the entire process of my thesis, I practiced reflexivity, primarily by reflecting on and remaining transparent about my personal relationship with the topic. To mitigate my personal bias bleeding into the findings, I put my bias in plain sight and clearly stated: Yes, I have a bias that this intervention can work; however, my research question does not seek to affirm or contradict this bias, but instead focuses on subjective understandings of the participants' embodied understandings of what an intervention "working" means to them in the context of their lives, their hopes, and the context of their personal relationship with illicit substances. Cresswell and Roth (2017) describe this as a "clarifying researcher bias" (p. 261), which allows the readers of the research to know my position relative to the topic, and the orientation from which I embarked on this research.

Another validation strategy I used was including a negative case analysis. For example, one interviewee reported that STAT did not work for them at all, and that the

available medications were not sufficient to make it "work." Rather than determining they did not fit the inclusion criteria of the study and being fearful they would contradict other data and my belief it works, I continued the research interview to try to understand their position and learn more about it. The validity is only enhanced, write Cresswell and Poth (2017), when the researcher "provides a realistic assessment of the phenomenon" (p.261). Indeed, the data derived from this interview certainly does not invalidate or contradict the other interviews; rather, it adds complexity to the data derived from those who felt STAT did work, and nuance and dimension to understanding how perceived goals and anticipated effects of STAT can influence a person's success with the medication.

Additionally, it would be impossible to not have a predetermined understanding about whether and how such medications work, given the length of time I had been immersed in the harm reduction and substance use field. But rather than detracting from my research results, some methodologists write that this immersion adds the credibility and validity of the research through what is called "prolonged exposure" (Cresswell & Roth, 2017; Rose & Johnson, 2020) because my experience in the substance use field academically, professionally, and personally provides a rich understanding of my research subject.

Worthy topic is another evaluative criterion described by Rose and Johnson (2020). I have explained why the topic is worthy, given the ongoing overdose crisis and debates in treating substance use disorder. Indeed, my participants expressed they were motivated to participate because of the worthy topic: They discussed the concerns of the ongoing toxic drug crisis, public misunderstanding of PSS, and the lack of attention towards stimulants.

Credibility and validity refer to how much the research can be assumed to be accurate, and transparency about how I will ensure accuracy in my research (O'Connor &

Joffe, 2020; Rose & Johnson, 2020). To ensure credibility and validity in this thesis research I used the strategies of member-checking and intercoder reliability. Member-checking is the process of letting the research participants review codes, themes, and findings in order to receive participant input on resonance and accuracy of the data analysis process and also to add nuance and complexity to the research findings (Rose & Johnson, 2020). Participant feedback is used to evaluate the codes and themes produced in an ongoing process of feedback and revision. Rose and Johnson write that member-checking provides the valuable purpose of "reorienting researchers and the developed qualitative data to produce more representative analyses of social phenomena" (p. 441). This ensures both the data and the analysis of it accurately reflects the voice and experiences of the participants. Early after finishing the research interviews, I was accepted to a drug policy conference in Scotland which was moved to an online format because of the ongoing pandemic. I needed to prepare a short video of my conference presentation. This fortunately meant I could share the video with several participants and ask if they had any concerns or feedback. Additionally, several participants were present for an in-person presentation of my research at the BCCSU conference in April 2023. No concerns were raised at the time, and the participants felt the presentations represented their perspectives and compared and contrasted their experiences with others in an interesting and compelling way.

Finally, to ensure my bias did not disproportionately influence how I interpreted the interview data or affected the coding process, I participated in an intercoder reliability process with two members of my committee. O'Connor and Joffe (2020) write that reliability is important in the early coding phase because this is where "analysis begins to move beyond the raw data into a more abstract conceptual framework" (p. 2). This allows for a more

careful and rigorous coding process throughout the research project. I distributed a sample transcription to two members of my committee and used a random number generator to choose a page from it that we would all code. Then we compared what we had coded on that page. By comparing my codes to those of more experienced researchers, I could reflect on my reasoning and relevance for codes chosen. However, our codes were largely similar, which assured my committee I was not projecting any previous conceptions of the subject onto the experiences of my research participants.

Throughout the process of creating this thesis, I made great efforts to ensure I produced a high-quality research product by remaining reflexive of my relationship to my research topic and the dynamic between me and the participant; choosing a topic important to both the participants and provincial drug user community, in a field in which I have substantial experience; including disconfirming evidence; checking in with participants about my codes and findings to ensure they were congruent with their experiences and perspectives; and by engaging in an intercoder reliability process with members of my thesis committee. Additionally, I did extended research on ethical concerns regarding using drug users as research participants to reduce any potential exploitation and made concerted efforts to counteract exploitation by acknowledging the contribution and expertise of my participants by financially compensating them for their contributions and soliciting their feedback on the output of my research.

Research Limitations

This research project had several limitations. Due to COVID-19 public health guidelines at the time of data collection, interviews and recruitment could only be conducted virtually, rather than in-person. This imposed barriers to recruiting a more marginalized

faction of participants throughout the province (although because of my community connections within Northern BC, I was able to recruit unhoused participants locally and help coordinate access to phones or computers through different social service agencies). As well, this research would have been strengthened by the very thing I think RCTs ought to do: have meaningful inclusion of **PWLLE** of illicit stimulant use, especially within research design, data collection, and findings interpretation roles. However, hiring other researchers was outside both the scope of this independently researched master's thesis and my available funding, which was limited to a $400 contribution from my initial thesis supervisor's institutional start-up research fund towards the stipends for research participants.

Conclusion

In this chapter, I have explained the process by which I recruited and compensated participants, engaged them, interviewed them, what I did with that interview data, and how I turned those interviews into codes and themes. I also reviewed several ways in which the quality of my research was enhanced, and a few limitations of this research. The next chapter will review the results of this process. In *Chapter 4: Findings*, I first describe the demographics of my ten participants, then thoroughly describe the themes that emerged from the data analysis and provide illustrative examples of these themes with quotations from my interview data.

Chapter 4: Findings

Participant Demographics

In total, I interviewed ten people around the province of BC who had used pharmaceutical stimulants to replace or reduce their use of illicit ones. Seven were polydrug users, who consumed **stimulants** as well as opioids, and three used stimulants but not **opioids.** I am, however, reticent to call those in this latter group "not polydrug users" because for two of them alcohol was a prominent feature of their substance use.

Of my respondents, half (five) were men, two were women, and extremely interestingly, three identified as non-binary. Three were First Nations, and seven were white. Eight lived in urban areas and two lived in rural areas, but three of the urban dwellers lived in smaller urban centres in more remote areas of the province. Two reported that their drug of choice was **cocaine**; two only mentioned **methamphetamine**; the rest would do either but used meth more frequently because of its affordability. Two respondents used Adderall (mixed amphetamine salts) to replace their illicit stimulant, and both reported consuming it orally most often, but also both reported using a crushing method in order to bypass the extended-release mechanism. Three participants used **dextroamphetamine**, and five used **methylphenidate.** Of the methylphenidate users, four of them regularly injected their medication. Eight reported being required to do daily pharmacy pick-ups, one would receive their medication dispensed in a two-week supply but was subject to random pill counts and UDSs, and one purchased their Adderall illicitly. Three respondents lived in market housing, three lived in supportive housing, and four were unhoused and accessed the shelter system.

Themes

As I went through the thematic analysis coding process explained in the above chapter, and the codes merged into emerging themes, these themes were answering the central research question in very specific ways. I sought to understand how users of STAT conceptualized it to work and how this manifested, or they hoped it would manifest, in the context of their lives. As it was an exploratory study, I asked very general questions and made space for the participants to discuss any aspect of STAT, while also making sure the topics I outlined in my Interview Guide (see Appendix F) were addressed. As a whole, the group talked about the problems associated with illicit stimulants, so why they wanted or needed STAT to work. However, they also talked about the effects of illicit stimulants that appealed to them and motivated them to continue using illicit stimulants, which were also the effects they sought in the prescribed alternatives. They also described the specific ways and patterns in which they used STAT to make it work for them. I asked them how they knew that STAT worked, and the participants described a wide range of physical, mental, and social changes in their lives. Finally, the participants also had a lot of feedback on some negative aspects of the STAT clinical guidelines and policies and practices associated with receiving STAT but also had very clear suggestions for improvement.

Why did Participants want STAT to Work? (Reasons for Accessing STAT)

In my interviews, participants discussed their reasons for wanting to use a replacement medication for their use of unregulated stimulants. The themes that emerged were psychological problems, physical problems, social problems, problems with the unregulated drug supply, and functional reasons for needing to take stimulants.

Psychological Issues. Overwhelmingly, the primary reason why participants wanted a prescribed alternative to unregulated stimulants was because of how their ongoing use of unregulated stimulants was impacting their mood, mental health, and cognitive functioning.

Mood and Mental Health. Brenda discussed how, for her, using methamphetamines caused emotional instability. She said:

> *When you get that **inhale**, you go up. The getting high part. it takes four to six hours to start coming down. So, when we start coming down, drop and that's when you get into your depression and your roller coaster with your emotions and your moods and everything that goes along with that*.

Tyson told me something similar about using methamphetamine saying, "*It made me just irritable and make an ass of myself and not think things through rationally, you know*?" Jesse's primary reason for wanting to reduce their cocaine was because of how it impacted their mental health. They said that after heavy **cocaine** use, they "*would just like, like, stay in my room for days, not return texts, not eat, not talk to anybody. Purposely avoid appointments, like, say things to make my friends worry about m*e".

Cognitive Functioning. Participants also remarked on how their use of **methamphetamines** was impacting their cognitive functioning. Paul said:

> *You can feel it eating your brain… like if you were on **side** extremely heavy the day before, like on a Tuesday, and you wake up Wednesday morning. Until you're using, you're really a mess. Really. You can't unlock parts of your mind, you can't think.*

Tyson, reflecting on when he was using methamphetamine heavily, said, "*I'm just a basket case. I'm starting to forget people's names. Even people who owe me money… Lots of important things I forget*".

Physical Problems. Participants discussed wanting to quit or partially replace their use of unregulated stimulants because of how periods of binging impact their physical health, particularly reduced eating and sleeping. Brenda and Cody both discussed these in the context of binging. Brenda said, "I *went on [a] three to four months bender and I literally locked myself into a bedroom. I didn't eat; I didn't go to sleep. I didn't do anything. It was terrible. I went down to 89 pounds".* Cody told me about an incident in his 20s when "*I had a stroke, a TIA stroke they call it, we were up for seven days straight*".

Jesse discussed this lack of self-care in the context of the aftermath of a binge. They told me, "*The worst I was ever like in bed and you know, not eating, not showering. I mean, I definitely ate a little bit but like I think two weeks was probably the longest that it that it lasted, but that's like in bed in the dark*".

Other participants discussed wanting to switch to safer alternatives as part of a larger goal to stop intravenously using substances. Bob said, "I*'m having a hard time finding vessels to inject into".* Tanis talked about this issue more in depth:

> *I killed this vein on the left side, and it's like there's, I don't know what's going on, but I just don't use it anymore and I am a really poor shot… which is why I'm like basically done, I'm on my like last you know, I really need to get off and I know I need to get off.*

Another physical problem from unregulated stimulants that was discussed was overamping. Alex told me about two instances of experiencing an **overamp:**

> *The first time one was frightening. I don't remember anything. I woke up in the hospital and kind of freaked out. The second time I was in and out of it. Luckily enough we were close to the hospital, my body was overheating so bad. And it was*

just because I did a really... I did a lot more than I should have done. Like, that was when I was just beginning to shoot. So, I didn't know that doing a lot more would affect me like that but it did.

Social Difficulties. Another reason why the participants wanted to stop or reduce unregulated stimulant use was because of how it was creating social problems for them, particularly in the realm of finances and their relationships with friends and family. These problems were exacerbated by the criminalization of their substance of use.

Paul discussed how easy it was to spend large amounts of money on **crack cocaine** and reflected on how this led him to overspending in the past:

I used upwards of about a million bucks worth of crack, as a dealer with very good, very good access to it and very good pricing... So that entire fortune that I had amassed I went and sunk the whole fuckin year.

Jesse discussed finances in the context of both the cost of cocaine and how it led them to skipping work days. They told me, "*Coke's like, really, expensive. And when I was doing it in [other city], when I got like, hooked on it, or whatever, I was like, spending more money on it and like, not going to work".* Alex talked about how the illegality of methamphetamine impacted their ability to work, where they often interact with police officers, saying "*When I'm stopped by cops, even if I just had enough meth to last for the day, it would still make me really nervous*".

Another social problem that accompanied unregulated stimulant use, often compounded by use of opiates/opioids or alcohol, was the participants' relationships with their friends and family. Bob told me, "*I end up annoying the people around me, and running around three in the morning asking my family and friends questions like 'is my jacket under*

your pillow?' while they're trying to go to sleep for, work or whatever". Jesse's relationships with their loved ones were impacted by their behavior during their low periods after cocaine use: "I *would just like, like, stay in my room for days, not return texts, not eat, not talk to anybody, say things to make some serious damage and I don't like that people who care about me, my family, they have to worry while you're stuck in this lifestyle".*

Concerns with the Unregulated Supply. Another theme that emerged in the research interviews is that participants were concerned about the unpredictability of the unregulated supply, both in terms of the quality of the product and cross-contamination with substances with potential to cause overdose. Greg had particular concerns about changes in global production of cocaine:

The quality of the cocaine is really bad. You know? For a while, for years it was really good. I read in the newspaper awhile back that they're growing a hybrid coke, coca plant now and they're growing it in Brazil and in the Philippines, it produces a very poor-quality product. A hybridized coca bush. That's on the street now. Just a lower-quality cocaine.

In comparison, Greg described dextroamphetamine as "*so much clearer, better, higher*". Tyson discussed changes in the meth supply, saying that "*Meth changed so bad and it was just causing a lot of people to get infections. It's not made right anymore. There's lots of dirty stuff in it".* Paul discussed how unpredictable the unregulated drug supply was in general, saying that, "*The ups and downs are sometimes good and sometimes it's not, it's hit or miss".* In comparison, the appeal of taking prescribed safer supply is that the "*[s]tuff is the same every time. It's not a guessing game".*

One of the ways the lack of quality control in the unregulated drug supply manifests

is that the cross-contamination of fentanyl and fentanyl analogues onto stimulants during the weighing and packaging process carries an overdose risk for those who are opioid-naive. This was a concern for Alex, one of the few participants who did not also do opioids, who said "*It's like people don't believe that meth is cross-contaminated with fentanyl. Like, it is. Like, it's cross-contamination, but it's also just like, you don't know what you're buying nowadays".* Paul had seen cross-contamination this first-hand:

> *I've seen people, crack users, that have never used opioids in the life. And it's always cross contamination on the scale… And just the amount of fentanyl that's on the scale is enough to somebody who's never used fentanyl before. They turn blue and then they hit the ground, bam. Just instantaneously.*

What does STAT Work to Replace? (Functional Reasons for Using Stimulants)

Despite these above-described emerging issues with the unregulated stimulant supply, participants discussed reasons for simply not quitting and continuing use, thus necessitating a safer pharmaceutical replacement. These reasons were improving focus, low energy, lack of confidence, and managing crisis or trauma.

Focus. Many participants shared that they relied on stimulants to provide focus motivation, with some indicating that they felt they had ADHD or were diagnosed with ADHD at a later age. Bob told me:

> *I was only recently diagnosed with ADHD a couple of weeks ago, a couple months ago. And I think it's obvious to everyone around me and myself that I had ADHD. But it's really a big part of why I'm using stimulants is to self-medicate for that so that I can actually focus and complete tasks and get things done instead of just piling things up in the corner and pretending I don't see them.*

Tanis also shared that she felt that she had ADHD and how stimulants impacted her symptoms:

> *When I first started injecting the side, I got this effect that hit my brain that like… I believe in some sense… I may have been ADHD I'm not quite sure but I know that there's something in it where I know I think a lot, I analyze a lot all the time, I'm always thinking and I would have six thoughts or things I might be working on at any given time as an average right? And those six things, when I injected side, pow! Suddenly I just got 10 connections between the six and how it was connected to the next four. It was all interconnected all together. It was all just one great big, everything made sense.*

Doug shared something remarkably similar in less words. When I asked him why he started using meth, he replied, "*Just like Ritalin, it kind of eased my mind… Just put pieces of the puzzle together I guess".* Brenda shared that starting to use meth in her 30s helped initially improve her functioning: "*I smoked a bowl with my girlfriend and well that changed everything… I started cleaning my house, my house was always clean I'd wash my walls I'd wash the ceiling. I had five jobs within six week*s".

While prolonged use of illicit stimulants may have later caused negative side effects, these participants had a baseline of what they felt was subpar functioning.

Energy. A theme of low energy was also present in the data. Greg felt that a stimulant was necessary for increasing alertness in his older age:

> *Well, if you take it regularly, on a regular, you know, every day at same time, and it's a little wakey up along with my morning coffee or wherever, it seems to, you know, maybe it's a little bit for geriatric use. I'm almost 70 years old now. It does help.*

However, when reflecting on his past, Greg struggled with sleepiness almost four decades earlier as well:

> *I used to have a problem driving... when I was driving, you know, I was over in the Eastern part of Washington state. All the sage and sand and even in the morning, I'd be driving along and be the only car on the road... on the Highway. I'd get (unintelligible). I tried to get something… something to keep your eyes open at night.*

Jesse as well relied on stimulants for driving, as well working, when they were suffering from hangovers: "*Adderall actually then had another function where when I was hungover, but needed to like drive, eight hours or like, go to work or just do something, I could just pop the Adderall".* Tyson was a participant who was trying very hard to limit his use of unregulated stimulants despite his prescribed dextroamphetamine not giving him the energy he desires. He wanted "*something with a bit more of a jam to it… just so I'm active and I can function in like day-to-day routine to achieve things because with this medication now I don't really accomplish much".*

Alex also described feelings of inertia without stimulants, saying "I *get really, really depressed during like, just sluggish and I'm just not, I'm not a person. If I don't take some kind of stimulant and I'm just not, people don't like me".* This feeling of unlikability was also expressed by participants who described themselves as shy or unconfident, which is discussed in the below section.

Confidence. A number of participants expressed a lack of confidence while not on stimulants. Tyson, who started using stimulants at age 12, told me, *"Some friends and I tried it, smoking a joint. Right away I knew they put in some kind of chemical. And yeah, I liked it from the get-go. It gave me a lot of confidence. I could do anything*". Tyson told me he had

tried quitting stimulants “many times” before having access to STAT. I asked him how that felt and he responded, “*Naked. Like I go outside and I want to go back inside. I feel naked*”. At the end of the interview, he apologized for being so shy, telling me “*I had a stutter when I was younger and people I don't know I have a bit of trouble talking to”.*

Stuttering was also mentioned by Brenda, who told me that before initiating methamphetamine use “*I was locked in my house. I couldn't leave my house. I couldn't have a conversation. I tried to talk to people and I would stumble over my words*”.

Jesse as well told me that confidence and ability to talk to people was a reason they loved using cocaine, saying that after snorting a line of cocaine, *“you feel numb for a second and then you’re on top of your game. And you can just chat to everyone. It just makes you, like, confident”.*

Coping with Crisis. Interconnected with lack of confidence, participants also shared that stimulant use helped them with periods of trauma and grief in their lives. To preface this section, I would like to share that I stressed to the participants that my intention was not to trauma mine, and that they did not need to feel pressured to share triggering events or stories with me. I told participants that to reduce the negative impacts of participating in the research. However, many did share this information because of how traumatic events directly impacted their substance use. For instance, Cody shared that he began using speed after a long period of abstinence because of marital separation:

> *But it was about two months after she left me, is when I started using because when I would use speed it's not like I didn't forget what was happening, I knew everything that was happening, it was still going over in my head but I didn't cry anymore.*

Brenda shared that she began using speed immediately after beginning sex work. She

told me that:

> *I found out later it was due to— I know you said no trauma— but the sexual abuse that I endured as a child and then being an escort those two combinations, how it affected my mental and my emotional was it was really detrimental on me.*

Jesse discussed using various substances from a very young age to cope with trauma:

> *But there was also a part of me for me, it also kept like intrusive thoughts at bay, you know, to be under the influence of something like whether I was huffing car starter or like, snorting Claritin, or eating my friend's Ritalin, or whatever it was like, it was kind of like moments that it couldn't just like, it wouldn't come into my brain.*

They later discussed using cocaine to manage the effects of alcohol, which they used to manage trauma:

> *I used to like drinking and it would loosen me up and also give me that confidence. But then when I started doing coke and getting confidence from coke, I also, like, had a higher tolerance for booze then. So then after I started doing coke I couldn't drink without doing coke to not get like drunk and sloppy and out of control and feel really grumpy.*

The purpose of this section was to explore the functional reasons why participants use stimulants, despite motivations to discontinue using unregulated stimulants. Participants used stimulants as a tool to be productive, treat ADHD, gain energy, cope with trauma and loss, and as well perhaps manage the side effects from other substances used to cope with trauma and loss. This provides context for why the participants would require a replacement medication rather than solely using counselling or another psychoeducational tool to abstain their use. Next, I will outline the various ways that participants used STAT to achieve their

goals.

How did Participants use STAT to Work? (Patterns of Use)

Nine of the ten participants in my research felt that STAT "worked." How these participants measured this success, however, varied greatly and could be categorized into four different conceptualizations: complete substitution; occasional chipping; use cut in half; and stimulant Sinclair Method. This is important because the way in which STAT success is measured in clinical trials is complete substitution after being given scheduled daily witnessed doses of stimulants taken orally. By looking at alternative patterns of use of STAT users who felt the medication worked and improved their quality of life, we can see the limitations of these clinical trials and how the ways they are designed ignore the creative and flexible ways in which users use STAT to suit their individual needs.

Complete Substitution. Two of the participants, Greg and Paul, completely stopped buying unregulated stimulants due to being provided with prescription stimulants. Paul told me, "*I have no desire to use coke or meth while I have my methylphenidate".* I asked Greg if he still did cocaine:

Greg: *Oh, no no, not at all, I quit that.*

Juls: *Do you feel like that's because of the Dextroamphetamine*?

Greg: *I think it helped a lot, in my quitting, I really do.*

However, Greg is the only one who would have a chance of passing a clinical trial, due to taking his medication orally and having one witnessed dose. He told me, "*It's witnessed, you know, I mean, they give me all my meds, I take them there, for blood pressure, a few other things".* Greg is given a 20mg dose of dextroamphetamine with his witnessed meds and given a carry of a second 20mg pill: "I*t depends whether I want the other one*". It

would be remiss to not note that Greg was also not someone who used stimulants as habitually or compulsively as the other participants. He told me, "*It's replacing powder cocaine, I was injecting that but not all the time but you know, usually with down, using it in a speedball".* When asked how often he was using powder cocaine before starting STAT, he said "*Oh, whenever we had the money. When we had the spare loot, you know? If we had the funds, we would do it*".

Paul told me "*I used a combination of both [unregulated and safer supply] to stretch for at least for six months. And then eventually I was just… tired of wasting my money on the street drugs. I didn't really need them anymore".* Additionally, Paul injects his medication and often sourced diverted STAT to use. on top of his prescribed daily 120 mg of methylphenidate. Because he feels like lower dosages taken orally do not have the desired effect that allows him to not crave the unregulated supply, he would be disqualified or unsuccessful in a clinical trial, despite the objective success of completely separating himself from the toxic unregulated drug supply, especially as an individual who has overdosed "over 30 times" as he told me.

Chipping. Chipping is a colloquial term used amongst older drug uses that refers to controlled or occasional use of heroin. Its use can be located in an academic article from 1976 on a phenomenon of controlled opioid use called the "Natural History of Chipping" (Zinberg & Jacobson), and a 1980 article on the temporal use of heroin differentiates between heroin habit and heroin chipping (Sinnet et al.). Chipping was a word used by several of my participants, particularly the older men, when referring to occasional or controlled use of illicit stimulants, while on STAT. Although the word has been traditionally used for heroin, by using it in this context, they are differentiating this use from their more

habitual or compulsive stimulant use in the past. Four of the research participants reported that because of STAT use, their use of and relationship with illicit stimulants had changed drastically.

Doug said that "*it works quite a bit… I'm not buying meth anymore. Just chipping, you know? I only use it if it's given to me or, you know, I got an extra 10 or something like that*".

Tanis said similar things about her use of street stimulants:

> *Like, I'm basically off of crystal meth for most point I'm like… I smoke it a little bit, inject it just a little bit, but you know, like on a weekly basis maybe once or twice if that like and that's usually only when it's offered like we're I don't, I don't buy it except for like once in a while.*

Cody who had been cut off his prescribed safe supply remarked on how accessing prescribed safe supply reduced his cravings and use:

> *If I did do street drugs while I was on the safe supply, it was very little amount and there wasn't much to throw me off course or anything. Yeah. So now when I do street drugs, I get my hands on it and I do as much as I can, is I don't have anything else.*

Like Cody, Tyson found that using STAT enabled him to stop using unregulated stimulants for the most part, saying *"I still chip a bit with amphetamines, I'm not totally off of them but I'm not agitated and not as scattered".* However, Tyson also shared that it required a lot of effort on his part to not go back to heavy use: "*It works somewhat but it's like putting a band-aid on a bullet wound… It's constant work because I always crave it so I have to play it out. Know where it will bring me if I were to get at it heavy again*".

STAT as a Road to Abstinence. Within this group, there were two participants, Tanis and Cody, who saw prescribed safe supply, both stimulants and opioids, as a way to eventually stop consuming all narcotics, both unregulated and prescribed. Cody told me:

> *One day I'd like to quit everything. And not be on everything. Yeah. Like I don't want this to be a forever thing. 'Cause, I don't think my body is gonna take it. I don't want to die young. But at the same time, I think if you get stable on this stuff, and slowly micro dose yourself down. And it's such a small minute way, you would barely feel it.*

Similarly, Tanis wrote that discovering both opioid and stimulant replacements medications were available to her made her hopeful that she could wean herself off the unregulated street supply. However, she was not initially informed about the option of stimulant safe supply and increased her use of methamphetamine in order to cope with the transition from street fentanyl to prescribed **hydromorphone:**

> *Dillies became my jump actually, when COVID hit was when I really thought: way to really get off down because I was familiar with* ***Dilaudid*** *and Dilaudid was a safe supply--that became the option in order to get through the withdrawals when I went into self-isolation, and then it became "okay, I can switch over and I CAN get through the withdrawals" and so I ended up becoming basically addicted to dillies over the course of a year but substituting and needing something else...I started increasing my side use, I believe, but it seems like prior to that I was doing the same thing back and forth with down and side, and then it became dillies and side*.

Interestingly, Cody also reported that he used amphetamines to cope with withdrawal symptoms from opioids:

> *The guy that I got a ride with, he wanted a lot of my (opioid) pills too, as part of the*

deal. I gave him... two-months' worth my doctor gave me. But I gave him most of my pills. So, I had no pills. And I had no doctor to prescribe them up here either. So, I started to detox. And what I did to avoid that was I smoked a lot of speed. I smoked a quarter ounce, sometimes a day, of speed.

This speaks to the fact that for polysubstance users, stimulant use—both prescribed and unregulated—cannot be examined in a vacuum that ignores both prescribed and illicit opioid use. For polysubstance users, prescribed opioid safer supply also needs to be provided in patient-led formats and dosages in order for STAT to be successful as well. This is discussed more in the next chapter.

Use Cut in Half. Two of the participants specifically mentioned cutting their use in half, generally, with specific times that they only use the prescribed safe supply. However, their reasons for this and their experiences were very difficult.

Alex reported that since being on STAT, they were generally buying methamphetamine half as much as before—a half ball, which costs $80, was now lasting them two days rather than one. They did not intend on quitting methamphetamine, which created tension with their prescriber. However, with the provision of STAT, they were able to not use during work hours, or when meth was cross-contaminated with fentanyl in their neighbourhood, or simply not available to buy. They told me "*Like, I'm not quitting meth, I'm just gonna use less during the day, like I don't want to be running around at work and trying to fix a shot or something*". As mentioned above, they also found their access to prescribed amphetamines helped them cope with disruptions to the drug supply and avoid withdrawal: "I *squirrel away a lot of medication too, just in case, cause I'm just nervous about... I just keep it in case the meth runs out or anything*". Prescribed stimulants also make it possible for

Alex to avoid using contaminated methamphetamine: "*My overdose risk is really high. So, it's just like, just in case that (fentanyl cross-contamination) happens again, I'll probably... I'll have the opportunity to not worry about having to go buy something when I can just pop Adderall".* By having access to a regulated stimulant supply, Alex is also able to travel to their small home community and reconnect with family for the Christmas holidays, saying "I *don't want to worry about like carrying drugs with me and cross on the islands and stuff which is kind of nice. And you can't really get meth where I'm from".*

Brenda also reported patterns of being able to completely replace her unregulated stimulant use at certain times, while cutting her unregulated stimulant use in half during other times:

> *He put me on 20 milligram Ritalin in 24 hours and it just did wonders... there was no up and down the roller coaster ride, everything was working really, really good… And then somebody's just started stressing me out... it's like my voices attack me sometimes. You know, like I can be sitting there and everything's fine. And then there's like weeks at a time where I just… I'll be a basket case and yelling and screaming and you know and when it when those bouts happen no amount of drugs is enough. Like really, you know, it doesn't matter if I'm doing safe supply or if I'm just doing meth that I'm doing if I'm doing the both of them then I use half the amount of meth when I go through those bouts.*

So, while the 20mg of Ritalin was sufficient to provide some stability during most times of her life, it was also effective in cutting her meth use in half during times when she increases her instances of methamphetamine use to cope with auditory hallucinations. Brenda viewed this as a positive thing due to the negative physical and psychological effects of

heavy methamphetamine use, as well as high costs.

Stimulant Sinclair Method. One participant, Jesse, used prescribed stimulants—although diverted—in a way similar to a pattern of naltrexone use called the Sinclair Method (Umhau, 2019). Naltrexone is a medication that is used to eliminate the euphoric effects of alcohol and opioids (Hart et al., 2019). The Sinclair Method is a way to reduce alcohol use: the user consumes the medication before entering a situation where they previously had consumed more alcohol than they intended to or felt was healthy (Umhau, 2019). Jesse had developed a pattern of alcohol and cocaine use which caused what they called "*low periods*" following heavy consumption of both, which would last from a day to several weeks, during which they would isolate, miss work, and experience suicidal ideation. They were unable to remove themselves from situations where they would normally use cocaine and alcohol, as they were a musician who performed in bars and at parties (house shows) both locally and around North America.

A way that Jesse was able to manage a cocaine habit they found debilitating and difficult to control was to use diverted Adderall at the beginning of the night, telling me:

> *If I was amping up in the night I would take more, like if I was partying, but I would crush it up instead of just swallowing it. If you swallow the balls without crushing them. It's like a slow-release all-day thing. So, I would crush them up*.

Although they continued to use some cocaine, by consuming Adderall at the beginning of the evening, they experienced a reduction in cravings and thus a reduction in overall use, leading to a reduction in both the severity and frequency of periods of low mental health:

> *It's not like the Adderall got rid of addiction, or my propensity for wanting to do*

cocaine because I like, the ritual of doing it, you know what I mean? There was still kind of, like, connection and attachment to that. Right? I definitely didn't have to do as much though.

It Doesn't Work. One participant, Bob, contacted me to let me know that prescribed stimulant safe supply did not work for them:

I don't remember what the dosage was, but I was using it every day, as much as possible to try and, and replace it. I was basically trying to emulate an OAT program, but with, with prescription stimulants. There was a big problem with meth back in the late 90s, early 2000s. It was, it was really on everybody's mind in the government and, and in the city, and municipal government. And so, they were sort of just floating the idea around, you know, like, the same question I had. If there's a program for replacement of opioids, why isn't the one for stimulants, the medications… and it just didn't ever really go anywhere, unfortunately.

This participant gave me invaluable information on how and why they felt STAT did not work, which was congruent with information that emerged from the data from other participants on how STAT specifically—but also prescribed safer supply in general—could be improved. This is discussed in a section below.

How do Participants know STAT Works?

When participants indicated that they felt that STAT "worked," I asked them what that meant to them—that is, what were the changes in their lives that indicated that STAT worked? Despite four patterns of use within participants who felt that STAT worked, the answers were strikingly similar. Overwhelmingly, the participants indicated that using STAT resulted in stability and reconnection.

Stability. Stability was the most salient theme that emerged from this research question: stability in emotions, well-being, finances, and substance.

Emotional Stability. Emotional stability was a very common theme. Brenda, for instance, said: "*It did wonders, there was no up and down, the roller coaster ride, everything was working really, really good".* Doug explained that using STAT and cutting down on his methamphetamine use meant that, *"I, I'm just a lot more level-headed, not as quick in the mind about making bad decisions and getting a little antsy about stuff.*". Tyson had similar thoughts saying, "*I'm not totally off [illicit amphetamines], but I'm not agitated and not as scattered*". Paul told me, "*I get a feeling of well-being from it for sure. Doesn't matter, I could be in a bad situation and if I have methylphenidate, I wouldn't even care. I would be perfectly happy to be sitting in that bad situation. I'd be like, 'Hey, calm down and figure this out. No big deal.' You know?"* Jesse said, "*I tried it for the first time when I was travelling in the states or something because it was easy to get prescriptions, so it was easy to buy off people there… And like, it didn't make me as, I felt like it didn't affect me as much and make me as mentally unstable".* Alex, who had no intention of quitting methamphetamine, found that replacing some of their use with Adderall resulted in increased quality of sleep, telling me that "I *can sleep... it's just like... I get a more restful sleep I guess, in a sense".*

Mental Stability. Additionally, the participants felt that stability was achieved by improvements in their thinking, cognition, and mental functionality. Cody shared that, "*I was able to focus on shit easier. I wasn't like, you know, getting distracted by the smallest things*". Tyson told me that he's "*not as scattered. I have some sense of what I want to try to do for tomorrow with the little time I have left in life".*

Some of this stability was achieved by relying less on the black market. Cody told

me, *"I wasn't really craving speed at all"*. Jesse said, "*So Adderall yes, took away cravings for sure. Like yes for sure replaced cravings and served the same function*". Greg shared with me that *"It just uh... keeps my mind occupied, you know, keeps me from thinking about doing cocaine, from doing black market or aftermarket stimulant drugs*". Additionally, using the regulated pharmaceutical stimulant allowed for more predictability and stability. Paul told me, "*Stuff is the same every time. It's not a guessing game*".

Financial Stability. Another example of stability is financial stability. Using the pharmaceutical stimulant was beneficial in helping some participants work more. For Alex, this was due to being able to travel and be at work with a prescribed substance they take orally rather than a criminalized one they inject. When asked about the positive effects of STAT, they answered:

> *I guess not having to worry about doing a shot too in the middle of the day when I'm working and also not having to sneak drugs on me, I've had (unintelligible) and drugs stolen from me. and I've been searched, to just be able to have the Adderall and the prescription it protects me, if they try to stop me, I can say "I have a prescription for this.*

I asked Jesse how they measured STAT working for them, and they answered that it came down to them using less cocaine while partying:

> *So, because of that there were less periods of bad mental health and that helped me work my job and have money. And also, I wasn't spending loads of money on cocaine and Adderall was like $10. I wasn't spending as much money on cocaine. So, it was definitely good for my financial health. So, it worked, it worked for me.*

However, some participants felt that the daily dispense aspect of STAT limited their

ability to work. Cody lamented, "*Like, the irony is like, they're like, oh, drugs are stopping people from, like, having productive lives. And then it's like the drug treatment is also…"*

Overall, the participants indicated that STAT increased stability in their lives, despite largely not achieving abstinence from unregulated stimulants.

Reconnection. Another theme that arose when participants talked about improvements in their lives from STAT was reconnection. This was because of the increased stability discussed above and decreased criminalization, which allowed the participants to travel. Tyson shared that he first heard of the STAT from a friend who was required to take it in order to maintain his connection with his children: "*When I first heard of it, it was through my friend, my one friend needed to keep his kid, needed to go on safe supply... His wife said he had to stop using stimulants or he wouldn't have custody of his kid."*

Greg and Alex shared that having stimulant prescriptions allowed them the ability to visit family. Greg found on top of the ability to cross borders with prescribed dextroamphetamine, the stability of STAT was making room in his life to start the process of getting ID: "*But I'm getting it all together, I'm getting all my ID back again. You got to have all that if you wanna travel anymore. I'd like to go back down and visit all my family and friends down in Washington State*".

Alex shared a particularly poignant anecdote that they were planning on going home for Christmas soon after the interview, for the first time in years, saying "*I don't want to worry about like carrying drugs with me and cross on the islands and stuff which is kind of nice. And you can't really get meth where I'm from".*

How could STAT Work Better? (Suggestions for Improvement)

While nine of the participants explicitly expressed that they felt that STAT—to varying degrees—worked for them, themes emerged from the interviews about how STAT could be improved. The one participant who felt that STAT did not work had reasons for this that were congruent with other participants' suggestions of how it could work better. These suggestions were: decreased surveillance; increased autonomy in dosage and medication choice; and better messaging around potential dangers of overamping and other adverse events.

Decreased Surveillance. Participants largely resented the ways they were subjected to multiple means of surveillance when taking STAT, including forced daily dispense, urinalysis, and other medical monitor practices.

Daily Dispense. The most commonly reported method of prescribed safer supply surveillance was daily dispense. Daily dispense is the practice of requiring a patient to visit the pharmacy daily in order to receive a daily allotment of medication, some of it being witnessed. Eight out of ten participants were or had been accessing prescribed safer supply formally. Out of those eight, only one, Alex, was not subjected to daily pharmacy visits, and that only came after pushback from their pharmacist:

> *In the beginning of last year, I'd do like daily witness dosing and then my pharmacist was like, I'm not doing this, I can't do this with you, I can't do this with you. He had enough trust in me, so like, take your pills at home. My doctor was not happy with that but I was like, fuck it. I don't why she wants witnessed, you're taking medication, you're popping pills, it's not like you're doing shit like methadone or anything.*

Two participants were able to access their medication through medication programs in their supportive housing buildings, which mitigated the inconvenience of daily dispense. However, most others felt being forced to pick up their prescriptions was humiliating and a hindrance to their day. Cody, for instance, was able to accommodate daily dispense while working in a low-barrier setting, but saw daily dispense as preventing him from working in a higher-paying skilled labour position he had done in the past:

> *It's stopping me from really progressing in my life, job-wise. Like luckily I work at the overdose prevention site where I can say, "Yeah, I gotta run up the street," and just take it or whatever if I had to or, but like if I was doing like, you know, doing construction and I was out on a job site like If I leave at six in the morning and I come back and they're closed like, fuck, like. "Well, that's too bad," [the addictions doctor] would say*.

This was echoed by Doug when asked about daily dispense:

Doug*: Well, I wouldn't hanging around, so close or before nine o'clock, I'd be doing other things.*

Juls: *Like what?*

Doug: *I had some, I had some jobs on [street name]—window washing, janitorial services. and that.*

Jesse—who accessed their STAT through diversion before the program began who now supports people on OAT in a different country and as well works in policy— sees daily dispense as a problem for the people they support and something that would dissuade them from accessing STAT through their own prescription:

Would the safe supply program work for me? If I had a prescription now? If I had to go in every single day to a pharmacy? It would depend on where the pharmacy is located. From my experience, I work with people who travel very, very far for methadone every single day, and it's a huge hindrance on their lives. And like, if they're late, they get denied. Being in my place right now, being employed four days a week, if I had to rely on that prescription every day, I don't even know I could do it because it would conflict with like, work and stuff and if the pharmacy is open from 9 to 6 you know that's just that's really constricting when you're making somebody show up somewhere every day. They're like "oh your drug use is preventing you from like participating in normal things like getting a job." But the treatment is also preventing you from getting a job because you have to go to the pharmacy every day.

Paul was an anomaly in that he appreciated daily dispense. This was because he stayed in shelters where theft is very common:

Due to the lifestyle here, it's good. I had to pick it up every day because there's the times I get ripped off, where people steal my pills and stuff. If I had a week's worth and they do steal from me, I'd lose a weeks' worth of pills and I wouldn't be able to get them back. It's a pain in my butt that I have to go every day but the thing is, if I do get my pills, if they're stolen, I can just go in here tomorrow… I've been ripped off 150 times a year at least.

However, Tanis, who was unhoused in the same community, felt that the act of lining up in the morning to get her STAT, regardless of its practical purposes, was humiliating:

It feels like you're being made fun of like it becomes like a hang your head Oh, there's the addicts again. Ding, ding, ding, we're going through the door, you know, like and

they all know and then we become labeled as addicts right there and looked down on by some, maybe by some, maybe not. It just becomes a self-deflating ego balloon or whatever.

Urinary Drug Screenings (UDSs). Participants shared that UDSs were a gate-keeping mechanism that healthcare workers used to surveille the presence or absence of substances in the participants' bodies. Cody, for instance, had his prescription cut off due to "failing" a UDS:

The nurse comes up to the front office part in the clinic and sits down beside me and says, "there was none of that your system" I was like, "What are you talking about?" I'm like, "Well, that must be wrong. You must have got my samples mixed up or something." Because when there are people going in and out, it can happen, mistakes can happen. I wasn't going to, you know, get mad at them for that. But I said "Well, let me piss into a cup again. Please. Like I can. It's there you know," and then they refused to and told me to leave.

Alex had the difficult and absurd task of ensuring their urinalysis would show up positive for Adderall, their prescribed stimulant alternative, even after their doctor didn't provide a prescription for a period of time. This task was extra difficult bearing in mind that Alex doesn't necessarily take their Adderall every day, but instead uses it to avoid using meth at work or when fentanyl cross-contamination or supply dry-up necessitates the use of a replacement supply:

And then the fact that I also had to keep the Adderall in my system. And then like I wouldn't take it every day so it's kind of difficult. Because she would, uhh... It was difficult because I would to have pee dirty, I guess, with Adderall in my system and

> *also meth. She cut me off a few months ago. She just didn't call me for two months. But I didn't have any medication for two months but she still expected me to pee Adderall when I went for bloodwork done.*

Pill Counts and Blood Tests. Alex was subjected to means of surveillance that the other participants weren't and felt they were being closely and unnecessarily monitored by their doctor:

> *That's the other issue is just like having to, like… do blood work and stuff about that. It's also like, if I lose weight or anything that she gets concerned and just, like, starts freaking out. I was like, I lose weight and gain it a lot. It fluctuates.*

These blood tests were done every two months, and included screenings for sexually transmitted infections: "*even though I'm not sexually active and like, it doesn't make sense".*

Another form of surveillance Alex had to submit to was mandatory regular pill counts: "*I'd have to go in, anytime I went in for a refill. They made sure that I was done all my pills".* This practice is particularly frustrating for Alex because, as described above, the ways in which prescribed stimulant safer supply works for Alex does not necessarily mean they take their Adderall every day or the same amount every day. As well, Alex's initial prescribed doses did not meet their needs, which added additional difficulty in passing these pill counts:

> *Adderall was helping but I was also taking like, ten pills instead of taking like 45 milligrams as prescribed. What was frustrating though is that I asked for the 20 milligram pills and she refused to give me. She gave 15 milligrams instead. It helped cut down a bit but it didn't help out as much as I wanted it to. Because they started monitoring how much I was taking, and like I was getting pill counts and stuff like*

that, it was really frustrating.

This lack of autonomy around dosage is part of another theme that participants discussed feeling frustrated about, which I will describe in greater detail below.

Increased Autonomy. Most participants discussed lack of autonomy surrounding medication types, medication formats, and medication dosages as a limitation to prescribed safer supply.

Control over Medication Choice. A theme that arose in my research was that there was some dissatisfaction around the stimulant medications included in the Risk Mitigation guidelines, which are dexamphetamine and methylphenidate. Tyson, for instance, was a participant who felt that his current medication worked "*somewhat but it's like putting a band-aid on bullet wounds? It never totally helps".* Tyson expressed that he wanted a stronger medication: "*It's not strong enough, the Ritalin or the Dexedrine. I do... a lot of amphetamines and I can handle a lot of it. There's no reason why they shouldn't just give me Adderall... Why do they want to fart around on that?"*

Alex was the only participant who was prescribed Adderall, but had to argue with their doctor for year after initially being prescribed dexamphetamine:

> *After about a year of [dextroamphetamine], it wasn't helping anything at all. Like I was using a lot more meth to top it off and stuff like that. Which could be an issue. She's talking about how dangerous that was, and I had a couple overdoses. So, she was just... I fought with her to finally change to Adderall.*

Jesse, who felt that Adderall was extremely useful in controlling what they identified as being a debilitating cocaine habit, accessed this medication illegally but did not feel they could have accessed it through legitimate pathways:

Back then I was trying to figure out how to get an Adderall prescription. I was to like, figure out how to like, play the system and say I had symptoms of ADHD to get it but yeah, I would have loved safe supply if it was normalized to talk to my doctor about like, look, I could benefit from this. Because cocaine is affecting my mental health. It's affecting my ability to go to work. It's affecting my relationships. This prescription can change that. But it's honestly, like stressful even trying to think about that, because I talked to my doctor about drug use, like once and then never again because of the like, kind of side eye stigma that she gave me.

While Adderall in particular was identified as an effective medication to replace or reduce unregulated stimulant use, participants either felt they couldn't be prescribed it or had to struggle to get it. Alex, who supports other drug users, felt that the *Risk Mitigation Guidelines* (BCCSU, 2020a) would be improved with the inclusion of Vyvanse, another ADHD medication and Desoxyn, pharmaceutical-grade methamphetamine that is not currently available in Canada:

Juls: *If the BCCSU hired you to write new guidelines for the stimulant safe supply, what would you….*

Alex: *I would make sure that like, as a client you could actually talk with your doctor and you're able to actually get the doses you wanted, because everyone that's a long-time meth user are on different doses. So, being able to access to like whatever dose you think or feel would work and being able to access not just Dexedrine, but also Adderall and Vyvanse and stuff like that, and try out different ones. And also, just like fighting to get Desoxyn available here.*

Control over Dosage. Alex was a participant that struggled with stimulant safer supply dosage in particular:

> *It was like a fight with her to get 40 milligrams, and then that's two… so I'd get 80 milligrams per day. it would be at 40 milligrams morning. 40 milligrams a night. I would take like, I would just take ten (pills) and still not feel anything…. They don't understand why I'm asking for more and more and keep increasing my dose. Like, you don't want to give a lot of Dexedrine to a meth user but like my tolerance is higher than she thinks it is. And she thinks that 40 milligrams, like 80 milligrams per day is good and I'm like, it's not, I'm non-functional unless I take a lot of it.*

Paul, who was prescribed 120 milligrams of methylphenidate daily, also described his struggles to reach an adequate dose and how he supplements with buying additional diverted pills:

> Juls: *Do you feel like there are any changes or improvements that could be made to the safe supply program?*
>
> Paul: *Definitely could increase it.*
>
> Juls: *Like, increase the dosages from 120?*
>
> Paul: *Yeah, oh yeah. I can use four times as much. It's the max of what I could get and I fought for a while to get that. I definitely could use a lot more than that… There's people out there that don't use them every day. Not all the time, but sometimes they don't. If they're around, I definitely will try to get them.*

However, some participants, such as Brenda, were satisfied with a relatively low dose, telling me: "*He put me on 20mg Ritalin in 24 hours and it just did, it did wonders".* In addition, Greg had successfully switched to STAT with 40 mg of Ritalin. This speaks to the

necessity of patient-led dosing. While some participants required dosages higher than the clinical guidelines allowed, some were happy with dosages that fell within the guidelines.

Control over Medication Format. Many of the participants spoke about the necessity of smokable, snortable, and injectable medications. Bob, who contacted me to talk about how prescribed stimulant safe supply did not work, had much input into *why* it didn't work—this helps us understand how it could work better. Bob told me:

> *If they made things like Adderall or Dexedrine available in snortable or smokable, or injectable format, I think that would be really help because there's obviously quite a ritual for people who, who are using those ways and I just think that as much as we can offer people to help them stabilize, the better things will be and more time they'll have to focus on things that aren't doing drugs.*

This concept of ritual was also discussed by Jesse, who found that Adderall helped them consume less cocaine, but they still craved the ritual of cocaine:

> *There were times when I did Adderall instead of buying cocaine but if someone offered, I would still do it. It's not like the Adderall got rid of addiction, or my propensity for wanting to do cocaine because I like the ritual of doing it, you know what I mean? There was still kind of, like, connection and attachment to that. Right? I definitely didn't have to do as much though.*

Jesse described this ritual in greater detail earlier in the interview:

> *What do I like about doing cocaine? I like the ritual of it. Like you have the powder. And you do key bumps or you pour it out and make lines. I like the feeling of it going up my nose. Um and like you snort it and it first goes up your nose and you're like "woah" and if it's good, you feel numb for a second and then you're on top of your*

game.

Bob had mentioned this "woah" as well, in the context of what prescribed stimulant safer supply was missing but called it a "ringer." Cody, who was someone who smoked his substances, echoed these sentiments about prescribed safer supply taking too long to feel the impact of when taken orally. He said, **"**T*he smokers are getting shafted on this safe supply. They are either forced to inject it or to use [street drugs] before their pills kick in so it defeats the fucking purpose of doing it, right?*" This frustration was also expressed by Alex who said, about their doctor, "*And then also she doesn't understand that, for meth users it's hard trying pop pills instead of injecting. Trying to inject the pills is really frustrating".*

However, four out of the five methylphenidate users did inject their pills—two consistently and two occasionally. Doug told me, "Y*eah, I just eat them. Sometimes I'll use them with the needle".* Cody, who told me he preferred to not use drugs intravenously, would occasionally do so in order to facilitate a quicker release of the medication:

> *With the safe supply, with the stimulants, I was sometimes shooting that for it to kick in right away. So, I was finding that I was, I wasn't shooting the opiates because I didn't like shooting the dillies because it made my arm burn. Yeah, the stimulants wouldn't do that.*

Tanis and Paul, who both injected methamphetamine, both regularly injected their STAT. Another alternative way of using was described by Jesse, who described a method of crushing their Adderall with their teeth:

> *Sometimes in the day I would wake up and I would take, like swallow, the 20mg in the morning and be steady all day but then if I was amping up in the night I would take more, like if I was partying, but I would crush it up instead of just swallowing it. If*

you swallow the balls without crushing them. It's like a slow-release all-day thing. So, I would crush them up.

Tyson, however, was amicable to taking oral medications for prescribed stimulant safer supply. I asked him if he smoked or injected meth. He replied, "*Well, I eat it. Sometimes I even stick it up my ass. I've done it every which way. Unfortunately, I'm a little excessive".* When discussing prescribed stimulant safer supply, he said "I*'d rather just take it as a pill… I like the idea of just* ***tapering*** *to get used to this, using it as medicine, not as something destructive like amphetamines".*

Generic vs Name Brand. Another theme that also arose in the data was control and preference surrounding name brand and generic medications. Alex, for instance, reacted poorly to generic dextroamphetamine, telling me:

I had to get the name brands. Generic was just not doing well for my stomach. Like they say that it's the same thing as the other one, the name brand, but it's not. There's something that's different, it just upset my stomach but it was like a fight.

They later learned this was due to lactose content in the generic pills.

Two participants complained about generic methylphenidate being difficult to inject. Paul commented that "[*t]he generic ones are crap. They're chalky. They're horrible".* This was supported by Tanis who said:

I don't like the blue ones in injection. They gunk up and they're really difficult to get anything out of… And it's like there's a smell, like a honey-like smell that comes from it which I don't know if... there's something going on.

The switch between different generic formulations triggered paranoia in Brenda, leading her to discontinue taking a medication that had previously been working for her:

> *I quit taking the methylphenidate probably about six weeks ago because I went in one day and I picked up my pill and it was different. There was something off about them and I showed it to my friend who was a pharmacist and she said "yes it does look different" and I was like I'm not taking this anymore. Because there were three days in a row where it didn't work. The pill didn't look like it was supposed to. The funny thing was I was standing in Save on Foods And those two old ladies were standing there talking and they didn't know I was behind them and one of them was saying that her husband got a pill maker… a pill press and I was like, I didn't even know you could get that and see my husband, he stalked me also for 19 years and between him and the voices and I questioned if he was anywhere in the vicinity because all of a sudden, my pills started being different.*

Each of these participants had specialized needs to be met: one had food sensitivities, two required an injectable pill, and the other needed a consistency in appearance and formulation to feel safe taking the medication. This indicates that beyond medication type, the ability for the participants to be able to choose a specific formulation of medication was also very important.

Safety Precautions. Two participants discussed situations that exemplified the potential danger of using prescribed stimulant safer supply while not actively trying to reduce use of unregulated stimulants. Tanis, in particular, endeavored to participate in my research project because she wanted to warn others about the possibility of overamping due to continuing to consume both the prescribed stimulant safer supply and unregulated stimulants:

> *The concern that I have, especially why I was really, really trying to come and get into this study is that the people that are using specifically, or just for me anyways, is*

that I think what ended up happening with me trying to wean myself (off side) and do the Ritalin, I ended up kind of putting myself at an almost an overdose state constantly in the stimulant world, like I didn't realize that it wasn't coming down. And I wasn't able to come down because I was doing side and trying to lower my dose and wean myself off of that. The chemical balance and then the increase or whatever that I was having with Ritalin, I was never able to like actually come down and kind of made me go weird.

Tanis commented on the vagueness of the prescription instructions later in the interview, reading her label to me:

It's a weird prescription, look at this, this one is daily dispense, 14 tablets, take one to three tablets oral or IV or nasal every hour to three hours as needed. I can't imagine, so like if I was to inject one dilly-8 every hour… I would have like a 14-hour day there and I can take up to three tablets every one hour, right? And then I go and blow through all of them technically, right?

Jesse as well shared a story about the dangers of taking too much of both, especially combined with drinking:

Well, there was a time when I was using both a lot before I quit drinking for like six months. I don't know, I would take some Adderall before I would go out, because you can open the capsule up and take like maybe a half and then like finish getting ready, drinking and then doing a bit more or whatever. With coke it was the same, do a little while I'm getting ready and then more throughout the night… I did have to stop because I blacked out and I broke into this house where some of my friends lived, I went over uninvited and went into a few people's rooms, after that I was like "right I

need to stop" because that scared me… I must have taken probably like 40 milligrams of Adderall and a bunch of cocaine and then drank like two growlers of beers and a growler is like three litres or something. I like blacked out but my body and my mind were like "nah come on let's go."

Conclusion

In summary, the perspectives of the ten participants on what it means for STAT to work centered on the tangible improvements it brought to their mental, physical, and social well-being, rather than complete abstinence. Motivations for engaging with STAT varied from negative impacts on mental health to being dissatisfied with street cocaine quality. Even though very few aimed for complete abstinence, with even less achieving it, the participants described similar benefits across the study such as increased stability—whether emotional, mental, or financial—and some described ways of achieving reconnection. The participants emphasized how STAT helped mitigate the harms of illicit stimulant use—such as cognitive impairment, sleep disruption, and injury—while retaining some valued effects like focus and coping capacity. However, limitations in medication types, dosage, and guidance, and practices that made participants feel over-surveilled were seen as barriers to its full potential. These findings suggest that the definition of success from the user perspective is broader and more nuanced than the outcomes typically measured in clinical trials. The following chapter explores this divergence and its implications for STAT evaluation and implementation.

Chapter 5: Discussion

I was inspired to do this research from overhearing a single comment in April 2020 from my COVID bubble-mate's psychiatrist over speaker phone during a virtual appointment. Despite pharmaceutical stimulants facilitating positive changes in his life, including cocaine abstinence, his psychiatrist was not in support of an ongoing prescription, saying: "But the research shows it doesn't really work." I wanted to know what she meant by that. What outcomes were the research measuring, who was included in this research, and which interventions were used? How were these RCTs defining "working" and how was that operationalized? Importantly, I wanted to know how this differed from the actual people using these medications. This discussion will start with how STAT use by my participants differed from how it is delivered and evaluated within RCTs in three prominent ways: positive changes despite continued illicit stimulant use; routes of STAT administration; and temporal patterns of STAT use. I then discuss how stigmatized assumptions about drug users can contribute to poor research design, and although higher quality research in this field is necessary, I also critically analyze this belief that existing research actually suggests that STAT doesn't work. Finally, I look at the implications this research has for social work practice.

Lived STAT Experience versus Clinical Trials

Continued Illicit Stimulant Use

The most salient finding in my research—which very much differed from the experience that inspired it—is that most of my participants reported positive changes in their life from their use of STAT while continuing to use illicit stimulants in some capacity. More recent meta-reviews, such as the one by Tardelli et al. (2020), found that updated RCTs using

more targeted medications in higher doses show an association between stimulant pharmaceuticals and sustained abstinence. While improvements in the pharmaceutical interventions being measured are undoubtedly positive, my research suggests that how STAT is continuing to be researched fails to capture more nuanced improvements and research studies could more effectively capture these by measuring improvements in health, sleep, nutritional intake, mood, and cognitive functioning, and reductions in psychosis episodes and blood-borne infection transmission, rather than focusing on measuring abstinence.

For instance, the primary research outcome in the included RCTs of the Tardelli et al. (2020) meta-review is sustained abstinence—usually three weeks—by study end. While participants in the present research project felt that the purpose of STAT was to reduce or replace their use of illicit medications, there were multiple ways this manifested in their lives, which related to their goals regarding illicit stimulant use. Greg, a white man in his 70s, is the only participant who would also be a successful RCT participant. He stated in his interview that he felt he was done with illicit stimulants, but that he relied on the pharmaceutical stimulant for motivation and success in his daily life. However, unlike what would be allowed in most RCT designs, his daily dosage varied; he did not always take his second tablet. However, he would be the singular participant who would likely be able to provide several weeks of UDSs showing a negative result for illicit stimulants.

Paul also had the goal of stopping illicit stimulant use, which he eventually achieved. He told me "*I have no desire to use coke or* meth *while I have my methylphenidate*". However, he did not stop illicit stimulant use until after over six months of being on STAT, which is much longer than most RCTs in the meta-reviews, which were usually 12 weeks long (Bhatt et al., 2016; Castells et al., 2016; Tardelli et al., 2020). Additionally, he injected

his tablets and often purchased extra ones to achieve a daily dose higher than 120 mg, which would not be allowed in a study setting. Four participants had transitioned to mostly using STAT (although Cody had been cut off and was describing his past experience of being on them), and only occasionally using illicit stimulants. Tanis mentioned using meth once or twice a week, as opposed to previous daily use. Doug liked to buy a little **side** when he had an extra ten bucks and Tyson mentioned that he did "s*till chip a bit with amphetamines"* but that having the prescribed stimulants to rely on meant his continued illicit stimulant use had a less destructive impact on him: "*I'm not agitated and not as scattered,"* he told me.

Brenda and Alex sometimes still used illicit stimulants quite a bit but the option of the prescribed stimulants meant they could have periods of no illicit stimulant use when necessary. For Alex, a frequent methamphetamine user, having an Adderall prescription meant they could abstain from using methamphetamine when at work or when they travelled to their remote home community. Jesse, a touring musician, had a unique pattern of using STAT medications. They would use them prior to when they previously would have binged on cocaine—frontloading with some STAT use at the beginning of the night resulted in using some, but much less, cocaine, which in turn greatly reduced the severity of how much the cocaine use impacted their mental health. Before mediating their cocaine use with STAT, a night of alcohol and cocaine would result in multiple days of depression, decreased functionality, neglected self-care, missed work, and strained relationships with those around them.

Seven out of ten research participants could not have passed a UDS indicating they had multiple weeks of abstinence from illicit stimulants. Regardless, the positive impacts of STAT medications in their lives were abundant. Participants described improved sleep,

nutrition, mental clarity, balanced mood, higher participation in employment, and reconnection with family, despite not achieving full abstinence. The findings of my research suggest that by focusing on abstinence, particularly within such a short time frame, RCTs are failing to capture potential positive changes in people's lives from the use of STAT. If RCTs continue to be used to research this topic, user or PWLLE input is perhaps needed to ensure study outcomes reflect the lived successes of STAT users. Given the shared successes of the participants in this study, this suggests that research studies should take a different approach to measuring STAT efficacy. Additionally, given the extended length of time before some participants saw improvement, a study design that follows STAT patients over the course of a few years might be more effective in capturing positive changes.

Route of STAT Administration

Route of administration (ROA) refers to how a medication or drug is taken—for instance, if it is injected, **insufflated** (snorted), **inhaled** (smoked), or taken orally (BC Coroners Service, 2025). While some research participants took their STAT medications orally and wanted to view it as a medication, others consumed their STAT through an unconventional ROA. Four participants injected their methylphenidate, and the two that took Adderall consumed it orally but would crush the tablet between their teeth to bypass the slow-release mechanism. When we look at the opioid use disorder treatment in the province, the retention for the prescribed heroin program (wherein participants are able to inject their medication) is almost triple than that of the oral OAT options like methadone and Suboxone (McNair et al., 2023; Office of the PHO, 2017). Early treatises on developing stimulant replacement drugs focused on reducing injection because of the role stimulant injection had in HIV outbreaks in the DTES and other parts of BC in the 90s (Alexander & Tsou, 2001;

Mulla & MacPherson, 2007). However, this early era of harm reduction access also had low maximum daily limits of sterile syringes, which limited the effect of syringe exchange programs on reducing the spread of infection (Hyshka et al., 2012). Given the effectiveness of injectable opioid substitution options, providing stimulant options that can be injected, insufflated, or inhaled in order to match the preferences of illicit drug users in the province (BC Coroners Service, 2023; BC Coroners Service, 2025) would likely increase the retention for such interventions.

Temporal Patterns of STAT Use

Another way in which STAT use amongst the research participants differed from the RCT setting is that STAT use was not necessarily daily, and often did not have a regular intake schedule. Some participants took STAT in highly triggering settings and situations, and some saved it for travel or work. Some did not take the same dosage every day. This is where stimulant addiction can vary greatly from opioid addiction. The latter provokes very physical **withdrawal** symptoms, necessitating daily intake after an addiction or dependency has developed (Hart et al., 2019; Sordo et al., 2017). Moreover, because rapidly changing opioid tolerance puts an opioid user at risk of overdose, daily consumption of OAT is integral to ensuring a stable level of opioids within the user, to prevent opioid overdose (Sordo et al., 2017; Pearce et al., 2020). While overuse of stimulants in the context of reduced tolerance can cause harm, resumed stimulant use after a period of non-use has less risk of causing a fatal overdose, and research shows that stimulant use, even among those with a stimulant use disorder, is often much more scattered and irregular than opioid use within those with opioid use disorder (Fleming et al., 2024; Mansoor et al., 2022; Xavier et al., 2023). This was also the case with many of the participants in the research project.

In advocating for and developing a pharmacological intervention for stimulant addiction and dependency, we can build upon the successes of OAT for opioids. For instance, OAT exemplifies a successful model of identifying a psychoactive substance that decreases symptoms of craving and withdrawal by activating the same receptors as the illicit substance being replaced (Alexander & Tsou, 2001; Mulla & MacPherson, 2007), which in turn reduces illicit drug use and overdoses, and increases health and quality of life (Ledlie et al., 2024; Sordo et al., 2017). However, building on previous research and commentary on interventions for stimulant users (Fleming et al., 2020; Fleming et al., 2024; Palis et al., 2021; Xavier et al., 2023), my research suggests that trying to emulate the OAT model of a once-daily witnessed consumption of long-acting medication—which is the case in the vast majority of RCTs I reviewed—is unnecessary and would make a parallel stimulant intervention much less accessible or effective for many stimulant users who might benefit from an effective pharmaceutical replacement therapy.

Compensation and Assumptions

Conducting this research also revealed several systemic issues regarding research with drug users that impacts the quality of the research, and the research outcomes. This did not necessarily come from the participants, but through being told my university's REB might not allow cash payment for drug users, doing literature research on this topic, and then looking at the study design of the RCTs in the stimulant replacement meta-reviews. As someone working within the mental health and substance use field that frequently employs **peers,** and from which ethical best practices standards have emerged (BCCDC, 2018), I felt very strongly about fairly compensating my participants at a rate in line with these best practices guidelines in the province. Furthermore, research shows that payment for drug users

participating in research has often been lower than for other populations, due to beliefs that drug users will be disproportionately persuaded by money due to beliefs about addiction, drug use, and capacity to consent (Topp et al., 2013). REBS have been documented to call the practice of compensating drug users with cash currency "dangerous, coercive, and unsupportable" (Striley et al., 2008, p. 22). In order to address potential pushback from my own REB, I submitted a literature review on this issue with the ethics application for the present project. There are two salient points regarding how the typical REB stance regarding research with drug users reifies economic and social stratification that are relevant to the present discussion. First, it creates unwritten institutional double standards between how drug user research participants and non-drug user research populations are compensated, which constitutes a systematic form of unequal access to economic benefit (Topp et al., 2013). Second, these unequal standards in payment result in poor participant retention, which impacts the quality of the research (Striley et al., 2008; Topp et al., 2013). This suggests that, systematically, research on interventions and services for substance users are of a lower quality and standard than research for other populations, which could impact advancements in the field.

Despite concerns from the committee, I did not have trouble recruiting participants and even had to choose between several very interesting and eager participants nearing the end of recruitment. Several of my participants were even unhoused yet arranged with their local services to use a computer or phone to participate. I had very few, if any, instances of participants not showing up to scheduled interview times despite the myriad issues and barriers some of them face. I completed my research interviews within a span of four months. Research shows that adequate compensation makes research participants feel that their

perspective and expertise is valid (Bell & Salmon, 2012). Although I recognize that participation in a qualitative interview is much lower commitment than a clinical trial, retention was a key difference between the present research project and the two canon meta-reviews (Bhatt et al., 2016; Castells et al., 2016).

Retention was such an issue across the RCTS included in these two reviews that it impacted the quality rating of the RCTs. Across all the RCTS in both the reviews, on average, more than half the participants dropped out of each respective study. Interestingly, not one of the published research articles includes the remuneration given to study participants. However, given the research showing the hesitancy that REB boards have historically had about paying drug-using research participants with cash (Bell & Salmon, 2011; Striley et al., 2008; Topp et al., 2013), it is reasonable to assume that the high attrition rates may have been due to inadequate compensation. This is in addition to RCT study design requiring drug-using participants to do frequent site visits for witnessed intervention consumption (Bhatt et al., 2016; Castells et al., 2016; Tardelli et al., 2020), which seems to be based on implicit assumptions about lack of control, honesty, and responsibility within substance users.

Issues with "The Evidence"

Nevertheless, while we do not know for sure the reasons for this universally high attrition among the stimulant RCTs, this methodological issue impacts the outcomes of each review. So, when clinicians claim that the research shows that stimulant pharmacotherapy "doesn't work," that is not quite an accurate summation of the meta reviews they are referring to (Bhatt et al., 2016; Castells et al., 2016). Rather, the reviews conclude that while some available research showed an association between the intervention (the stimulant

pharmacotherapy) and the outcomes (treatment retention and abstinence), this evidence is not of sufficient quality to definitively conclude a causal relationship between the interventions and the outcomes: “Existing evidence does not clearly demonstrate the efficacy of any pharmacological treatment” (Castells et al., 2016, p. 2). This lack of clarity is partially because of methodological issues, which does not necessarily mean there is no association between the intervention and the outcomes; rather, this means that these methodological issues devalue the quality of the evidence of the association. Overwhelmingly, these methodological issues seem to stem from stereotypes and assumptions about substance users, which challenges the objectivity of the evidence used to claim that this intervention does not work.

Furthermore, stereotyping assumptions about drug users may be why every included study in the two 2016 reviews had a mandatory weekly group therapy session, usually in the cognitive behaviour therapy (CBT) modality, which is not explained or justified by any of the studies (Bhatt et al., 2016; Castells et al., 2016). Thinking across the range of experiences and reasons for stimulant and other substance use amongst just the ten participants in my study, I cannot imagine deciding and dictating a singular therapeutic modality for all of them. Mandatory therapy may be another possible contributor to high attrition rates in the RCTs, or depending on the quality of the sessions, may even unduly influence the research outcome. Regardless, these forced group CBT sessions are not seen as a source of bias. This is despite the fact that both reviews used the Cochrane risk of bias tool, which indicates that research participants in an RCT should not be able to detect the intervention. Regardless, mandatory group therapy mars the internal validity of the research (Cresswell & Poth, 2018), as it would be impossible to know if the research outcomes are from the tested medication or the therapy.

The mandatory group therapy element is another example of drug users being subjected to additional burdens in the research setting, as well as a way that research design based around stereotypes and assumptions about drug users produces poor-quality research.

In addition to a large proportion of the included RCTs in these reviews being conducted on medications that are not stimulant agonists, which renders these meta-reviews largely irrelevant to STAT and the stimulant section of the *RMG*, there are many reasons why claiming that the evidence shows that stimulant pharmacotherapy does not work is an erroneous statement. That was not quite the conclusion of the reviews—rather, the reviews conclude that the association between the intervention and outcome is muddied due to methodological issues. Although we do not know the reasons for high attrition, we know that the research shows that drug users are historically underpaid in research, and that there is a link between adequate payment and research retention (Bell & Salmon, 2011; Striley et al., 2008; Topp et al., 2013). Importantly, a myopic focus on total abstinence as an outcome misses the myriad improvements in people's lives that can occur from how STAT can change a person's relationship with the illicit stimulant supply, especially in the midst of an ongoing toxic drug crisis.

Implications for Social Work Practice

The findings of this research illuminate a disconnect between how the STAT users in the present study measured success of the intervention and how success is primarily measured by researchers. As clinicians and social workers, we must be aware of how the focus on abstinence can miss positive changes in a client's life, which can be very discouraging for the client. When someone with multiple issues who also uses substances presents to us, it can be tempting to see those problems as a result of the substance use and

thus encourage them to make what we as social workers see as a positive life change: to quit substances.

However, it is imperative that social workers remain aware of their own biases and not make assumptions about the goals of their clients nor the source of their problems. First, in BC, the code of ethics for our licensing body states that "Social workers are aware of their own values, attitudes and needs and how these impact on their professional relationships with clients" (BCCSW, 2009, p. 9). This statement implies that a social worker must evaluate their own ingrained beliefs about drug use and not project assumptions onto their client. The provincial code of ethics also says that we must "respect and facilitate self-determination in a number of ways including acting as resources for clients and encouraging them to decide which problems they want to address as well as how to address them" (BCCSW, 2009, p.9). If a social worker is concerned about drug use, a useful conversation could focus on these specific concerns and how to address them, rather than pushing or pressuring for complete abstinence.

For instance, social workers could ascertain if there is a safety risk. Is the client vulnerable to overdose or death? In this case, we could suggest a safety plan, and collaboratively brainstorm both in-community and virtual/remote resources to improve safety. Is the client not sleeping and experiencing hallucinations? Then, how can sleep be improved? As seen with the participants in the present study, many were able to make positive changes in their life and health without total abstinence. Even for those in my research who had goals of abstinence, this was daunting for them. It took one participant a six-month transitional period before he stopped using illicit substances. Another participant, who had reflected on their experience using STAT almost ten years prior, had eventually

stopped using cocaine, but only after years of trauma therapy and a drastically changed environment. If we only look to abstinence as an outcome, we can overlook ways a client can keep themselves safe, or the small changes and improvements in quality of life that may be necessary in working towards that goal of abstinence.

Furthermore, although evidence-based practice is paramount in our profession, we must be critical about the practice of producing evidence for interventions for substance use and addiction through RCTs. First, these trials exclude people with severe mental illness or addictions. This makes sense for ethical reasons, but this means that the evidence for this intervention doesn't include those who might most need it. Second, this evidence is largely produced outside of the context of the toxic drug crisis, which may negatively influence the motivation for participants to switch over to the pharmaceutical intervention. The outcomes may be much different in a toxic drug crisis.

Third, and related to this previous point, an RCT design requires that the participant not be aware if they are receiving the intervention or not, in order to decrease performance bias (Bhatt et al., 2016; Castells et al., 2016). However, we generally accept that changes in one's life are driven by motivation. We even have a *Stages of Change* model to help motivate clients to make life changes **(**Sibley, 2014). In the context of a RCT, either the research participants are moderate substance users who may not be motivated to change, or all participants are seeking change in their lives and all are attending weekly group therapy to help motivate this change. In the former group, those receiving the intervention may have no motivation to make changes, which could result in the intervention showing no association with the decided outcome measure. In the latter situation, both the intervention and the control group may be motivated to change, so both groups would be associated with the

outcome measure. In either situation, the intervention stimulant would not have a greater association with the outcome measure, showing no result. Knowing what we know about motivation for change, we should be critical of the practice of studying and measuring behavioural changes in this way.

As social workers, we must work within our capacity, which means we do not make medical or pharmaceutical recommendations (BCCSW, 2009). This means that our role within STAT is limited. However, in work with substance users, I suggest having non-judgmental conversations with clients to understand their motivations or reasons for using any substances. Both this present research and research conducted with clients receiving dextroamphetamine at the Crosstown Clinic (Palis et al., 2021) found that people who used stimulants for functioning, energy, or managing ADHD found using the prescription stimulants useful, whereas those looking for a "ringer" or a rush may not necessarily find it useful. Understanding the nuances of this research and explaining this to clients can help them make the decision of whether or not to talk to a medical prescriber to see if STAT is medically appropriate for them to take. But letting our clients know about these services and options is another ethical imperative as part of our responsibility to clients, as our code of ethics states that "[s]ocial workers provide clients with accurate and complete information regarding the extent, nature and limitations of any services available to them" (BCCSW, 2009, p. 14). Finally, there may be no pharmacological interventions available for stimulant users in your community. If stimulant use is a concern for your clients or your greater community, especially in the context of a poisoned drug supply, this model of prescribing might be something to advocate for or suggest to local addiction clinics. Our code of ethics states that we must push for change:

> Social workers promote social justice and advocate for social change on behalf of their clients. Social workers are knowledgeable and sensitive to cultural and ethnic diversity and to forms of social injustice such as poverty, discrimination and imbalances of power that exist in the culture and that affect clients. Social workers strive to enhance the capacity of clients to address their own needs and problems in living (BCCSW, 2009, p. 13).

The drug war is a social justice issue, and the lack of evidence-based treatments is predicated on stereotypes about drugs and drug users. Although newer meta-reviews including only actual stimulants shows success (Tardelli et al., 2020), my research suggests that the body of earlier evidence showing no effect of STAT may be due to because of overly cautious research with inappropriate medications, low doses, or poor research design with high drop-out rates, all likely caused by stigmatizing stereotypes about drug users, and the assumption that positive change is only seen in the event of complete cessation of illicit drug use, which does not reflect the reality of participants in the present research project.

Conclusion

In May 2022, I was presenting the findings of this research to a conference called *Untangling the Complexity through Drugs Research* from my home office in the corner of the living room that had once been the bedroom I shared with the ex-boyfriend who had quit cocaine using methylphenidate. It was the Drugs Research Network Scotland conference; I had applied thinking I would get to go to the United Kingdom; however, the event moved online because of ongoing pandemic restrictions and instead I found myself attending from my apartment in Prince George, BC. This meant my presentation slot was at 3:45 a.m. BC time—thankfully, the organizers had asked us to submit pre-recorded videos. My

presentation was part of a session on *"Treatment"*, which was followed by a brief Q&A. Afterward, I joined some virtual networking sessions, and as I started to see the sun creep up over the cutbanks outside my window, I sat down to watch the keynote talks. Dr. Keith Humphreys, from Stanford University, chair of the Stanford-Lancet commission on the North American Opioid Crisis, did a talk called "Creating Evidence-Informed Public Policies Addressing Addiction*"* (DRNS, 2022). In this, as one of his discussed case studies, he included BC and our "safe supply initiatives," which he described as a new policy of widespread prescribing of pharmaceutical opioids, as well as, to my surprise, methamphetamine. I popped a comment in the Q&A to address this. It was not mentioned.

Ironically, Dr. Humphreys' presentation had centered on the idea that policy is not shaped by evidence alone, but also by political contexts. He said that "evidence alone never carries the day" (DRNS, 2022, para. 11) and emphasized the role of politics in creating openings for evidence to influence policy, saying "[w]hat happens is that when the values in politics create a window, evidence becomes critical for taking maximal advantage of them" (DRNS, 2022, para. 11). However, the misinformation he repeated about methamphetamine being part of BC's prescribed safer supply policies—whether intentional or not— is a stark example of how political narratives can distort public understanding. This reflects how political agendas can take—in his words— *maximal advantage* of public misunderstandings to reinforce inaccurate and harmful stereotypes about drug users and drug policies.

The marginalization of drug users in research only compounds this issue. Policies and research models that impose rigid, one-size-fits-all conditions—such as research studies having low doses, low pay, and mandatory group therapy—result in high participant dropout rates and weaken the quality of evidence. As a result, the real needs and experiences of drug

users are not met, and the development of user-centered interventions is stifled, preventing effective pharmaceutical interventions from ever reaching fruition. In social work, our code of ethics is centered on upholding social justice and the self-determination of all individuals, allowing them to define their own challenges and decide how to address them (BCASW, 2009). In our commitment to both evidence-based practice and justice, we must advocate for research that respects the dignity and autonomy of those impacted by it. This includes ensuring that research questions, methods, and interpretations reflect the perspectives of the people it seeks to serve.

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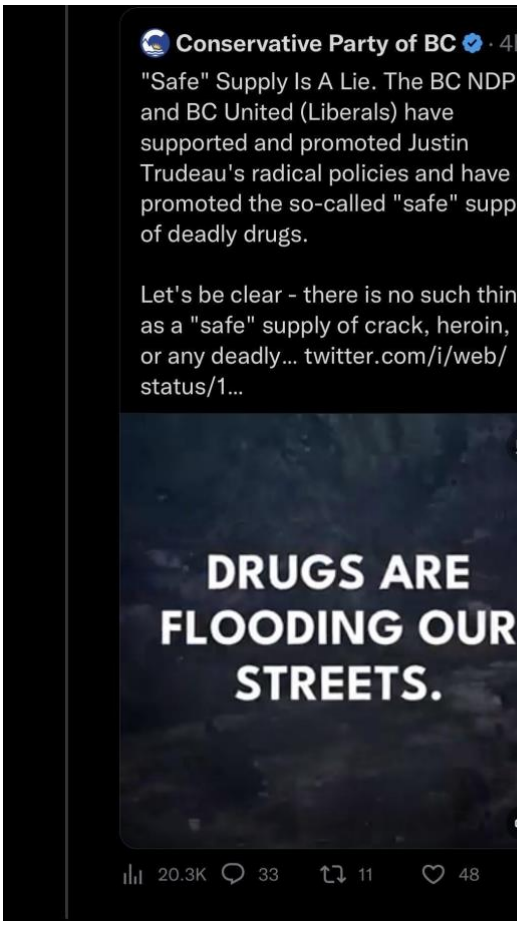
Appendix A: Examples of Stimulant Safer Supply Disinformation



Appendix B: Study Recruitment Poster

Appendix C: Study Information Letter

UNBC UNIVERSITY OF NORTHERN BRITISH COLUMBIA

October 2021

Project Title: What Works?: User Perspectives on STimulant Ant/Agonist Therapy (STAT) included in BC's Clinical Guidelines for Safer Prescription Alternatives

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This research will be reported in a thesis submitted in partial fulfillment for my graduate degree (Masters of Social Work). The thesis will be available online to the public. A summary of the results of this research will be published on social media. As well, findings of this research will be submitted for publication in academic journals. I will also prepare and offer findings to relevant agencies.

Study Information

I want to interview people who have accessed prescribed medications such as methylphenidate (Ritalin) or dextroamphetamine (Dexedrine) so they could replace, stop, or reduce their meth, crack, or cocaine use. These medications are commonly called "safe supply" or "safer prescription alternatives."

These medications have mostly been studied using experimental trials where the researchers have decided the dosages and how to measure whether the treatment works or not. I would like to talk to the people who use these medications to get their input on these things. The findings will be published as my masters thesis.

If you choose to participate, I will interview you for about an hour and no longer than 90 minutes. This interview can take place on the phone or through a video chat using Zoom or Microsoft Teams. Those apps can be downloaded to a smart phone or a computer. It can take place at any time convenient for you. As a token of appreciation for your time and efforts, you will receive $40 via e-transfer. As well, you may choose to be contacted to review my findings after I interview everyone in my study and give me feedback. You will receive $25 if you participate in giving me feedback.

Your participation is voluntary and you may withdraw the study anytime before the interview and during the interview. You can refuse to answer any questions during the interview. As well, you can contact me to withdraw from the study up to two weeks after our interview. No reason is necessary. If you do so, I will permanently delete any recordings or transcriptions of your interview, and your information and answers will not be used in my thesis.

The interview will be recorded and then I will transcribe (type out) the interviews. Then, I will look at your interviews and the interviews of the other people in the study to find

similarities and themes. I will send these themes back to people I interviewed so they can give me feedback. Then I will publish the results in my thesis (which will be available on the UNBC website) as well as through social media and in academic papers and journals.

I will try to ensure your confidentiality as much as possible. Your identity will be kept private and any identifying details will be changed or removed. However, there is no way to guarantee complete anonymity if you are sharing details of your life that others may know about. Let me know if this is a concern for you and we can discuss how to protect your confidentiality as much as possible

I work in harm reduction and overdose prevention. I don't judge people for using substances. However, if you have used just before or will use during our interview, please let me know. Because I care about your safety, I will ask for you to let me know your location or provide me with an emergency contact so that an ambulance or other overdose responder can be sent to you in case you become unresponsive. Another note about using: I would appreciate it if you stayed coherent, but I know the drug supply is unpredictable and medications can make you tired. If it becomes difficult for you to understand and answer the questions, I'm happy to just reschedule the interview for another time.

Everything you say will be kept confidential **except disclosures of suicide risk, abuse of vulnerable people such as children or elders, and the provision of illegal substances to minors.** Because of my legal and ethical duty to report these dangers or harms, I will report to the appropriate authorities, such as the police, mental health crisis team, or child protective services where you live.

Potential Risks

If you have had a negative experience accessing stimulant safe supply or are traumatized by the overdose crisis, you might feel upset talking about these things in the interview. I will be providing a list of phone and internet resources that can provide you with support for this.

Being identified as a drug user is stigmatizing and if it is known that you are participating in this research, you may be identified as a drug user. I will aim to keep your identity confidential. Interviews will be kept on a locked computer and deleted after I transcribe them. Any identifying information will not be published. I will work with you to schedule the interview at a time that is convenient to you and when you can have the most privacy possible.

If you disclose information about suicide risk, the abuse of vulnerable people (such as minors or elders), and the provision of controlled substances to minors, I am legally obligated to report this to authorities. Please be aware of this when you share information with me.

Potential Benefits

Participating in this study will not benefit your personal access to substance use medication and treatment. However, it may help others in the future by influencing clinical guidelines for prescribing policies.

Compensation

As a token of appreciation, you will be offered $40 for participating in the interview and $25 for providing me feedback on my findings later on. This money will be e-transferred to a phone number or e-mail address of your choice after the interview. I will erase the e-transfer information after the money is sent.

How to Participate

Please contact me through telephone call, text, or e-mail to let me know if you want to be in the study. We can talk about when and how to do the interview. You will need to be at least 18 years old and sign the consent sheet or verbally say you consent to being in the interview verbally while I am recording. The interview will be about an hour. I will ask you about taking stimulant safe supply drugs, motivation to take them, if you felt they worked, and what that means to you. It will not be longer than 90 minutes. After the interview, I will e-transfer you $40 to an email address or phone number that you provide. If you agree to be contacted about giving me feedback on my findings, I will contact you in a few months and e-mail you my findings.

You will have two weeks to respond, and you are free to tell me if you agree with my findings or if you

Thanks for your interest!

Juls Budau

stimulantsafesupplystudy@gmail.com

778-798-5857

Appendix D: Study Consent Form

Study Participation Consent Form

I have read or been described the information presented in the information letter about the project: **YES NO**

I have had the opportunity to ask questions about my involvement in this project and to receive additional details I requested: **YES NO**

I understand that if I agree to participate in this project, I may withdraw from the project until two weeks after my interview with no consequences of any kind: **YES NO**

I have been given a copy of this form: **YES NO**

I agree to be recorded: **YES NO**

Follow up information and study results can be sent to me at the following e-mail address or mailing address:

Signature (or note of verbal consent)

Name of participant:

Date:

Appendix E: Support Resources Document

Support Resources

Thank you so much for participating in my research project. Getting feedback from users on medications for substance use disorder is really important and thank you for adding your voice.

I want to acknowledge that here in BC, we are living through an extremely deadly drug poisoning crisis. We have lost too many people we care about to count and for many of us, it feels like there is very little meaningful action from the government or the healthcare system to stop this crisis. Talking about this can be really upsetting. Thank you for your willingness to give feedback about safe supply medications.

Please remember that you are an important part of your community and please keep yourself safe. Please don't use unmonitored. Call a friend, use an overdose prevention site, or use one of the resources I'm listing here.

Smartphone Apps

If you have a smartphone, there are two apps you can use for overdose monitoring.

Lifeguard App - Enter information about the substance you are using and your location, set a timer. If you do not shut off an alarm because you have become unconscious, emergency responders will come to you.

Be Safe Community - In this app, you talk to a peer volunteer about the substance you are using, and they contact emergency responders in your community if you become unresponsive.

Telephone Numbers

NORS - National Overdose Response Service - 888-688-667 - You can chat with a volunteer for support while you are using. They will notify emergency services if you become unresponsive.

1-800-SUICIDE (1-800-784-2433) - If you are experiencing suicidal thoughts, please call this line for support.

BC Mental Health Resource Line - 310-6789 - 24/7 emotional support, information and resources specific to mental health in British Columbia

Online Support Groups

Moms Stop the Harm - https://www.momsstoptheharm.com/ - a network of Canadian families impacted by substance use-related death. This group provides support and organizes advocacy campaigns to change Canadian drug policy.

BC Yukon Drug War Survivors - http://bcyadws.ca/ - Connect for Advocacy, Activism, and locating local drug user group

Appendix F: Interview Guide

Supporting Document 6 - Interview Guide

As this is an exploratory study, my interviews will be semi-structured. The participants will be able to discuss any aspect of their experience with stimulant safer prescription alternatives that they wish. Unanticipated follow-up questions will be asked to explore interesting tangents or topics the participants bring up. Although I will keep the interviews open-ended and conversational, I will aim to have the following questions addressed during the interviews. I will establish a mutually understood term for the medication accessed early in the interview. "Safe supply" is used as a fill-in for this interview guide.

Are you still using safe supply and if not, why not? Where did you access or try to access safe supply? What is through your regular prescriber or a different one? Was there anyone difficult about the process? What made you want to take it? How long did you take it for? Which illicit stimulants were you using or continue to use and how much?

Did safe supply work for you? What does it mean for you "to work"?

What is your experience with overdose?

Were there any barriers to accessing safe supply?

How much were you prescribed? Did you have a daily dose or a longer prescription?

How did accessing safe supply impact your use of illicit stimulants?

Did accessing safe supply change your daily life in any way? If so, how?

Overall, what is your impression of safe supply?

Do you think stimulant safe supply should be more widely available?

What are your recommendations to the people writing the clinical guidelines for safe supply? What are your recommendations for prescribers?

Appendix G: Coding Chart

Categorized Codes	**Themes**
-changing drug supply *-unpredictable drug supply* *-experiences with overdoses, overamping* *-negative impacts of stimulants i.e. overuse, not sleeping, not eating, impact on mental health*	**What does it work to solve?** ● Indications of why unregulated stimulants needed to be replaced ● Reasons why participants wanted to reduce or replace illicit stimulant use
-focus *-confidence* *-trauma* *-ADHD symptoms* *-staying alert* *-dealing with opioid withdrawal* *-alcoholism*	**What does it work to replace?** ● The positive impacts of illicit stimulants ● Functional benefits of stimulants ● Reason for stimulant use ● Mental health and relationship with stimulant use
-Improved health (sleeping, Eating) *-Improved mental health (Better moods - More stable, Less fighting/anger)* *-Travel* *-Work* *-Less overdose* *-Less overamp*	**What are signs that it works?** ● Positive impacts of switching to prescribed stimulants
-Injecting / snorting / crushing *-Replacing illicit drugs* *-Trying to taper off* *-Wanting to quit* *-Chipping* *-Sinclair Method*	**How do you use it to make it work?** ● Modes of administration ● Timing/pattern of doses ● Relationship with illicit stimulants **What is the perceived goal?** ● STAT as substitute drug ● STAT as medication.
-lack of access *-pill counting* *-urinary drug screening* *-STI testing* *-daily dispense* *-relationship with prescribers* *-dosage* *-lack of clarity/instruction* *-medication options*	**What are barriers to it working?** ● Lack of access ● Lack of instruction ● Limits on dosages and medications ● Too much surveillance