

Safe Spaces but Shifting Prices? The Impact of Safe Injection Sites on Vancouver's Housing Market

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Dashboard - [Safe Injection Sites](#)

## **Introduction**

Safe injection sites have been established in cities like Vancouver as a harm reduction strategy, providing supervised spaces where individuals can use drugs under medical supervision. Supporters argue that these facilities help prevent overdoses, reduce the spread of diseases, and decrease public drug use. However, their presence has also raised concerns among residents and business owners. Critics argue that safe injection sites may lead to increased crime and open drug use, which can make neighborhoods feel less safe or appealing. These concerns have led some to believe that property values in the area could be negatively affected.

One of the major concerns is that these sites can attract individuals struggling with addiction, which could potentially lead to loitering, discarded needles, and an increase in drug-related activity in the area (Zhu et al., 2024). Homeowners and real estate investors may worry that these issues can negatively affect property values and overall neighborhood appeal. While safe injection sites are intended to reduce the harms of drug use, they do not address the root causes of addiction, leading some to question their long-term effectiveness. This study examines the impact of safe injection sites on housing prices in Vancouver by analyzing property tax assessments in areas near these facilities. We aim to determine whether the presence of a safe injection site impacts lower property values. Understanding these effects is important for policymakers, urban planners, and residents when considering the future placement of harm reduction services in cities.

### **Independent Variable (Safe Injection Sites)**

Safe injection sites offer a controlled environment where individuals can use drugs under medical supervision. These facilities provide sterile equipment, immediate care, and aim to reduce the risks of overdose and disease transmission. In British Columbia, they have become a

practical response to the crisis caused by an unregulated drug supply. Canadian research shows that safe injection sites lower overdose deaths, reduce emergency room visits, and connect people with essential health services (Bonn et al., 2023; Bonn et al., 2021; Roberts & Humphreys, 2023). While some critics argue that relaxing safety protocols could lead to additional risks or discourage broader health care interactions, the direct oversight and structure of these sites help prevent diversion and ensure patients get timely care. Overall, the evidence supports that safe injection sites are a critical and immediate intervention that saves lives during public health emergencies (Willows et al., 2020).

Public fear surrounding safe injection sites often stems from concerns about increased public drug activity and a perceived decline in neighborhood safety. In areas like Vancouver's Downtown Eastside, residents and local business owners have expressed worry about the normalization of drug use when these facilities are visible in the community. While research shows that safe injection sites reduce public injecting and syringe litter, their presence can still heighten anxiety and reinforce negative stereotypes of affected neighborhoods (DeBeck et al., 2008). This can lead to calls for stricter zoning laws or even the relocation of these services, despite clear public health benefits. Police and municipal officials often face pressure to respond to these fears, even when data shows that safe injection sites contribute to improved public order. Some efforts to reduce visible drug use have led to unintended outcomes, such as displacement into nearby areas, which can further fuel public concern (Petrar et al., 2007). However, coordinated efforts between law enforcement and public health agencies have been shown to reduce visible drug-related disturbances and help ease community tensions (Kerr et al., 2003).

Overall, research brings mixed results on how safe injection sites impact their surrounding neighborhoods. While many studies highlight the positive effects on public health and safety, others point to ongoing stigma and negative public perceptions that affect how these

services are received. Unintended consequences like displacement and concerns about neighborhood identity often complicate their implementation. These outcomes vary depending on factors like zoning, community engagement, and local support systems. Understanding this range of effects is important for shaping policies that respond to both public health needs and neighborhood concerns in a balanced and informed way.

### **Dependent Variable**

The city of Vancouver has famously become one of the least affordable places to live in the developed world, and there appears to be little signs of improvement. With rapid property appreciation over the last two decades, much of the young generation is being entirely shut out of the real estate market due to insufficient means resulting in many Vancouverites paying unreasonably high rental prices (Gordan, 2016). To add further to the grim Vancouver housing market, the University of British Columbia (UBC) reported that purchasing a home in Vancouver requires 106.4% of the average salary. This persistent unaffordability has contributed greatly to the growing communal dissatisfaction with the current housing landscape. Despite many government interventions which include taxes on foreign buyers, vacant homes, and short-term rentals, all have missed the mark on have lasting effects on mitigating speculative buying and stabilizing the market. According to a 2015 poll by Angus Reid on community sentiment regarding housing prices, Reid reported that 45% of respondents were either uncomfortable or miserable on their experience with housing in Vancouver. These respondents were unsatisfied with their inability to access the housing market, as 53% wanted to own homes but were unable to afford them, resulting in them “seriously considering leaving Metro Vancouver” (Angus Reid Institute, 2015).

Despite the ongoing struggle that renters and prospective buyers face in accessing housing, many current homeowners continue to resist changes that would increase density or affordability in their neighborhoods. Concerns about property values and shifts in community character have led to pushback against new developments and supportive community health projects. In response to rising overdose rates, initiatives such as supervised consumption sites (SCS) have been implemented to help curb the growing opioid mortality rate among vulnerable populations. Much like affordable housing developments, the newly implemented SCS has been met with resistance from homeowners concerned about their possible impact on the neighborhood. At the same time, precarious housing has become more widespread, placing those with unstable living situations at significantly higher risk of opioid overdose and other health-related issues. According to the Homelessness Services Association of BC, from 2020 to 2023, Metro Vancouver saw a 32% increase in the minimum homeless population, with over two-thirds of respondents experiencing homelessness for at least a year. A UBC report also found that nearly 30% of individuals who had experienced an overdose were also dealing with precarious housing conditions.

### **Zoning**

When examining the possible consequences of introducing a safe injection site into a neighborhood, a notable concern is what the outcomes are on the surrounding housing market. In our analysis, we examine the Vancouver property tax dataset, and a key variable within the dataset is zoning classification. Zoning determines how land can be used, whether it is residential, commercial, industrial, or mixed purpose – these classifications have an impact on property values and their desirability. Housing prices in Vancouver have been driven up by various factors such as zoning laws, as 81% of the city's land is allocated to single-family and duplex dwellings, which only accounts for 35% of all households (Lee, 2022). If zoning changes

occur near safe injection sites, this could indicate redevelopment efforts, shifts in property demand, or policy-driven urban transformations. The following section outlines Vancouver's various zoning classifications and their potential uses.

Zoning classifications determine how land can be used in each area. In Vancouver, these zoning categories include:

- One-Family Dwelling (RS) - A detached home, which is occupied by a single family, typically found in residential areas.
- Two-Family Dwelling (RT) - A duplex, which is occupied by two families, typically found in residential areas.
- Multiple Dwelling (RM) - Housing that is occupied by three or more families. RM's include apartments, townhouses, condominiums, and other multi-unit buildings.
- Residential Rental (RR) - Housing specifically designated for rental purposes. These housing units often are subject to different regulations such as a certain percentage of housing must be built for rental purposes.
- Commercial (C) - Properties designated for businesses such as retail stores, restaurants, and offices.
- Industrial (I) - Land designated for industrial activities such as manufacturing, warehouses, and production facilities. Often located in separated areas, where such industrial activities will not negatively affect residential neighborhoods.
- Historical Area (HA) - Protected heritage districts that have development restrictions to maintain certain architectural characteristics. Vancouver's historical areas include Chinatown, Gastown, and Yaletown.

- Comprehensive Development (CD) - A flexible zoning type meant for large-scale projects with mixed land uses. CD zoning types are site specific and are unique to each specific project.
- Residential Inclusive (RI) - Housing units that are required to be affordable. These units can be social housing, housing for people with disabilities or any other housing that helps the socio-economic needs of a community.
- Limited Agriculture (LA) - Areas that permit farming and limit non-agricultural use within an urban boundary.
- Other - Properties and lots that do not fit the standard zoning categories listed above.

### **Why Did We Use Tax Assessments to Measure Housing Prices?**

For our project, we decided to use property tax assessments as our primary measure of housing prices because they are accessible and comprehensive. Accessing reliable data on housing market trends is challenging, as many sources are restricted behind paywalls and not readily available to the public. Multiple Listing Service (MLS) listings and private sales data are also often inconsistent, making them less reliable for large-scale analysis. Davidoff (2018) notes that MLS listings reflect fragmented private transactions and short-term fluctuations rather than standardized, policy-driven property value assessments. MLS data can also be affected by listing biases, seasonal trends, and voluntary reporting, limiting its use in long-term housing research. In contrast property tax assessments account for factors such as location and neighborhood characteristics which make them a strong measure of housing price changes (Berniaz, 2009). Property tax records from the City of Vancouver Open Data Portal provide a structured and regularly updated dataset, making them ideal for our research. Property tax reports provide a reliable, standardized measure of housing prices, capturing long-term trends and economic conditions without short-term market distortions.

Aside from being a solid way to track housing prices, property tax assessments also reflect broader economic and social factors that shape property values. Municipalities in British Columbia rely on these assessments to generate revenue and evaluate neighborhood desirability. Variables such as crime rates, access to amenities, and demographic shifts are already embedded in assessment calculations, making them well-suited for analyzing the impact of safe injection sites on property values (Bish, 2004; Hickey, 2021). Since these factors are embedded in assessments, they help provide a more comprehensive understanding of housing market trends. Because assessments are updated periodically, they offer an evolving snapshot of market trends.

Using property tax records allows us to systematically track changes in housing prices while controlling for external influences such as crime rates, ensuring a clearer analysis of how safe injection sites affect property values. Public perception also plays a significant role in shaping market trends. While direct effects on property values remain inconclusive, concerns about neighborhood safety and desirability often influence buyer behavior and investment decisions (Macdonald, 2021; Liang & Alexeev, 2021). For our study, we aim to explore how housing prices may have been affected by the proximity of safe injection sites. Property tax assessments offer an objective measure that accounts for both market trends and policy influences which help us better understand these potential impacts.

## **Methodology**

### Data Collection Process

To explore how safe injection sites affect housing prices, we first gathered information on all the safe injection sites in Vancouver. We wanted to look at the information of when they opened, whether they were still active, and where they were located. In total, we found 12 active sites and 2 that were inactive as of March 2025. For the housing data, we used Property Tax

Assessment Reports from the City of Vancouver’s Open Data Portal. These records gave us yearly property values and helped us see how prices changed over time. They also include information like neighborhood location and zoning, which helped us understand how different areas might respond differently to the presence of a safe injection site.

## Data Cleaning & Prep

Our analysis relied heavily on high-quality spatial and property data; however, before conducting any statistical analysis, we undertook a rigorous data cleaning process to ensure our results were both accurate and meaningful. We began by filtering out extreme outliers in the Vancouver Property Tax dataset. Several parcels displayed assessed values of \$1 or less—clear anomalies without documented justification. As these properties were likely severely undervalued, we excluded them to maintain the integrity of our analysis. We then removed non-residential lots.

Since our study focused exclusively on residential property values, retaining such properties would have distorted our block-level comparisons. Additionally, we filtered the dataset to include only properties that were active during the relevant time frame. Any properties listed after the closure of a nearby safe injection site (SIS) were removed, as they could not have been influenced by its presence.

A more complex component of our methodology involved assigning properties to spatial zones around each SIS. Using GeoJSON files, we created custom zones, typically extending two to three blocks from each site. Given the variability of Vancouver’s block structure across neighborhoods, we applied contextual judgment to draw realistic boundaries that reflected local layouts. To further enhance precision, we manually refined these zones using Google Maps. Our team reviewed each SIS individually and identified surrounding properties, classifying them as

being on the same block, adjacent, or nearby. These spatial classifications were incorporated into our combined SIS-property dataset, allowing for a more nuanced, block-level analysis.

Throughout, our goal was to make conservative choices in our data cleaning to avoid overstating any findings. We were mindful that our results could contribute to ongoing debates around harm reduction infrastructure. Given the political and social sensitivities around safe injection sites, we intentionally chose to underestimate rather than exaggerate potential effects, aiming to provide a responsible and balanced perspective.

### **Analysis**

We started by looking at how property prices have changed in proximity to Vancouver's safe injection sites (SIS), with a specific emphasis on spatial and zoning dynamics. Using a custom-built dashboard, we analyzed property value trends using tax assessment data from the City of Vancouver (2024). This allowed us to compare localized changes against the citywide average property price growth of approximately 266% over the last two decades. Each property was coded as being on the same block and nearby blocks of the safe injection site enabling us to observe trends that broader datasets might otherwise mask. For this analysis, we selected neighborhoods based on block size, shape and land use. These characteristics were sourced from city tax assessment data and MLS listings to ensure the zones reflected realistic neighborhood features. Once each SIS was geocoded, we created customized buffers around them to track price changes before and after the facility's opening. Red-shaded areas in our maps represent properties that underperformed relative to the citywide average, while green shades indicate better-than-average growth. The intensity of each colour reflects the extent of the deviation, providing a clear visual of the economic impact of proximity.

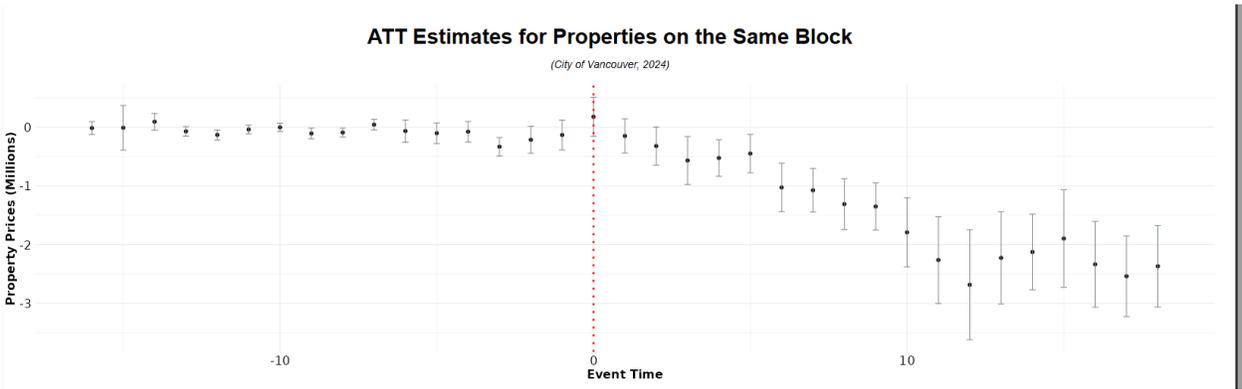
The results point to a consistent spatial trend: properties on the same block as an SIS experienced the steepest price declines, with decreasing impact as distance increased. This distance-decay effect reinforces the idea that proximity to an SIS may be capitalized into property prices over time. Our zoning-specific bar charts support this pattern. Comprehensive Development and Residential zones consistently show many negatively affected properties, while Industrial zones appear more resilient. This may be due to lower sensitivity in industrial land markets, where value is often tied to utility rather than neighborhood appeal.

These trends align with earlier studies showing how public perceptions of neighbourhood safety and visibility of drug-related activity can impact housing markets. For example, DeBeck et al. (2008) found that while SIS reduce syringe litter and public injection, their presence may still heighten community anxiety. Liang and Alexeev (2021) also note that stigma and fear of crime, even when not supported by data, can influence real estate behaviour. Thus, the presence of an SIS indirectly depresses prices through changes in buyer perception rather than actual increases in crime or disorder. Ultimately, our block-level analysis offers a nuanced understanding of how SIS sites influence housing markets. Moving beyond citywide averages and integrating zoning, policy timelines, and buyer psychology, we present a clearer, data-driven picture of how harm reduction facilities shape neighbourhood economics.

## **Results**

To rigorously assess the long-term impact of safe injection sites (SIS) on local property values, we employed a staggered Difference-in-Differences (DiD) methodology particularly well-suited for evaluating interventions implemented at different times across various locations. In this study, we analyzed neighbourhoods in Vancouver where SIS facilities were introduced in staggered years, such as 2009, 2016, and 2021. The staggered DiD approach allows us to measure the Average Treatment Effect on the Treated (ATT) by comparing treated properties (on the same

block as an SIS) with a control group of nearby properties unaffected by the intervention while accounting for time-based and spatial variation. Importantly, our control group was carefully selected based on zoning, property type, and location, ensuring valid comparisons across groups. The resulting graph offers a powerful visualization of these effects. The x-axis represents time relative to the opening of a SIS (with “year 0” being the event year), and the y-axis shows changes in property values measured in millions of Canadian dollars. The black dots indicate the estimated ATT for each year, while the vertical lines reflect 95% confidence intervals. What is critical here is the pre-treatment period: property values remain statistically stable and close to zero, confirming the parallel trends assumption central to DiD validity. This provides a robust foundation for attributing post-treatment effects to the SIS intervention.



Following the introduction of an SIS, property values exhibit a pronounced and persistent decline. The ATT estimates grow increasingly hostile over time, dropping as much as \$2.6 to \$3 million by year 12. This sustained downward trend, paired with widening confidence intervals, suggests a significant market response and increasing variability in how individual properties are impacted. The key takeaway from this visualization is the absence of a rebound effect. Rather than stabilizing or recovering, property values continue to decline over time, indicating a potential permanent market response. These results bolster the argument that proximity to an SIS,

particularly when located directly on the same block, may have enduring implications for residential property markets in Vancouver. The data from the City of Vancouver's annual property tax assessments (2024) provides a reliable, consistent basis for these conclusions, making the case for localized analysis in urban policy planning.

### **Conclusion**

In conclusion, our study finds that properties located near safe injection sites experience a substantial decline in value compared to similar properties farther away within the same neighborhood. On average, those in close proximity lose over 2.5 million CAD in value over a twelve-year period, with consistent negative price effects observed annually. These results indicate that the presence of safe injection sites in residential areas imposes a significant financial burden on property and business owners, potentially deterring investment and long-term neighborhood stability. The economic impact appears to be unevenly distributed, suggesting that policymakers should take local demographic factors into account when selecting site locations and consider compensation mechanisms for affected property owners. While our analysis focused on block-level comparisons, a broader city-wide study could uncover an even more pronounced cumulative effect. Future research should expand the dataset to include longitudinal comparisons across different property types and socioeconomic areas across the city of Vancouver.

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