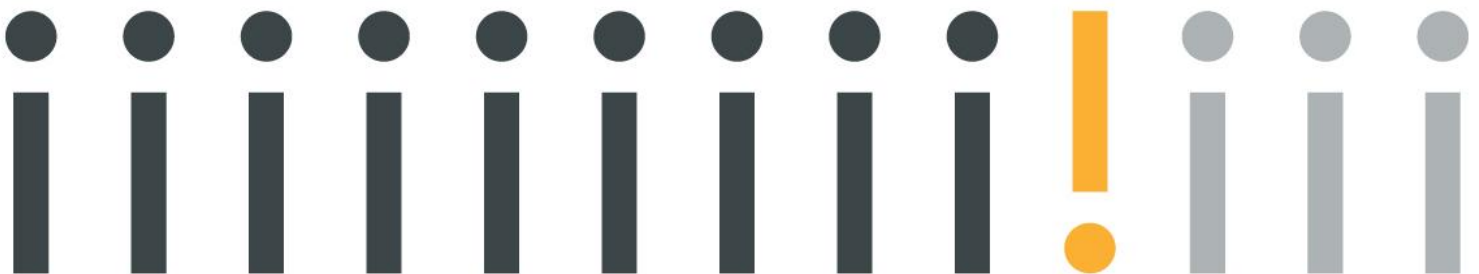

The Role of Alcohol Outlet Density in Reducing Domestic Violence in Alberta



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1.0 Introduction

Shift: The Project to End Domestic Violence was initiated by the Brenda Strafford Chair in the Prevention of Domestic Violence, in the Faculty of Social Work, at the University of Calgary. Shift is aimed at significantly reducing domestic violence in Alberta using a primary prevention approach to stop first-time victimization and perpetration. In short, primary prevention means taking action to build resilience and prevent problems before they occur.

The purpose of Shift is to enhance the capacity of policy makers, systems leaders, clinicians, service providers and the community at large, to significantly reduce the rates of domestic violence in Alberta. We are committed to making our research accessible and working collaboratively with a diverse range of stakeholders, to inform and influence current and future domestic violence prevention efforts, through the perspective of primary prevention.

In this paper, we examine the relationship between alcohol use and domestic violence, and explore whether policy changes—in particular the regulation of liquor store density—can be effective in preventing and reducing domestic violence. This paper outlines the rationale for implementing liquor outlet density controls in Alberta and offers examples of effective research, policy and enforcement strategies from other jurisdictions. It concludes with a list of ways that municipalities can reduce alcohol-related domestic violence incidences using density controls.

Research has demonstrated a strong association between alcohol use and domestic violence, with evidence suggesting links to both increased occurrence and severity of violence (World Health Organization [WHO], 2005). This correlation is evident in Alberta, where rates of domestic violence are among the highest in the nation¹ (Statistics Canada, 2011). When liquor stores were privatized in Alberta in 1993, rates of violence involving alcohol rose dramatically, increasing from 40 per cent to 60 per cent in the year after privatization (Government of Alberta, 2007). Rates of spousal and non-

A Correctional Service of Canada survey of 8,598 male federal inmates as well as interviews with both federal and provincial inmates indicated:

- 38 per cent of federal inmates committed their most serious crime under partial influence of alcohol
- 39 per cent of assaults, 34 per cent of homicides, 30 per cent of attempted murders, 32 per cent of thefts were committed under the alcohol intoxication only at the moment of crime
- Overall, it was estimated that between 15 per cent and 20 per cent of crimes committed by federal and provincial inmates were attributed to alcohol only (Pernanen, Cousineau, Brochu, & Sun, 2002).

¹ At eight per cent, the provinces of Alberta and Saskatchewan have the highest rates of domestic violence in Canada.

spousal homicides involving alcohol also increased, and Alberta's rates of alcohol-related spousal and non-spousal homicide and general crime are now higher than the national average (Government of Alberta, 2007).

Availability of alcohol has also been growing in Alberta since privatization. In 1993, there were 208 liquor stores in the province; by 2011 the number of stores had increased to 1,240 (Alberta Gaming and Liquor Commission, 2011a). Adjusting for population growth, this represents a 420% increase in liquor outlets per person, with the number of liquor stores increasing from one for every 12,379 people in 1993, to one for every 2,944 people in 2011.² There are now more liquor stores in Alberta than in any other province in Canada (Flanagan, 2003; Snow, 2009).

As this paper will explore, a growing body of research exists to suggest a strong correlation between alcohol and violence, with higher levels of liquor outlet density being associated with higher rates of alcohol consumption and these, in turn, being associated with higher rates of violence (Babor et al., 2010; Hahn et al., 2012; Popova et al., 2012; Stockwell et al., 2009), including domestic violence, child maltreatment and sexual abuse (See, for example: Cunradi, Mair, Ponicki, & Remer, 2011, Livingston, 2010, Livingston, 2011a; 2011b; McKinney, Caetano, Harris, & Ebama, 2009; Freisthler & Weiss, 2008). While causality has not yet been established (Krug et al. 2002), the implementation of alcohol control measures in some jurisdictions has been associated with reduced rates of violence (this is explored further in the section 3.1.3, below). For this reason, alcohol control measures are featuring more prominently in violence prevention efforts worldwide (Mair & Mair, 2003; WHO, 2005; WHO Europe, 2005).

The World Health Organization (WHO) has played a leading role in changing the discourse regarding alcohol policies for the past three decades, expanding the discussion from simple licensing measures to include a range of policy tools designed to reduce harm related to alcohol use. Initially, the WHO focused primarily on traditional health issues, however, recognition of the complexity of alcohol-related problems led the organization to launch *The World Report on Violence and Health* in 2002, which highlighted the correlation between alcohol misuse and domestic violence, child maltreatment and range of other violence-related issues (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). The WHO followed this with a series of other reports detailing the relationship between alcohol and violence, including: *Alcohol and Interpersonal Violence* (WHO Europe, 2005), *Intimate Partner Violence and Alcohol Fact Sheet* (WHO, 2005), *Violence Prevention Evidence* (WHO, 2010), and *Guide to Developing Effective Alcohol Legislation* (WHO, 2011). As a result of these publications, alcohol control strategies began to be implemented around the world as a means of harm reduction.

² In 1993, there were 208 liquor outlets serving a total population of 2,575,000. In 2011, there were 1,240 outlets for a total population of 3,651,000 (AGLC, 2011a; Municipal Affairs, 2012).

Since then, a number of strategies have been developed to reduce alcohol consumption, including policies to control access to alcohol. This paper focuses on one of these tools: density controls.³ Whereas most alcohol-related policy lies within the purview of provincial or state governments, density controls are implemented at the municipal level and thus are often easier to implement.

Many cities throughout North America are working to reduce access to alcohol by implementing regulations to control the density of liquor outlets. Evidence suggests that the control of retail alcohol outlets may prove an effective way to reduce alcohol-related harm—including domestic and sexual violence—in Alberta. It is an issue that must be addressed with some urgency as density is very difficult to address retroactively. The density of alcohol outlets in Alberta has grown steadily since privatization and not enough has been done to manage this growth.⁴ A small window of opportunity exists to prevent the clustering of alcohol outlets in communities in Alberta and municipal governments need to act quickly.

2.0 Methods

The purpose of this study was to explore the degree to which alcohol outlet density control could be used as an effective tool to reduce domestic violence in Alberta. There were two phases in the research process. The first phase involved a literature review to: 1) identify types of alcohol control policies internationally, 2) understand how alcohol control policies and interventions have been used to reduce domestic violence, 3) determine the effectiveness of these policies and interventions, and 4) explore the Alberta context to determine whether changes to alcohol-related policies are warranted. The scope of this review was broad, and included studies from the U.S., Canada, Australia, the United Kingdom, European and Nordic countries, Russia, Thailand and India. Findings from the first phase suggested that outlet density control is a potentially effective area of alcohol-related policy and intervention. The first phase of research further indicated that this type of policy might be appropriate within the Alberta context due to the dramatic growth of alcohol outlets.

Based on these findings, a second phase of research was designed to: 1) identify existing restrictions related to alcohol availability in Alberta, 2) explore the theoretical and

³ In addition to density controls, alcohol policies addressing access and availability include: government monopolies, minimum purchase age and limiting hours of sale. These strategies will be explored further in a subsequent paper.

⁴ Following national recommendations for reducing alcohol-related harm in 2007, the Alberta Alcohol and Drug Abuse Commission (AADAC) and Alberta Gaming and Liquor Commission (AGLC) developed recommendations for more extensive measures, including alcohol outlet density controls (Government of Alberta, 2007); however, these measures have never been fully implemented.

conceptual foundations for alcohol outlet density control in the province, and 3) identify practical examples of density control (particularly those measures that were associated with a decrease in violence generally and/or domestic violence specifically). This report summarizes findings from the second phase of research.

Examples of density control measures were sought from countries that were socially and culturally similar to Canada, including Great Britain, Australia, New Zealand and the U.S. While research showing a correlation between alcohol outlet density and increased rates of violence exists in each of these countries, evaluated examples of implementation of measures to control density exist primarily in the U.S.⁵ For this reason, a significant part of this report centres on alcohol control measures in U.S. jurisdictions.

Since Alberta is the only province in Canada that has completely privatized retail alcohol sales, comparisons to other provinces are limited. The U.S., on the other hand, comprises a fairly effective point of comparison for several reasons. First, in most states, alcohol is sold through private retail outlets.⁶ Second, the licensing systems in the U.S. are similar to those in Alberta, with various levels of local government involved in regulating controls over licensing. In the U.S., each state falls under one of several existing licensing systems such as Exclusive State Licensing, Dual Licensing and Executive Local Licensing (National Highway Traffic Safety Administration (NHTSA), 2005), which differ by the level of authority state and local governments have over licensing. However, regardless of the system in place, it is *municipalities* that have the power to control outlet density within their communities.

Relevant materials for both stages of research were identified by searching EBSCO host research databases, governmental organizations, alcohol control boards, community websites and related networks through Google search. Research databases and the Internet were searched for publications from 1990 to 2011. In order to ensure that relevant studies were not missed, the search terms remained broad and were combined in different ways. Articles including any of the following terms in the title, abstract or text were identified through the search: “alcohol” or “liquor,” “store” or “premise” or

⁵ For example, while major studies on the relationship between alcohol outlet density and domestic violence were recently conducted in Australia, policies designed to control density have not been implemented and evaluated in that country; instead, Australian alcohol control policy has focused mainly on restrictions related to store hours (Douglas, 1998; Foundation for Alcohol Research and Education, 2012; Schineanu, Velander, & Suggers, 2010) and alcohol-free communities (Hudson, 2011; Kinnane, Farrington, Henderson-Yates, & Parker, 2010).

⁶ Some differences exist. For example, in many U.S. states, alcohol can be sold in convenience or grocery stores, whereas in Alberta it is sold in dedicated outlets. However, while some studies count only dedicated stores as an ‘outlet’, most do not distinguish between dedicated outlets and mixed-use outlets; that is, grocery stores and convenience stores are counted as ‘outlets’ in most of the research emerging from the U.S., making estimates of outlet density and comparisons of outlet density control measures possible.

“establishment” or “license,” “density” or “availability,” “control” or “restrict” or “regulate” or “limit,” “violence” or “crime” or “homicide” or “assault” or “harm,” “policy” or “regulation” or legislation.” All jurisdictions identified through the literature review as having implemented alcohol density control measures were further investigated through a Google search in order to identify additional materials (e.g., background information, demographic data, developmental processes and evaluation findings).

On-premise outlet:

Alcohol is bought and consumed on premise. Also known as on-sale outlets, such as bars and restaurants.

Off-premise outlet:

Alcohol that is purchased must be consumed off the premises. Also known as off-sale outlets, such as liquor stores. Off-premise outlets also include convenience and grocery stores where alcohol is sold.

3.0 Findings and Implications

3.1 The Situation in Alberta

While other provinces have partially privatized liquor sales, Alberta is the only province in Canada where alcohol is sold solely through private liquor stores. Research suggests that privatization (both full and partial) is associated with negative social outcomes (Stockwell et al., 2009; 2011), including increased violent and non-violent crime. This is because privatization generally leads to an increase in alcohol outlets, and this is associated with increased levels of consumption (Babor et al., 2010; Popova et al., 2012; Stockwell et al., 2009; see systematic review Hahn et al., 2012). Privatization in Alberta has certainly resulted in more alcohol outlets, with an increase in both numbers (AGLC, 2011a) and density (Hill, 2004; Piroddi, 2010). The number of liquor outlets in Alberta has grown by about 600% since privatization, increasing from 208 in 1993 to 1,240 in 2011 (AGLC, 2011a). While this has created significant revenues for the provincial government,⁷ the most recent data show that costs associated with misuse have also increased: from \$749.3 million or \$285 per capita in 1992 (Single, Robson, & Xie, 1996) to \$1.6 billion or \$527 per capita in 2002 (Rehm et al., 2006).

Regulations designed to ensure a minimum distance between alcohol outlets do exist in Alberta,⁸ however, clusters of off-premise outlets are still evident in certain areas, and outlet density is notably higher in communities with low socioeconomic status (Teh, 2007). An exploratory analysis of outlet density in Calgary by postal code⁹ showed

⁷ Government revenue from alcohol sales has almost doubled since privatization, increasing from \$404.8 million in 1993 to \$716 million in 2009-2010 (Alberta Gaming and Liquor Commission, 2011).

⁸ Municipal regulations for Calgary stipulate that liquor stores must be at least 300 metres apart. In Edmonton, they must be at least 500 metres apart.

⁹ These calculations were made using population aged 15 years and older and public alcohol establishments by postal code. They were based on data from the Civic Census Results Calgary (2011) and Alberta Gaming and Liquor Commission online database (http://aglc.ca/aglc_public/aglc_site/liquor/licensee_list/lsearch.jsp).

patterns of higher outlet density in lower-income pockets in the northeast, southeast and downtown core of Calgary. Whereas the higher income communities of Tuscany and Scenic Acres have a total of one liquor store to serve a community of 27,548 residents, the lower income communities in the T2A postal code (Penbrooke Meadows, Marlborough and Marlborough Park) have 22 liquor stores to serve 24,776 residents (one store per 1,126 residents).¹⁰ This is fairly high compared to other jurisdictions. For example, licensing requirements in New Jersey, are one outlet per 3,000 residents for on-premise licenses and one per 7,500 for off-premise outlets (Schwester, 2010). In Minnesota, the ratio is one private off-premise license per 5,000 people in large municipalities (Minnesota House of Representatives, 2008).

Due to limitations in the available data, it is difficult to determine whether there is a casual relationship between the relatively high density of alcohol outlets in Calgary and higher crime rates. However, data from Spruce Grove, Alberta, demonstrate a clear correlation. In Spruce Grove, a city about 11 kilometres east of Edmonton with a population of 17,992 adults, the ratio of alcohol outlet to resident is 1:1,124, which is approximately 2.7 times higher than the provincial rate of 1:2,983 (McKenzie, 2011). Research shows that areas with a higher density of liquor stores in Spruce Grove have higher rates of violent crime (Mills, 2011).

3.1.1 Alcohol-related harm in Alberta

In 2003, Flanagan identified the need for research at the micro level to explore the potential negative consequences associated with increased availability of alcohol in Alberta. However, this major gap in research has never been addressed. What we *do* know is that alcohol consumption in Alberta has been growing since 1997, paralleling the growth in liquor store density (Alberta Gaming and Liquor Commission, 2011c).¹¹ Rates of violence involving alcohol have also increased sharply after privatization: in 1992, before privatization (which was implemented over two years, from 1993-1994) alcohol was involved in 44 per cent of all reported incidents of spousal abuse in Calgary; in 1995, the year after privatization, the rate of spousal abuse involving alcohol had risen to 60 per cent (Government of Alberta, 2007). Combined with international research findings which will be explored later in this report (Popova, Giesbrecht, Bekmuradov, & Patra, 2009; Stockwell et al., 2011), these data suggest a link between privatization, increased density and higher rates of violence.

¹⁰ Tuscany and Scenic Acres per capita rate is 0.04 liquor store per 1,000 residents. The per capita rate for the lower income communities in the T2A postal code is more than double at one off-premise outlet per 1,000 residents. Including on-premise outlets, there is a total of four outlets per 1,000 residents in T2A.

¹¹ To some extent, this may reflect a general increase in alcohol consumption across Canada over the past two decades. However, since 2008 when Health Canada started tracking alcohol consumption by province (using survey data instead of sales data), the national average has increased only nominally, whereas alcohol consumption rates in Alberta have risen significantly: "The only statistically significant change in past-year alcohol use was in Alberta, where the percentage increased to 80.0% from 73.8% in 2010" (Health Canada, 2012, Alcohol, para. 2).

3.1.2 Existing restrictions regarding alcohol density

Some legislation exists provincially to control access to alcohol in Alberta, including restrictions around hours and age. Retail liquor stores cannot open before 10 a.m. and must close by 2 a.m. (AGLC, 2011c), and the minimum drinking age is 18 (AGLC, 2009). Distribution is also controlled by the provincial government: despite the fact that the alcohol retail system is completely privatized in Alberta, the responsibility for warehousing and distributing spirits, wine, coolers and imported beer in Alberta belongs solely to Connect Logistics Services (CLS), an authorized agent of the Alberta Gaming and Liquor Commission (AGLC). However, while the AGLC is responsible for issuing new licenses, municipalities are responsible for establishing zoning requirements. According to the AGLC, “the marketplace will ultimately determine how many retail liquor stores may operate successfully” (AGLC, 2011b, p. 2).

Regulations also exist at the municipal level in some parts of the province. The City of Edmonton, for example, recognized the potential risks associated with increased density of alcohol outlets, but was also concerned that: “using zoning ordinances to control density would be considered a restriction on competition” (Hill, 2004, p. 7).

Despite the Alberta Liquor Stores Association’s (ALSA) concern that municipal control over alcohol outlet density “interferes in the marketplace,” the organization also acknowledged the need to address alcohol-related harm that is associated with higher concentrations of liquor stores within Edmonton (Bylaw 14547, 2007). As a result, in 2007, Edmonton implemented regulations stipulating a minimum distance of 500 metres between alcohol outlets (Edmonton Zoning Bylaw, 2007).

Calgary introduced a similar bylaw, with a restriction of 300 metres. Whereas Calgary applied the regulation to new applications only, Edmonton attempted to address existing liquor outlets, stipulating that if two or more alcohol outlets were within 500 metres of one another, they were considered non-conforming and were expected to relocate or consolidate (Bylaw 14547, 2007).

Sixty per cent of existing establishments in Edmonton were found to be non-conforming when the bylaw was implemented. The requirement for relocation or consolidation created significant challenges (e.g., relocation is not a viable option for many of the existing stores due to contractual obligations such as leases). As Edmonton City Counsellor Karen Leibovici pointed out “there has been no legal way identified to maintain a strict 500-metre separation distance for a particular Land Use, while at the same time, allowing [an existing liquor store] to relocate or expand within the area” (cited in Piroddi, 2010, p. 2).

A number of recommendations for addressing this issue have been put forward, including the suggestion to remove the 500-metre regulation altogether. To date, none of the suggestions have met with the approval of both the City of Edmonton Planning and Development Department and the ALSA (Piroddi, 2010). Despite difficulties in maintaining the distance requirements, Edmonton continues in its efforts to implement density controls. In Calgary, where some liquor stores are located within 15 metres of one another, no discussions of relocation can be found in the public record.

3.1.3 *The negative impact of high alcohol outlet density*

Two recently published systematic reviews show a correlation between density of alcohol outlets and a variety of negative outcomes, including health issues, mortality, violent and non-violent crime, suicides and homicides, domestic violence and neighbourhood deprivation (Campbell et al., 2009; Popova et al., 2009). The methodology used to assess these types of impacts is becoming increasingly more refined and sophisticated, filling some of the earlier gaps that existed in the data, and generating more reliable findings.

Interestingly, researchers have discovered that using aggregate data for large areas (e.g., a nation, province or municipality) and combining all types of licenses (i.e., on-premise and off-premise) obfuscates the social impacts related to alcohol. Researchers have been able to draw more nuanced and reliable findings by taking into account the uniqueness of neighbourhoods, stores and licenses. Research has shown that low income neighbourhoods tend to have a higher density of alcohol outlets and unique social characteristics, and this gets hidden in aggregated data (Escobedo & Ortiz, 2002; Pollack et al., 2005; Romley, Cohen, Ringel, & Sturm, 2007; Teh, 2007; Zhu et al., 2004). One U.S. study identified that “alcohol outlets elevated the level of violent crime only within the immediate neighbourhood context” (Gorman, Speer, Gruenewald, & Labouvie, 2001, p. 634) and concluded that the “association between off-sale outlets and assaultive violence is greater in smaller communities” (Scribner, Mackinnon, & Dwyer, 1995, p. 338). Therefore, inner-city districts, communities or even city blocks require separate analysis.

In contrast to municipal level analyses, research that has used immediate neighbourhood environment or small-area analysis has consistently demonstrated a strong association between alcohol outlet density and violent crime (Gorman et al., 2001). Alcohol outlet density was found as a very strong—and in some cases *the single greatest*—predictor of violent crime in several U.S. cities, including Newark, New Jersey (Speer et al., 1998), Cleveland, Ohio, and San Diego, California (Roneck & Maier, 1991). The same results were also found in: 74 Los Angeles county municipalities (Scribner et al., 1995); 581 zip code areas in California (Gruenewald & Remer, 2006); 188 census

tracts from the City of Austin, Texas; and 263 tracts from the City of San Antonio (Zhu, Gorman, & Horel, 2004).

Other micro-level research analyzing data at the level of zip codes, census tracts or blocks, also found alcohol outlet density to be a significant predictor of: assaultive violence (Scribner et al., 1995; Reid, Hughey, & Peterson, 2003; Livingston, 2008; Grubestic & Pridemore, 2011), homicide rates (Scribner, Cohen, Kaplan, & Allen, 1999); adolescent violence (Resko et al., 2010); and youth homicides (Parker et al., 2011).

In addition to increased violence, other negative impacts are associated with outlet density: a micro-level study of 89 local health areas of British Columbia (where the sale of alcohol is semi-privatized) studies show a correlation between a rise in privately owned liquor stores and higher rates of alcohol-related mortality (Stockwell et al., 2011) and consumption.

Increasingly, researchers are examining the relationship between alcohol (and specifically outlet density) and domestic violence, interpersonal violence and child maltreatment. While one macro-level study conducted in 1998 found only a weak correlation between liquor outlet density and domestic violence (Gorman, Labouvie, Speer, and Subaiya, 1998), micro-level research paints a different picture. Researchers using smaller units of analysis (postcodes in Australia, block groups in the California, and zip codes in the U.S.) have found a strong link to domestic violence (Cunradi et al., 2011, Livingston, 2010, Livingston, 2011a; 2011b; McKinney et al., 2009). Based on the survey of a national sample of 1,597 couples, McKinney et al. (2009) demonstrated a significant association between on-premise alcohol outlet density and partner violence, while Cunradi et al. (2011) found that density of off-premise alcohol outlets was significantly associated with intimate-partner violence in one urban area. Longitudinal analysis from 1996 to 2006 demonstrated a significant association between alcohol outlet density (hotel/pub, packaged liquor, on-premise) and rates of domestic violence, with stronger effects for packaged (off-premise) liquor outlets (Livingston 2011a).

While most studies conducted a micro-level have shown a strong association between alcohol outlet density and domestic violence, a few studies have shown mixed or conflicting results. Findings from Livingston's cross-sectional data did find a positive association between the density of hotels (pubs) and domestic violence; however, the study found a negative association between the density of restaurants and bars and domestic violence (Livingston, 2010). Waller and colleagues (2012) found no significant correlation between neighbourhood alcohol outlet density and domestic violence in their study of young adults age 18-26, but the authors emphasized that the results are conflicting, and the unit (census tracts) might have been too large or too small for such analysis. While this study did not show an overall significant association, an unadjusted model demonstrated an increased risk for intimate partner violence among females in

the highest outlet density tracts and “this risk increased further, if the high outlet density also occurred within a high vacancy tract” (Waller et al., 2012, p. 2077). Another recent study showed a positive association between density of bars and intimate partner violence-related emergency department visits, but weaker or no association was found with density of off-premise outlets and restaurants (Cunradi et al., 2012). Cunradi et al. (2011) points out that the difference in findings may be partially caused by significant methodological differences in the samples, periods of the studies, tools of statistical analysis and domestic violence measures.

There is also evidence that greater alcohol outlet density is related to higher child maltreatment rates and increased risk of being referred to Child Protective Services (Freisthler, Needell, & Gruenewald, 2005; Freisthler, Gruenewald, Remer, Lery, & Needell, 2007; Freisthler & Weiss, 2008).

Highlights from this research include the following:

- “An increase of 10 alcohol outlets per 10,000 persons was associated with 34 per cent and 12 per cent increased risk of MFPV [male-to-female violence] and FMPV [female-to-male violence] respectively” (McKinney et al., 2009, p. 169).
- “Each additional off-premise alcohol outlet is associated with an approximate 4% increase in Intimate Partner Violence (IPV) related police calls and an approximate 3% increase in IPV-related crime reports” (Cunradi et al., 2011, p. 191).
- “An additional on-premise outlet per 1,000 in population would increase the total number of crimes per 1,000 by 2.4” (Schwester, 2010, p. 374).
- “Ten per cent increases in numbers of off-premise outlets and bars were related to 1.67 and 2.06 per cent increases in violence rates across local and lagged spatial areas. Every six outlets accounted for one additional violent assault that resulted in at least one overnight stay at hospital” (Gruenewald & Remer, 2006, p. 1,184).
- “A 1.00 per cent increase in the density of alcohol outlets is associated with a 0.62 per cent to [plus/minus] 0.14 per cent increase in the rate of violent offences” (Scribner et al., 1995, p. 337).
- “An increase of one general outlet per 1,000 residents in a postal code was associated with an increase of 0.28 in domestic violence incidents per 1,000, while an increase of one on-premise outlet per 1,000 residents was associated with an increase in the domestic violence rate of 0.11. The most substantial effect was found for packaged liquor outlets, with an increase of one packaged outlet per 1,000 related to an increase of 1.36 in the domestic violence rate. To provide some context, these effect sizes represent increases of 5.9 per cent, 2.3

per cent and 28.6 per cent, respectively, from the overall mean of the domestic violence rate (4.76 of 1,000 residents)” (Livingston, 2011a, p. 922).

- “A 10% higher off-sale outlet density accounted for a 2.4% higher homicide rate” (Scribner et al., 1999, p. 310).

Overall, micro-level analysis (i.e., research that is based on census tracts, blocks or neighbourhoods) clearly demonstrates a relationship between alcohol availability and violence, underscoring the importance of ensuring that data collection and zoning decisions are conducted within a particular neighbourhood setting, and not at the aggregate level (Ashe, Jernigan, Kline, & Galaz, 2003).

3.1.4. Control over alcohol outlet density as an effective tool

Controlling Density

Evidence-based approaches to controlling alcohol outlet density include:

1. Minimum distances between outlets
2. Population-based formulas
3. Moratoriums on new licenses in certain communities
4. Licensing review committees that involve residence participation

Research by Anderson and colleagues (2009) showed that regulating the physical availability of alcohol is effective in reducing alcohol-related harm. Alcohol policies addressing access and availability include: government monopolies; minimum purchase age; limiting the density of alcohol outlets; and limiting work and hours of sale (Anderson et al., 2009).

Alberta has already implemented some of these policies. The province has minimum age legislation, restrictions around retail hours and a monopoly on the distribution of alcohol. In addition to zoning requirements (which have already been introduced in some municipalities in Alberta), there is a need for other tools to control alcohol outlet density within this province. Examples of various approaches to addressing this issue are offered below, including: population-based formulas, moratoriums on new licenses in high-density areas, and licensing review committees that involve residence participation.

3.2 Review of strategies in U.S. jurisdictions

In 2003, the Calgary Police Service stated that many cities in the U.S. “implemented liquor store zoning and concentration ordinances to assist disempowered communities in maintaining social vitality and to minimize their perceived risk of spill-over crime” (Adhopia, 2003, p. 15). Almost 10 years have passed since that report and even more municipalities and states in the U.S. control alcohol outlet density.

Because Alberta is the only province in Canada that has completely privatized retail alcohol sales, the U.S. provides a reasonable point of comparison for liquor outlet

density measures, as many states also have privatized sales.¹² While individual states determine their own regulations, the U.S. Department of Alcoholic Beverage Control (ABC) is responsible for licensing, compliance and administering the provisions of the Alcoholic Beverage Control Act.¹³ ABC's role parallels that of the AGLC. Another similarity is that municipalities in the U.S. are responsible for decision-making in the regulation of alcohol outlet permits, use formulas and the initial assessment of applications. While the state has exclusive authority over alcohol sales, "courts have found that local power over land use is so strong that it can be used to regulate operation of alcohol outlets" (Ashe et al., 2003, p. 1,406). Given these parallels, U.S. examples have relevance for the Alberta context.

3.2.1 New Jersey

New Jersey has some of the toughest municipal density controls in the U.S.¹⁴ New applications are based on a population formula of one off-premise license per 7,500 municipal residents and one on-premise license per 3,000 residents (Schwester, 2010). In addition, retail chains are limited to two alcohol licenses (New Jersey Code, 2009). These restrictions, which have been in place since the 1940s, have significantly reduced alcohol availability compared to other states. Schwester (2010) studied the impact of New Jersey's regulations and found that the off-premise alcohol outlet restrictions that were implemented have been more effective in reducing crime rates than the on-premise formulas. His study showed that the off-premise restrictions are associated with reduced crime rates, whereas on-premise restrictions (e.g., pubs and restaurants) have not reduced crime.

In addition to population-based formulas, municipalities in New Jersey have distance requirements that vary from town to town, ranging from 500 feet between liquor selling establishments (with mandatory relocation for existing outlets) to 2,000 feet from entrance to entrance of establishments with the same license (Villani & DeLuca, 2010).

3.2.2 Minnesota

¹² At the end of the prohibition era in 1933, the authority to regulate alcohol was decentralized from federal to state jurisdiction. At that time, many states decided to privatize their retail system. Others created state monopolies, and (for a time) some chose to ban alcohol altogether (Schwester, 2010).

¹³ According to NHTSA (2005), there are Control states and License states which both regulate alcohol industry members through licensure. Each of these states fall under one of the existing licensing systems such as Exclusive State Licensing, Dual Licensing and Local Licensing (NHTSA, 2005) which differ by the level of authority state and local governments have over licencing. However, regardless of the system, municipalities have the power to control outlet density.

¹⁴ New Jersey is using an Executive License type of authority (NHTSA, 2005), which gives the most control and licensing power to the state. However, regulations around density control are determined at the municipal level.

Whereas the state of New Jersey has exclusive authority over licensing, in Minnesota, almost all liquor licenses are issued locally. Despite this difference, municipalities in both states control alcohol availability. Minnesota has no regulations in cities with populations less than 100,000. For larger municipalities (Minneapolis, St. Paul, Rochester, and Duluth), the regulations allow one private off-premise license per 5,000 people (Minnesota House of Representatives, 2008). Some large municipalities also have distance requirements. For example, the City of Minneapolis requires a minimum of 2,000 feet from the main entrance of any existing off-sale liquor establishment to the main entrance of another off-sale liquor store (City of Minneapolis, 2011).

3.2.3 Wisconsin

Wisconsin is another state in which municipalities have the authority to grant licenses to new alcohol establishments. Wisconsin has one of the highest rates of alcohol outlet density in the U.S.; on average, there is approximately one licensed establishment per every 172 people, while the national average is one for every 1,400 people (Citizens Rallying for Change on Alcohol, 2009).

The Alcohol License Density Ordinance (ALDO) was created in 2007 in Madison, Wisconsin to reduce the amount of licensed establishments (except restaurants) in the downtown area and adjacent communities. This program was first initiated by the Alcohol Policy Coordinator in 2006, and was deemed effective in reducing crime: “From 2008-2009 alcohol-related calls for service have gone down 8.9 per cent. For comparison, the Central District experienced a six per cent reduction in [violent and property] crimes between 2006 and 2008. Overall, citywide crime continues to drop” (Plominski, 2009, p. 3).

However, others have argued that “ALDO’s impact on alcohol-related crime and disorder is negligible when compared to other factors,” and suggest that these positive results may be the aggregate result of a variety of initiatives that were implemented at the same time as ALDO, including the Downtown Safety Initiative, the Alcohol License Review Committee, house party reductions, better management, and enforcement of alcohol violations against licensed establishments (Carbine, 2011, p. 4). Further information is needed to determine the impact of density control measures in Madison.

3.2.4. California

California has introduced moratoriums on issuing off-sale and wine licenses in cities and counties where the ratio of these types of licenses exceeds the state threshold (one outlet for every 2,500 residents) as defined in the ABC Act (Department of ABC, 2011). For example, in San Francisco, where the density of liquor outlets exceeds the state threshold, new licenses are not permitted except in cases where “an existing business

with a liquor license closes or ceases to use its license, that license may be bought or traded by another business owner within the city, if the proposed new business is not in an area of ‘undue concentration’ (defined as: 1. police districts where the number of reported crimes is 20 per cent or greater than the city average; and 2. census tracts where the ratio of off-sale alcohol licenses per population is greater than the county wide ratio)” (San Francisco Department of Public Health, 2011, para 5).

3.2.5 The Community Trials Project (California and South Carolina)

The Community Trials Project (CTP) tested a five-component community intervention to reduce alcohol-related harm in California and South Carolina. The initiative included engaging the local news media; imposing restrictions around serving intoxicated and underage patrons; and increasing law enforcement related to alcohol (Holder, 2004), as well as a focus on density controls, with “an access component to reduce the availability of alcohol by affecting the number, location and concentration of alcohol outlets” (Holder, 2004, p. 246). CTP was one of three intervention trials sponsored by the National Institute on Alcohol Abuse and Alcoholism (NIAAA).¹⁵ All three trials were designed to reduce alcohol use among youth and young adults. However, CTP deserves attention due to a significant reduction in assault rates and an additional study focusing specifically on the alcohol outlet density component (Reynolds, Holder, & Gruenewald, 1997). Holder (2004) reported the following results from California and South Carolina sites:

Assault injuries seen in emergency departments in the intervention communities declined 43 per cent compared with the rate seen in the comparison communities, and assault injuries requiring hospitalization declined by two per cent, a statistically significant drop. [...] Surprisingly, although the size of the drinking population increased slightly in the experimental sites over the course of the study, there was a significant reduction in problematic alcohol use. The average number of drinks per occasion declined by six per cent, and the variance in the frequency and volume of alcohol consumption (an indirect measure of heavy drinking) declined 21 per cent (pp. 245-246).

3.2.6 Community Coalition South Los Angeles

In 1990, an alcohol outlets movement started in Los Angeles when civil rights activist Karen Bass decided to mobilize her friends and colleagues to find solutions to substance abuse in South Los Angeles. In a door-to-door survey, nearly 30,000 residents were asked what could be done to reduce drug- and alcohol-related crime and violence. “Respondents overwhelmingly recommended reducing the number of liquor stores in

¹⁵ The other two projects include: *The Saving Lives Project* which focused on alcohol-impaired driving in six communities in Massachusetts, and *Communities Mobilizing for Change on Alcohol* which aimed to reduce underage access to alcohol in 15 communities in Minnesota and western Wisconsin (Holder, 2004).

the community” (Prevention Institute, 2004, p. 27). According to the Prevention Institute (2004), the coalition’s efforts met with these results:

In only three years, the Community Coalition prevented the re-opening of the 24 liquor stores it had originally targeted before the 1992 LA riots, and shut down nearly 200 operating liquor stores in South Los Angeles. [Program evaluators have] documented an average 27 per cent reduction in violent crime/felonies, drug-related felonies or misdemeanors, and vice (e.g., prostitution) within a four-block radius of each liquor store that was closed (Prevention Institute, 2004, p. 28).

Despite the group’s efforts, it appears there are still no formal controls on alcohol density. However in 2011, the Office of Health Assessment and Epidemiology in Los Angeles County conducted extensive research showing a strong correlation between alcohol outlet density, alcohol-involved motor vehicle crashes, violent crimes and alcohol-related deaths. The organization advised LA County to reduce alcohol outlet density through zoning ordinances for new outlets and “deemed approval” ordinances for existing ones (Office of Health Assessment and Epidemiology, 2011, p. 12).

3.2.7 The Coalition on Alcohol Outlets in Oakland

Following the example from South Los Angeles, Oakland’s Coalition on Alcohol Outlet Issues (CAOI) was officially formed in 1993 with representatives from approximately 10 community-based organizations, neighbourhood associations, churches, crime watch groups and residents (Seevak, 1997). CAOI’s main goals were to educate the community about alcohol outlet issues and mobilize community support for liquor store ordinances. As a result,

On July 27, 1993, the Oakland City Council voted unanimously for an education, monitoring and enforcement program for alcoholic beverage retailers citywide. Though less than what the Coalition had wanted, the revised ordinance set a precedent toward expanding and strengthening community control of problem liquor stores in California. The ordinance gave the city the authority ultimately to revoke the business permits of any noncompliant liquor stores. (Seevak, 1997, p. 5)

However, “once the ordinance was approved by the Oakland City Council, the alcohol industry used both legal and legislative tactics to try to kill it” (Seevak, 1997, p. 6). The industry argued that the state—not the municipality—has licensing authority over retail alcohol outlets. They brought forward a three-year lawsuit that challenged the city’s authority. The case ultimately made its way to the California Supreme Court in 1996, where municipal authority to control existing alcohol outlets through conditional use permit was confirmed. In 2009, the City Attorney reported a net decrease of 51 liquor

stores from 2004 in the city of Oakland, while admitting that the city is still over-concentrated by 54 stores (City of Oakland, 2009).

3.2.8 Other Effective Tools

In addition to the examples cited above, there are a variety of tools used by other U.S. jurisdictions to increase awareness about the issues related to alcohol outlet density and municipal authority, thereby increasing the effectiveness of alcohol outlet density control. For example, some states consider residents' opinions, stipulating that information about any application for a new liquor establishment must be published in a local newspaper (e.g., Rules of the Tennessee Alcohol Beverage Commission, 2010 and Virginia Department of Alcoholic Beverages Control, 2012). Moreover, for most states, information about alcohol outlet density for each county is continuously collected and presented online (County Health Rankings and Roadmaps, 2010). Furthermore, The Task Force on Community Preventive Services, an independent and voluntary body of experts, provides communities with up-to-date research and recommendations around policies, including regulation of alcohol outlets (Guide to Community Preventive Services, 2011; Task Force on Community Preventive Services, 2009). Increased awareness about the density of alcohol outlets and its impact on public health and safety helps to mobilize communities and municipalities to play a role in density controls.

4.0 Conclusion

A substantial body of research shows a strong correlation between alcohol availability and alcohol-related harm, including domestic and sexual violence, youth violence, homicide and a range of health issues. Controlling the density of alcohol outlets is therefore an important public health and community safety strategy to be included in a broader framework for primary prevention of domestic violence.

The density control measures undertaken by the seven U.S. jurisdictions cited in this report show that a range of approaches can be used to address the issue of alcohol outlet density. However, time is of the essence: Research suggests that alcohol density controls are often reactive rather than proactive, with states and municipalities attempting to address density only *after* alcohol-related issues begin to escalate. This leads to significant challenges as there is no easy way to reduce density once it is established. Clearly, a proactive approach is preferable.

The density of alcohol outlets in Alberta has grown steadily since privatization, paralleling the growth in rates of homicide and domestic violence. Following the WHO's recommendations, Canada and Alberta began to develop national and provincial alcohol strategies to reduce alcohol-related harm (Finnerty, Pieteron, & Perron, 2007; Government of Alberta, 2007; James, 2007; Sawka, Liepold, Lockhart, Song, & Thomas, 2007). However, little has been done to move these strategies forward. According to the Government of Alberta, recommendations to assist local governments in being involved in liquor licensing and managing "local concerns related to location, density or operation of licensed premises" have not been fully implemented (Government of Alberta, 2007, p. 22).

Growing density in Alberta underscores the need to act quickly to address the problem before it gets worse. There exists a small window of opportunity to prevent the clustering of alcohol outlets in communities, thereby potentially mitigating the social harm associated with unrestricted access to alcohol. Alcohol policy can take years to develop. This, combined with the challenges associated with trying to reverse density once it has already been entrenched, speaks to the urgency of addressing this issue with effective research, analysis, policy and enforcement.

4.1 Recommendations

Based on the examples and findings cited in this report, increased control over outlet density is an important next step in managing access to alcohol and reducing alcohol-related violence, illness and crime. The following strategies are recommended:

4.1.1 *Impose moratoriums to avoid clustering*

- Municipalities in Alberta should introduce moratoriums on new licenses in communities with higher liquor outlet density.
- In areas that already have a high concentration of liquor stores, municipalities should consider relocation and consolidation as a means of addressing density retroactively.

4.1.2 *Collect and analyze alcohol outlet density data*

- The Alberta Gaming and Liquor Commission should collect, analyze and update existing data about current alcohol outlets using a combination of geographic- and population-based formulas.
- The Alberta Gaming and Liquor Commission should simplify its database with publicly posted postal codes so that it can be used by citizens and community groups to challenge new applications for liquor outlets in high density areas.

4.1.3 *Strengthen municipal regulations*

- Municipalities throughout Alberta should strengthen zoning regulations to address density of off-premise and on-premise alcohol outlets by using a combination of population- and geographic-based formulas to restrict the number and location of alcohol outlet licenses.

4.1.4. *Involve the public in decisions about new liquor licenses*

- The Government of Alberta should amend Section 129(1) section 57(1) of the *Gaming and Liquor Act* (2010) to include a requirement stating that anyone applying for a new retail liquor outlet license must notify the public of their intent. Requirements pertaining to the content, timing, size and duration of the notice should be stipulated.
- The Alberta Gaming and Liquor Commission should work with municipalities to educate community members about the avenues available to them for voicing issues and concerns related to new alcohol licensees and alcohol outlet density in their neighbourhoods. Citizens should be encouraged to participate in alcohol liquor license application hearings.

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