

# Recovery Houses: Non-Compliance with the British Columbia Fire Code and Implications for Life Safety



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## Executive Summary

This study is intended to raise awareness and initiate discussion around fire and life safety issues existing at non-compliant recovery houses in Surrey, British Columbia, and to provide the rationale for increased coverage of safety at these facilities with a fire sprinkler requirement. Recovery houses provide valuable services for persons recovering from substance abuse, along with food and shelter while in residential treatment. They play an important role in supporting recovering addicts and their re-integration back into society. However, the issue of non-compliance with the *British Columbia Fire Code (Fire Code)* and life safety concerns at recovery houses has received increased attention. A recent *British Columbia Building Code (Building Code)* appeal decision has ruled that the provisions in Sentence 9.10.2.2(2) are not applicable to a drug recovery home. Based on Appeal Decision #1778, the risk of fire in a recovery house is similar to that in a single family dwelling and no additional fire protection measures would be required to re-purpose a single family home into a drug recovery group home. This is inconsistent with the facts brought forward by this study. Fire risk is increased when non-compliance with the *Fire Code* is high and residential custodianship is low, and the clients themselves are vulnerable while in recovery. The likelihood of fire-related death or injury at these residential facilities is greater if fire safety devices are absent, not maintained or tampered with, as is often the case with smoke alarms.

The absence of working smoke alarms at recovery houses is a concern given the characteristics of clients at recovery houses and their behaviours. Clients have been known to disconnect or tamper with smoke alarms to allegedly permit smoking in their rooms. Cigarettes and other smoking materials are carelessly discarded in and around these facilities and pose a fire hazard. Risks are heightened if clients are distracted or consuming illicit drugs and relapsing while at these facilities. Smoke alarms alert and provide needed time for escape from fire when occupants are asleep or distracted. Fire safety devices are only effective if they are present, functioning, and properly maintained. In most recovery homes in Surrey, fire safety inspections are only as good as the day they are completed. Surrey Fire Prevention Officers who re-visit non-compliant recovery houses often cite unsatisfactory items that were non-compliant in the preceding months. Repeat violations of the *Fire Code* at recovery houses are a reflection of the steady rise of non-compliant facilities serving a population of recovering addicts in the City. Non-compliance is also reflective of those facilities where fire and life safety seems absent for owners/operators. Recovery houses typically have a high occupancy load which means that a greater number of lives are at risk should a fire occur. Fire sprinklers can suppress and often extinguish a fire before the fire department arrives, giving clients and staff time to escape.

A case can be made for the addition of sprinkler systems at recovery houses in order to address heightened fire risk at such facilities. These life-saving devices cannot easily be tampered with, and they have a demonstrated ability to maximize safety if a fire occurs. Automatic sprinklers are highly effective and reliable elements of fire protection in buildings. A 2013 University of the Fraser Valley (UFV) study confirmed the value of residential sprinkler systems and their life-saving benefits in British Columbia (BC). From 2006 to 2011, 91% of the fires occurred in residential buildings

without sprinkler protection. These fires resulted in 94% of the injuries and 99% of the deaths (Garis and Clare 2013, 1). Across all residential fires, in the absence of sprinkler protection, the death rate per 1,000 fires that occurred increased by 13.7 times and the injury rate per 1,000 fires increased by 1.5 times. These results indicate that residential sprinkler systems reduce fire-related casualties, and reduce the significance of fire spread, particularly when combined with a regime of working smoke alarms.

This study is based on *Fire Code* violations identified from a baseline of 200 known recovery houses in the City of Surrey. Of these, 145 are unregistered and 55 are registered facilities. Twenty-five unregistered recovery houses are still open and running.

- In 2015, approximately 31% of recovery houses fall into a high-risk/low-compliance category ( $N=38$ )<sup>1</sup>, and 53% of unregistered recovery houses that had residential structure fires from 2012 to 2015 ( $n=12$ ) were non-compliant at the most recent inspection that preceded the fire.
- Over the past six years, there has been steady growth in the frequency and severity of *Fire Code* violations at recovery houses in Surrey. In 2015, *Fire Code* violations at unregistered recovery houses increased to well above the six-year average of 96 violations.
- The most frequent recurring violations at recovery houses are: (1) smoke alarms; (2); emergency lighting; and (3) portable extinguishers. Clients often disconnect or tamper with smoke alarms to allegedly permit smoking in their rooms or for other reasons.

While this study indicates that unregistered recovery houses experience more violations of the *Fire Code* than registered recovery houses, both facility types are at a heightened risk of fire given the vulnerable clients residing at these premises and the high-occupancy load associated with drug recovery group homes.

## Problem Statement

The root cause of the problem is the lack of provisions specific to recovery homes in the *British Columbia Building Code (Building Code)*. The common understanding has been that drug recovery group homes should comply with the provisions of Sentence 9.10.2.2(2) of Division of the *Building Code*. These provisions limit the number of occupants to 10 and require the provision of a sprinkler system. The fire protection measures in Sentence 9.10.2.2(2) would mitigate the additional fire risks associated with drug recovery homes. However, a recent *Building Code* appeal decision (Appeal Decision #1778) has ruled that the provisions in Sentence 9.10.2.2(2) are not applicable to a drug recovery home. Based on this decision, the risk of fire in a recovery house is similar to that in a single family dwelling and no additional fire protection measures would be required to re-purpose such a dwelling into a drug recovery group home.

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<sup>1</sup> This framework incorporates information about previous inspections, performance, the responsible person in charge of the property, the property use, and the structure type. It splits the property characteristics into two measures that operate in parallel: *compliance* and *risk*. These metrics can be combined to create a compliance-risk framework that separates all inspectable properties into one of four categories: (1) high-risk/low-compliance; (2) high-risk/high-compliance; (3) low-risk/low-compliance; and (4) low-risk/high-compliance. The overall compliance score for each property is computed by multiplying the most recent inspection result score by the score for the number of items inspected at the property.  $N$  refers to the population size and  $n$ , to sample size.

It is asserted that Appeal Decision #1778 is a setback from the efforts made by the Canadian Commission on Building and Fire Codes when the requirements for group homes were introduced in Sentence 9.10.2.5.(1) of the 1995 *National Building Code of Canada*. These same requirements were adopted in the 1995 *BC Building Code*. Appeal Decision #1778 has also undermined the efforts made by other government agencies and municipalities to make available a wider range of supportive housing and care services without compromising the *Building Code* and fire and life safety basics. For perspective, *The International Building Code* would limit the number of residents in such facility to 5 and require the provision of a sprinkler system (Reference 2015 *International Building Code* Section 308.3 Institutional Group I1, exception 308.3.4 to allow classification as R-3 rather than I-1, or compliance with the *International Residential Code* provided the facility has fewer than 5 residents and a sprinkler system is present).

A recovery house has some very specific fire system challenges. By their very nature, staff at these facilities will often provide treatment and supervision to vulnerable clients with limited mobility or in need of specialist care. Clients with vulnerabilities due to age-related limitations, physical/cognitive limitations, disabilities, drug or alcohol use should be given a high priority. Residents may have other disabilities such as mental health challenges that can affect the response to an alarm. A study undertaken by the Ontario Ministry of Community Safety and Correctional Services titled “Comprehensive Fire Safety Effectiveness Model” stated that when considering fire risk, special consideration should be given to addressing facilities such as group homes, rooming houses, residential care, and long-term care homes, among other related operations (Ontario Ministry of Community Safety and Correctional Services titled “Comprehensive Fire Safety Effectiveness Model,” 3.5.3 Vulnerable Individuals or Occupancies). The responsible person in charge of facilities such as drug recovery group homes must, where lawfully-required, ensure that premises conform to *Fire Code* requirements to protect the safety of clients and staff.

## Non-Compliance with the *Fire Code* and Life Safety Implications

The implications of non-compliance with the *Fire Code* are not trivial, and may result in tragedy if left unaddressed. In 2010, a rooming house fire occurred at 2862 Pandora Street, Vancouver where three individuals died. The house was designed as a single family dwelling, but its owner had rented rooms to transients on a monthly basis. Conditions leading up to the fatal fire at Pandora Street are similar to non-compliance issues and associated risks existing at many recovery houses in Surrey. The Pandora Street rooming house was used in a manner that went beyond its intended design, that is, to house a family. The residence had frequently come to the attention of Vancouver City officials in ways similar to how non-compliant recovery houses are identified in Surrey. That is, through fire safety inspections or public complaints. The owner of the Vancouver rooming house was ordered to make improvements to the property in order to bring it into compliance with the *Fire Code*, but did not comply. Whether a rooming house or a recovery house, both facility types carry a similar level of risk especially when they are non-compliant with the *Fire Code*, have a high occupancy load, and lack effective fire safety devices. Occupants of these facilities are all vulnerable persons, the risk of fire-related death or injury is equally present, and the owners/operators are often aware of the problems but unconcerned about fixing them.

## Intent of Study

This study examined the most serious and frequently recurring violations of the *Fire Code* in Surrey recovery houses from 2010 to 2015. These violations stem from a lack of fire safety devices at recovery houses to the tampering of smoke alarms and faulty equipment.

1. smoke alarms
2. emergency lighting
3. portable extinguishers
4. exit signs and lights
5. fire separations
6. servicing extinguishers

These risk-limitation devices are essential to the safety of persons working and/or residing at recovery houses. However, the evidence shows that smoke alarms are often removed, tampered with, or otherwise rendered inoperable. Efforts to resolve these issues are ongoing, but non-compliance with the *Fire Code* is a continuing problem at many recovery houses in Surrey.

Photographs of unsatisfactory items existing at recovery houses are included in this study, and range from examples of removing or tampering with smoke alarms to other serious violations which have implications for life safety (Appendix A).

## Operation of Recovery Houses in BC

There are three categories of recovery houses in BC:

1. Unregistered: These are not funded by BC provincial government as they do not provide “prescribed services” as defined in the *Community Care and Assisted Living Act (CCALA)*. Residents pay rent either through income assistance or other income. Owners/operators under this regime derive the majority of their operating funds through rent paid by clients. Prescribed services mean providing a personal assistance service at a level that initiates the requirement for registration as an assisted living residence. A service under this regime is at the prescribed level if it is provided daily to weekly on a regular and continuous basis. An example is the central storage of medications. Any problems are dealt with by the City By-law Service or Police Department;
2. Assisted Living Registry: Recovery houses under this regime are funded by the Ministry of Social Development and Social Innovation (MSDSI)’s recovery house per diem program and must provide at least one but not more than two prescribed services as defined in the *CCALA*; and
3. Licensed: These are licensed by and funded under the Fraser Health Authority (FHA) and provide three or more prescribed services as defined in the *Community Care and Assisted Living Act*.

The Ministry of Health and the Assisted Living Registry (ALR) do not fund supportive recovery homes in BC. However, there are several ways that registered recovery houses are funded in the province of BC:

- The Ministry of Social Development and Social Innovation or MSDSI provides a per diem of \$30.90 a day for clients who are in receipt of income assistance benefits from MSDSI. The per diem is only paid if the home is registered with the Assisted Living Registry and the per diem goes to the operator;
- Some Health Authorities provide funding to the operators of supportive recovery homes. The Health Authority has a contract with the operator and generally manages some or all the admissions to the home (publicly-subsidized) and Health Authority clinicians and other health professionals may be involved in the case management of the clients that they place in a supportive recovery home;
- BC Housing provides funding to some homes in this regime on a limited, case-by-case basis; and
- Clients may be covered under their private health care plan for supportive recovery services.

## Data Analysis

There are basically two reasons why recovery houses are not compliant with the *Fire Code*: the responsible person is either unaware of the violation(s) or is aware of the problem but unconcerned about fixing it. The first situation can be remedied with education and collaboration, while the second may require a formal process involving a legal response. Surrey Fire Service continues to provide educational and coaching opportunities for owners/operators of recovery houses while enforcing the *Fire Code*. The educational component is a large part of Surrey Fire Service's fire prevention focus on driving down fire risk in the City. However, there are times when enforcement is required, especially when non-compliance with the *Fire Code* is a recurring issue, and fire and life safety seems absent for owners/operators of recovery houses.

A 2014 UFV study titled "A Dynamic Risk-Based Framework for Redesigning the Scheduling of Fire Safety Inspections" introduced a risk-based, data-driven framework for fire safety inspections. This framework uses information about previous inspections performance, the responsible person in charge of the property, the property use, and the structure type. This alternative method for scheduling fire safety inspections took into account the likelihood of compliance, enabling fire services to target their efforts at the most problem-prone/highest-risk properties for more frequent inspection, while reducing the overall inspection workload and freeing up fire service resources to be proactively re-directed to other duties.

The data-driven, performance-based framework splits property characteristics into two measures that operate in parallel: *compliance* and *risk*. These measures can be combined to create a compliance-risk framework that separates all inspectable properties into one of the following four categories:



**FIGURE 1: A DYNAMIC RISK-BASED FRAMEWORK FOR REDESIGNING THE SCHEDULING OF FIRE SAFETY INSPECTIONS**



The intent of this categorisation method is to ensure fire service inspections resources are being deployed in the most beneficial manner possible. Ideally, this targeted effort would reduce the number of high-risk/low-compliance properties to as close to zero as possible. The 2014 UFV study found that when these calculations were performed on the outcomes of fire safety inspections at properties that experienced fires (for the inspection that directly preceded the fires), the following profile of risk was observed:

- 29% of properties fall into the high-risk/low-compliance category;
- 9% of properties fall into the high-risk/high-compliance category;
- 41% of properties fall into the low-risk/low-compliance category; and
- 21% of properties fall into the low-risk/high-compliance category.

(Garis and Clare 2014, 1)

Based on five years of historical fire incident data reports submitted to the BC Office of the Fire Commissioner for which the date of last inspection was captured (1999-2003), a major finding emerged. The majority of fires (74%), injuries (81%), and deaths (74%) occurred within one year of the most recent inspection (Garis and Clare 2014, 7). This further emphasizes the point that fire safety inspections are only as good as the period they are completed. It is important, therefore, to enforce continuing compliance with the *Fire Code* in properties that are regarded as high-risk/low-compliance given the greater risk of fire, and to ensure that present, functioning and tamper proof fire safety systems like sprinkler systems are in place. When applying this categorisation method to known recovery houses in Surrey, approximately one-third of properties in 2015 fall into the high-risk/low-compliance category. From 2012 to 2015 approximately 53% of unregistered recovery houses that had residential structure fires were non-compliant at the most recent inspection that preceded the fire.

This is an unacceptably high number given the risk factors involved, and can be reduced by adding a regime of fire sprinkler systems to a smoke alarm program at recovery houses to address heightened fire risk. The 2014 UFV study determined that properties with non-compliant items in the high-risk/low-compliance category were approximately 4.7 times more likely to have a fire (Garis and Clare 2014, 14). Since many recovery houses are chronically non-compliant with the *Fire Code*, there should be heightened attention to correcting violations and adding sprinkler systems as they are less likely to be tampered with or disabled. Since 2012, there have been three residential structure fires each year at unregistered recovery houses in Surrey (n=12). This speaks to an urgent need for a greater regime of fire safety protection at recovery houses to address ongoing non-compliance and the increased risk of fire, death, and injury at these facilities.

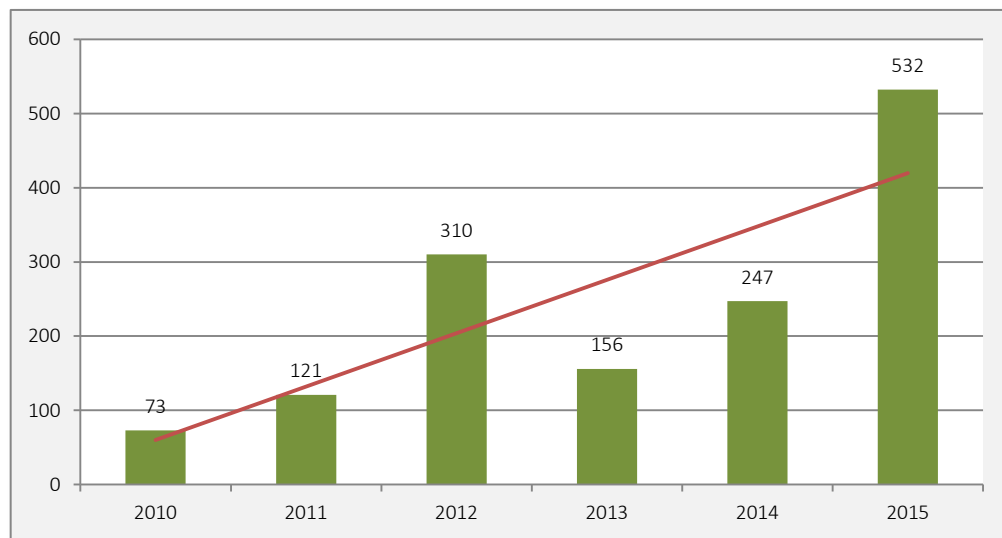


## The Issue of Non-Compliance at Recovery Houses

Fire safety inspections in BC are completed for two main reasons: (1) to limit the incidence of fires by rectifying situations posing an increased risk of fires occurring; and (2) to limit the risk posed by fires when they occur. Inspections ensure that safety devices are present and functioning and maximize life safety by allowing the occupant time to escape and restrict fire spread. These risk-limitation devices may include smoke alarms, sprinklers, means of egress, and fire safety education. Inspections are intended to audit and correct the behaviours and the physical components of buildings that elevate the risks of fires. Legal sanctions, fire prevention education or a combination of both are used with non-compliant property owners/operators.

From 2010 to 2015, there were a total of 1439 unsatisfactory items at registered and unregistered recovery houses in Surrey. There has been a steady rise in *Fire Code* violations at recovery houses over the past six years. From 2014 to 2015 alone, violations more than doubled at known non-compliant facilities in the City. This is attributable, in large part, to increased enforcement by the Surrey Fire Prevention Branch.

**FIGURE 2: VIOLATIONS OF THE FIRE CODE AT REGISTERED AND UNREGISTERED RECOVERY HOUSES IN SURREY BY YEAR: 2010 TO 2015**

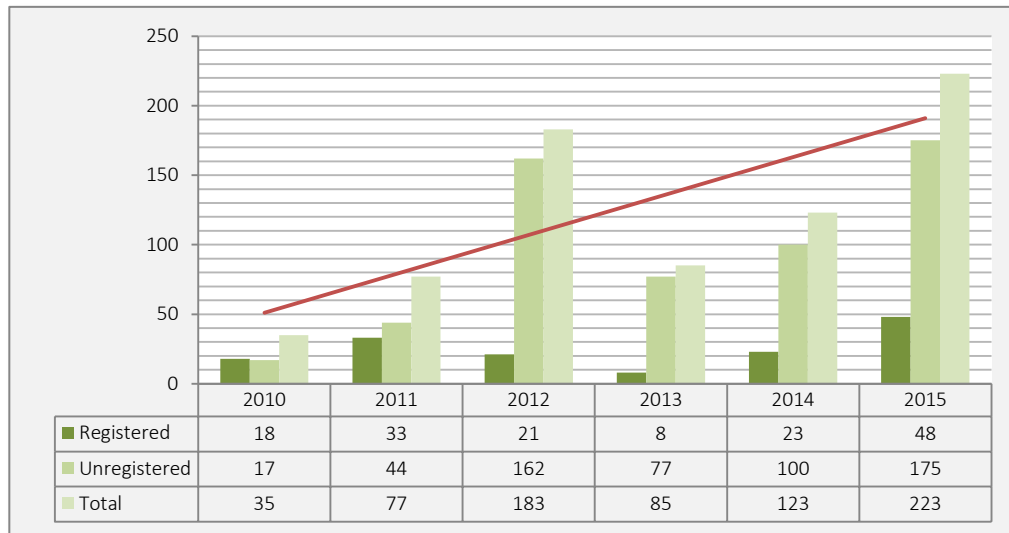


Source: Surrey Fire Service Information Management System (N=1439)

Figure 3 below reveals the frequency of *Fire Code* violations at recovery houses by licenced status with a trend line placed on the total number of infractions. The trend line shows a steady increase in the frequency of *Fire Code* violations at recovery houses in Surrey.

Since 2012, the difference between registered and unregistered recovery houses in terms of unsatisfactory items had substantially widened and by 2015, violations at unregistered facilities made up 78% of all violations. In 2015, the total *Fire Code* violations at unregistered facilities had risen to well above the six-year average of 96 infractions.

**FIGURE 3: FREQUENCY OF VIOLATIONS OF THE FIRE CODE AT RECOVERY HOUSES BY LICENCED STATUS PER YEAR IN SURREY: 2010 TO 2015**



Source: Surrey Fire Service Information Management System  
 (Figures refer to smoke alarms; emergency lighting; portable extinguishers; exit signs and lights; fire separations; and servicing extinguishers) (n=726)

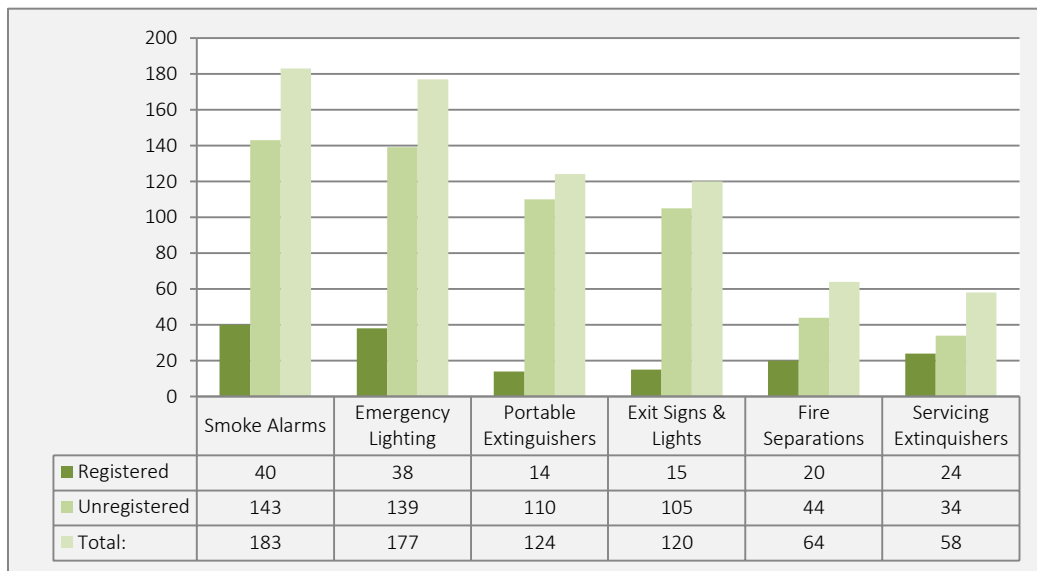
The increase corresponds, in part, with the presence of non-compliant recovery houses serving a population of recovering addicts in the City. It is also reflective of more *Fire Code* violations reported and acted upon by Surrey Fire Service’s Prevention Branch. Recurring violations or “recidivism” is a measure of residential custodianship at recovery houses and is a marker of fire risk at non-compliant facilities. Recidivism means more than one violation of an inspectable item at a non-compliant facility. Put another way, recidivism refers to an owner/operator’s relapse into non-compliant behavior, often after the individual receives sanctions or undergoes intervention for a previous violation of the *Fire Code*. Taken together, repeat violations of the *Fire Code* reveal a pattern of neglect and are a predictor of fire risk at these facilities. The following six major violation types were identified:

1. smoke alarms
2. emergency lighting
3. portable extinguishers
4. exit signs and lights
5. fire separations
6. servicing extinguishers

These six inspection items were selected for analysis as they are the most consistently violated of all inspectable items found at recovery houses yet have demonstrated life-saving potential if a fire occurs.

Of these, the three most frequently cited *Fire Code* violations are: (1) smoke alarms; (2) emergency lighting; and (3) portable extinguishers. These and other fire safety devices are vital components of a comprehensive fire safety package, if one or two of these items are absent or deficient at a facility, it reduces the overall effectiveness of the entire system. From 2010 to 2015, approximately 78% of all smoke alarm violations occurred at unregistered recovery houses. *Fire Code* violations are more pronounced at unregistered recovery houses where oversight and residential custodianship is low or absent, and there is less vigilance paid to fire safety requirements.

**FIGURE 4: FREQUENCY OF VIOLATIONS AT REGISTERED AND UNREGISTERED RECOVERY HOUSES IN SURREY BY INSPECTION TYPE FROM 2010 TO 2015**

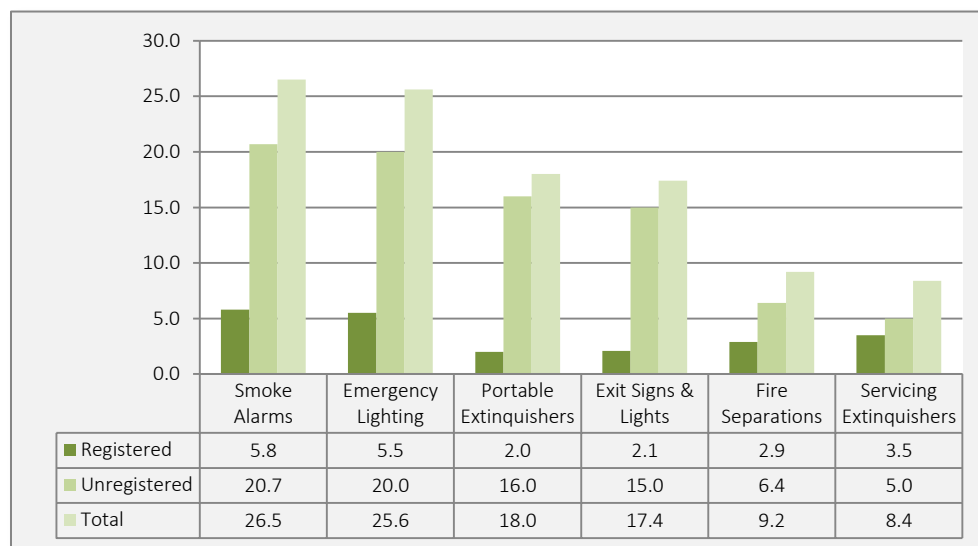


Source: Surrey Fire Service Information Management System (n=726)

When examining the rate of unsatisfactory items over a six-year period at registered and unregistered recovery houses in Surrey there is a notable difference in non-compliance between facility types. This is evident in the following four categories: (1) smoke alarms; (2) emergency lighting; (3) portable extinguishers; and (4) exit signs and lights. In the simplest cases, normalization of ratings means adjusting values measured on different scales to a common scale, often prior to averaging. From 2010 to 2015, there was a total of 68,983 unsatisfactory items recorded in the Surrey Fire Service Information Management System.

When looking at unsatisfactory smoke alarms at unregistered recovery houses, 143 violations were recorded during the six-year period. The calculation of smoke alarm violation rate is as follows:  $143 / 68,983 \times 10,000 =$  violation rate per 10,000 recorded unsatisfactory items. For smoke alarm violations at unregistered recovery houses over six years, the rate is calculated as: 20.7. The calculation of rate was applied to all data under consideration and displayed in Figure 5.

**FIGURE 5: RATE OF VIOLATIONS AT REGISTERED AND UNREGISTERED RECOVERY HOUSES IN SURREY BY INSPECTION TYPE FROM 2010 TO 2015**



Source: Surrey Fire Service Information Management System (n=726)

In examining recidivism of smoke alarms by facility type, there is a rate difference of 15, or expressed numerically 103 more smoke alarm violations at unregistered recovery houses compared to registered facilities during the six-year period under review. (A rate is a measure, quantity, or frequency, typically one measured against some other quantity or measure. A rate does not have the same numerator-denominator relationship as a percentage).

### The Importance of Present and Functioning Smoke Alarms in Recovery Houses

A study conducted by UFV in 2008 examining nearly 5,000 structure fires in Surrey over a 20-year period demonstrated that high-risk people, properties, and places have a greater fire risk than others. The study found that the risks of fatality in the event of a residential structure fire are unevenly distributed across BC society. It determined that risks are elevated for households with at least one young child, seniors, or person with a disability. In addition, rental units, households in low-income areas, and houses in rural and BC First Nations communities also experience elevated risk. This criterion extends to recovery houses where vulnerable and disabled people gather and reside, and receive treatment services for addiction.

A companion study carried out in 2012 had confirmed these earlier findings and made three main points:

1. present, functioning smoke alarms save lives;
2. smoke alarm functionality deteriorates with time; and
3. targeted prevention and education efforts increase functioning smoke alarm coverage.

It is estimated that the death rate per 1,000 fires in the absence of a present, functioning smoke alarm was 74% greater than when a functioning smoke alarm was present. The absence of present, working smoke alarms at recovery houses in Surrey is of concern given clients and their behaviours. This is particularly concerning at unregistered facilities where there is a higher rate of smoke alarm recidivism relative to registered facilities. Smoking is a known practice among many recovering addicts at recovery houses. A related behaviour is that clients often disconnect or tamper with smoke alarms to enable smoking in their living units. These living units often contain combustible materials and, in some instances, piles of clothing and old mattresses have been cited. Cigarettes and other material are disposed of at or near recovery houses and pose a fire hazard (Appendix A). These risks are heightened if the client is sleeping, distracted or consuming harmful drugs and relapsing while at a recovery house.

## **Sprinkler Systems and Residential Structure Fires**

Residential sprinkler systems are designed to automatically discharge to extinguish fires with a view to giving building occupants time to escape. They are able to react within 35 seconds of a fire starting. Within an industrial and commercial context these systems have been demonstrated to increase survival rates and reduce losses relative to buildings without sprinkler protection. These benefits are transferable to a residential setting. Studies have confirmed the value of fire sprinkler systems, and their life-saving power when combined with a program of present and functioning smoke alarms. In a 2013 UFV study titled “Sprinkler Systems and Residential Structure Fires,” Garis and Clare examined the impact of sprinklers for life safety and fire spread in residential buildings in BC. Data was provided by the British Columbia Office of the Fire Commissioner and included all fires reported to the Office between October 2006 and October 2011. From a total of 37,942 fires, 9,481 residential fires were retained for this analysis based on their sprinkler protection status. These fires resulted in 144 deaths and 696 injuries. Overall, 91% of the fires occurred in residential buildings without sprinkler protection. These fires resulted in 94% of the injuries and 99% of the deaths. Less than 1% of fires in single detached residential properties occurred in the presence of sprinkler protection (Garis and Clare 2013, 1).

Across all residential fires, in the absence of sprinkler protection, the death rate per 1,000 fires that occurred increased by 13.7 times and the injury rate per 1,000 fires increased by 1.5 times. These patterns were consistent for apartments and single detached dwellings. Fires in sprinkler protected buildings that were controlled by the sprinkler system were smaller and more contained relative to fires in buildings without sprinkler protection. They were 1.5 times more likely to be confined to at least the room of origin for the fire: confined in approximately 97% of fires in sprinkler protected buildings, compared to 63% of fires in buildings without sprinklers. Fires in buildings without sprinkler protection were more likely to extend to the building of origin and beyond (Garis and Clare 2013, 1).

In combination with the previous analysis that looked at smoke alarms and the impact of these safety devices and sprinklers on fire-related casualties, the general patterns that have emerged from BC data are consistent with those cited by the US Fire Administration:

- When fire sprinklers alone are installed in a residence, the chances of dying in a fire are reduced by 69%, when compared to a residence without sprinklers;
- When smoke alarms alone are installed in a residence, a reduction in death rate of 63% can be expected, when compared to a residence without smoke alarms; and
- When both smoke alarms and fire sprinklers are present in a home, the risk of dying in a fire is reduced by 82%, when compared to a residence without either.

Source: US Fire Administration. *USFA Position on Residential Fire Sprinklers*, 2008

Overall, these results indicate that residential sprinkler systems significantly reduce fire-related casualties, reduce the significance of fire spread, and reduce the demand placed on fire department resources. These protection systems work best in tandem with smoke alarms and have demonstrated life-saving potential at residential properties that are at a heightened risk of fire.

## Conclusions and Recommendations

There is a significant growing concern over non-compliance with the *Fire Code* at recovery houses. Inspections of these properties reveal that smoke alarms are often tampered with and removed, while other devices are rendered inoperable. Research has consistently demonstrated the value in reducing the risk with functioning smoke alarms. Furthermore, this reduction is achieved with the addition of a function of a sprinkler system. While the rate of residential fire-related deaths and injury in Surrey is low compared to other Metro Vancouver jurisdictions, non-compliance at recovery houses in the City has increased and requires a comprehensive response.

At present, there are few effective remedies to address the problem. While recovery houses play an important role in the lives of recovering addicts they can also present hazards to clients if they are non-compliant with the *Fire Code*. A case can be made for a greater regime of life safety by adding fire sprinkler systems to smoke alarm programs at recovery houses to address heightened fire risk. Sprinklers cannot easily be tampered with, and together with smoke alarms can greatly reduce the risk of loss of life and property to fire.

1. It is recommended that fire sprinkler systems be made mandatory for recovery houses in the City of Surrey given the ongoing issue of non-compliance with the *Fire Code*, and need for increased coverage of safety at these facilities with a fire sprinkler requirement.
2. It is recommended that an in-depth study of life safety issues at recovery houses in Canada be undertaken in partnership with the University of the Fraser Valley and other academic research partners (Chief Fire Officers Association, United Kingdom). <http://www.cfoa.org.uk/21132>

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[http://www.mcscs.jus.gov.on.ca/english/FireMarshal/FireServiceResources/ComprehensiveFireSafetyEffectivenessModel/FireRiskSub-Model/Fire\\_risk\\_submodel.html](http://www.mcscs.jus.gov.on.ca/english/FireMarshal/FireServiceResources/ComprehensiveFireSafetyEffectivenessModel/FireRiskSub-Model/Fire_risk_submodel.html)
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## Author's Biographical Information

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Steve Robinson is Assistant Chief for the City of Surrey, BC, with 24 years' experience and is in charge of the Department's Fire Prevention Branch.

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# Appendix

## APPENDIX A: FIRE CODE VIOLATIONS AT RECOVERY HOUSES IN SURREY

Disconnected Smoke Alarm



Removed Smoke Alarm



Disabled Hard Wired Smoke Alarm



Cigarette Butts in Gutters



Oven Door Removed




Mattress Stacks







  
**UNIVERSITY**  
OF THE **FRASER VALLEY**  
SCHOOL OF CRIMINOLOGY &  
CRIMINAL JUSTICE

  
**UNIVERSITY**  
OF THE **FRASER VALLEY**  
CENTRE FOR SOCIAL RESEARCH