

# Availability of alcohol

*Esa Österberg*

## Introduction

The physical availability of alcoholic beverages refers to the ease or convenience of obtaining alcohol for drinking purposes. Regulations on physical availability include the monopolization or licensing of on- or off-premise retail sales of alcoholic beverages as well as general or special limits on opening times for retail alcohol sales. Physical availability also includes regulations covering the location of alcohol retail sale outlets, special on- or off-premise sales practices (such as over the counter or self-service sales), and rules on the maximum size or number of drinks to be served to customers at one time. These regulations can also dictate who is allowed to purchase alcoholic beverages in licensed premises or off-premises. Usually these regulations concern the legal age limits for selling, buying, possessing or drinking alcoholic beverages and refusing the sale of alcoholic beverages to intoxicated persons or even to certain religious or ethnic groups (Room et al., 2002). There can also be rules relating to the rationing of alcohol sales which may be specified according to age and sex. Sometimes the physical availability of alcoholic beverages has been converted to economic availability by mention of the effective or full price of alcoholic beverages (see, for example, Chaloupka, Grossman & Saffer, 2002; Babor et al., 2010).

Historical evaluations show that total bans on alcohol production and sales can reduce alcohol-related harm. However, where there has been a substantial demand for alcohol, it has been met during prohibition by an informal market often organized by criminal operators. Independently of the research evidence of the effects of total bans on alcohol consumption and related harm, total prohibition is clearly politically not an acceptable alternative in contemporary Europe (Anderson & Baumberg, 2006).

A licence issued by the local or central administration is required in many countries before alcoholic beverages can be sold. For off-premise retail sales, where alcoholic beverages are consumed elsewhere than in the place of purchase, regulations can be made on the type, strength and packaging of the beverages that can be sold as well as the times and places for the sale of alcoholic beverages. For on-premise sales, where alcohol is consumed in the point of sale, regulations can also specify drink sizes or require the staff to receive training in responsible service of beverages. When the licensing system is used to restrict the number of outlets, most often the aim is to prevent harm and public disorder by limiting the supply of alcohol. These kinds of regulation, as well as restrictions on the number of outlets for alcoholic beverages, have been shown to have an effect on alcohol consumption and related harm. Some studies have also indicated that changing either the hours or days of alcohol sales can affect alcohol-related harms (Anderson & Baumberg, 2006).

There is consistent evidence that government monopolies on off-premise retail sales of alcoholic beverages affect alcohol consumption and related harm to both young people and adults. When Finland allowed the sale of medium beer (alcohol content at most 4.7%) in grocery stores in 1969, total alcohol consumption rose nearly 50% in a year (Mäkelä, Österberg & Sulkunen, 1981; Mäkelä, 2002). When medium strength beer could be bought in grocery stores in Sweden between 1965 and 1977, total alcohol consumption was some 15% higher than before 1965 or after 1977 (Noval & Nilsson, 1984; Tiihonen, 2011). From 1915 on, beer sales were prohibited in Iceland. When retail sales of beer in alcohol monopoly liquor stores and licensed restaurants

were allowed in March 1989, its consumption rose considerably. In both Finland and Sweden, these changes in beer consumption did not bring down the consumption of other beverage categories, but in Iceland the increased availability of beer did shift consumption from distilled spirits to beer (Olafsdottir, 1998; 2002; Mäkelä, 2002; Noval & Nilsson, 1984).

About half a century ago, broad restrictions on who could purchase alcoholic beverages were fairly common. The most extensive of such systems was the Bratt rationing scheme in Sweden in force until 1955, which assigned a quantitatively defined upper limit for spirits purchases per person with different rations for males and females and for younger age groups. Studies have shown that rationing systems in Greenland, Poland and Sweden reduced alcohol-related harm (Anderson & Baumberg, 2006). In Spitzbergen (Norway) there still exists a rationing system for purchases of alcoholic beverages.

Legal minimum age limits are widely practised availability restrictions targeted to young people, although limits vary from country to country, ranging typically from 16 to 21 years of age (Anderson & Baumberg, 2006). A review of 132 studies published between 1960 and 2000 found strong evidence that changes in laws for minimum drinking ages can have substantial effects on drinking by young people and alcohol-related harm. These effects often lasted well after the young people reached the legal drinking age (Wagenaar & Toomey, 2002). A study from Denmark, where a minimum age limit of 15 years was introduced for off-premise purchases in 1998, found that drinking by young people above as well as below the age limit was affected (Møller, 2002). There were no age limits on off-premise alcohol sales in Denmark from 1970 to July 1998 (Karlsson & Österberg, 2002). Recent innovative work has also examined the long-term effects of minimum limits on the drinking age (Gruenewald, 2011).

According to the material collected in the AMPHORA project, in at least four EU member states the legal age limits have been raised during the last decade, namely Denmark in 2004 and 2011, France in 2009, Malta in 2009 and Belgium in 2009. No EU member state has lowered the legal age limits for alcoholic beverages in the last four decades.

The full benefits of legal drinking-age limits are only realized if these limits are effectively enforced. Despite laws on the minimum drinking age, young people have often been able to buy alcoholic beverages. In most of the countries participating in the European School Survey Project on Alcohol and Other drugs (ESPAD) in 2003, most schoolchildren aged 15–16 years thought that getting any type of alcoholic beverage was fairly or very easy, rising to 70–95% for beer and wine (Hibell et al., 2004). Even moderate increases in enforcement can reduce sales to minors by as much as 35–40%, especially when combined with media and other community activities (Wagenaar & Toomey, 2002).

In the European Comparative Alcohol Study (ECAS) looking at alcohol control in EU member states and Norway in 1995, it was noted that between 1950 and 2000, some ECAS countries with no age limits in the 1950s began to implement legal age limits for buying alcoholic beverages, and in some ECAS countries age limits were raised. In Finland and Sweden, however, the age limits were lowered (Österberg & Karlsson, 2002). In 2000 there were still some ECAS countries with no legal age limits for at least some categories of alcoholic beverage in off-premise sales.

New research regarding the effects of changes in legal age limits has concentrated on the effectiveness of policies related to enforcement and support for a minimum legal drinking age. In Europe, the growing interest in enforcing minimum legal restrictions on the drinking age is connected to the increased use of test purchasing (mystery shoppers) as a way to check how

retail traders are following the relevant laws. In Finland and Sweden, the off-premise retail alcohol monopoly companies hire independent test purchasers to check how well the monopoly's employees are following the rules requiring the presentation of an identification card. In Finland and Sweden, all customers looking younger than 25 years of age have to present an identity card, even though it is legal in these countries to sell distilled spirits to customers aged 20 years (Vihmo & Österberg, 2011).<sup>1</sup>

As well as the alcohol monopoly companies, nongovernmental organizations, especially those concerned with young people, have been active in mystery shopping. There are also community-based research projects, such as the Finnish PAKKA project, which use trial purchasers (Holmila, Karlsson & Warpenius, 2010). Trial purchasers hired by the monopoly companies or in the PAKKA project are young-looking people who have reached the legal purchase age. Some nongovernmental organizations in the Nordic countries are in fact using trial purchasers who actually are under age, which can lead to legal problems.

Test purchasing is being used more and more in the continental European countries and the British Isles (Gosselt et al., 2007; Tael, 2011). In these countries, trial purchasers are usually hired by state or local authorities as well as by nongovernmental organizations in order to check to what extent underage people are able to buy alcoholic beverages and to put pressure on retailers to improve their enforcement of the legal age limits.

Underage alcohol use is also linked to access through informal family and social networks. According to the ESPAD study, in many countries the most common sources of alcoholic beverages among underage drinkers are parents, siblings and friends (Hibell & Skretting, 2009; Paschal, Grube & Kypri, 2009).

## Ratings of measures controlling physical availability of alcohol

There is not much new research evidence from EU member states regarding controls on the availability of alcoholic beverages since the report *Alcohol in Europe. A public health perspective* was published in 2006. Denmark and Lithuania changed their shop opening laws in 2010, leading to an increase in alcohol availability, whereas Estonia and Ireland introduced stricter rules regarding alcohol sales times in 2008, as did Finland and Italy in 2007. These changes have not, however, been studied, partly because the changes in availability have been quite small.

The second edition of *Alcohol: no ordinary commodity*, published in 2010, gives the latest situation on the physical availability of alcohol by rating policy options by their effectiveness, breadth of research support and cross-national testing (Babor et al., 2010; see also WHO Regional Office for Europe, 2009). Babor and his colleagues give all interventions affecting the physical availability of alcohol at least two pluses out of three for effectiveness, research support and cross-national testing (Table 1). The WHO publication *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm* summarizes the evidence relating to physical availability, and finds that there is consistent evidence that alcohol-related harm can be reduced by maintaining or raising the minimum purchasing age for alcohol, introducing government monopolies on the retail sale of alcoholic beverages, and regulating and limiting the density of outlets as well as times for alcohol sale (WHO Regional Office for Europe, 2009).

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<sup>1</sup> In Sweden, 20 years for all alcoholic beverages; in Finland, 20 years for spirits and 18 years for wine and beer.

Table 1. Ratings of strategies and interventions affecting physical availability of alcoholic beverages

Strategy or intervention	Effectiveness <sup>a</sup>	Research support <sup>b</sup>	Cross-national testing <sup>c</sup>
Ban on sales	+++	+++	++
Minimum legal purchase age	+++	+++	++
Rationing	++	++	++
Government monopoly of retail sales	++	+++	++
Restrictions on times of sale	++	++	+++
Restrictions on density of outlets	++	+++	++
Different availability by alcohol strength	++	+++	++

<sup>a</sup> The likely impact of interventions reflecting the strength of scientific evidence establishing whether a particular strategy is effective in reducing alcohol consumption and/or alcohol-related problems: + evidence of limited effectiveness; ++ evidence of moderate effectiveness; +++ evidence for a high degree of effectiveness.

<sup>b</sup> Research support goes beyond the quality of science to look at the quantity and consistency of the available evidence, including conflicting evidence: + one or two well-designed studies have been undertaken; ++ several studies have been completed, sometimes in different countries but no integrative reviews were available; +++ enough studies have been completed to permit integrative literature reviews or meta-analyses.

<sup>c</sup> Evidence for an intervention drawn from studies conducted in different countries, regions, subgroups and social classes: + strategy studied in at least two countries, ++ in several countries, +++ in many countries.

Source: Babor et al, 2010.

A systematic review (Hahn et al., 2010) concluded that there was sufficient evidence to show that increasing alcohol sales times by two or more hours increases alcohol-related harm. Although the review did not find sufficient evidence for the impacts of smaller increases in sales hours, a new study in Norway examining changes in bar closing times in 18 cities has since found that each one-hour extension to bar opening hours was associated with a significant increase in assaults (Rossow & Norstrom, 2011). With the international trend towards increased bar opening hours, few studies have examined the impacts of reduced alcohol service hours in bars. However, in Newcastle, Australia, pub closing times were restricted in 2008 following police and public complaints about violence, disorderly behaviour and property damage related to intoxication.<sup>2</sup> A study associated the restrictions with a relative reduction in recorded assaults of 37% (Kypri et al., 2010).

A systematic review assessed the effectiveness of limiting the density of alcohol outlets so as to reduce excessive alcohol use and related harms (Bryden et al., 2011). Again, the trend towards increased alcohol liberalization meant that it found few studies assessing the impact of restricting the density of outlets. However, most studies identified showed greater alcohol outlet density to be associated with increased alcohol consumption and harms, including injury, violence, crime and medical harm. A range of new studies have added weight to this evidence, associating higher densities of licensed premises with alcohol-related harm, particularly violence (Grubestic & Pridemore, 2011; Livingston, 2011a; Connor et al., 2011; Livingston, 2011b).

## Conclusions for policy and practice

The accumulation of research evidence about the impact of interventions regarding the physical availability of alcohol has been really impressive during recent decades. Much more is known now of the effects of restrictions on the physical availability of alcohol than half a century ago when *Alcohol control policies in public health perspectives* was published in 1975. According to Babor and his colleagues (2010), among the 10 best practices (besides alcohol taxes) in

<sup>2</sup> The restrictions covered 14 pubs. Opening times were restricted to between 0500 and 0300 hours, with an 0100 lock-in that prevented new customers entering after that time. However, a legal challenge by the pubs led to the restrictions being amended to 0330 closing and 0130 lock-in after the first four months.

preventive alcohol policies are interventions in the physical availability of alcohol such as the minimum purchase age, government alcohol monopolies, and restrictions on the times of sale and the density of outlets selling alcoholic beverages.

## References

- Anderson P, Baumberg B (2006). *Alcohol in Europe. A public health perspective*. London, Institute of Alcohol Studies.
- Babor TF et al. (2010). *Alcohol: no ordinary commodity. Research and public policy*, 2nd ed. Oxford, Oxford University Press.
- Bryden A et al. (2012). A systematic review of the influence on alcohol use of community level availability and marketing of alcohol. *Health and Place*, 18(2):349–357.
- Chaloupka FJ, Grossman M, Saffer H (2002). The effects of price on alcohol consumption and alcohol-related problems. *Alcohol Research and Health*, 26:22–34.
- Connor JL et al. (2011). Alcohol outlet density, levels of drinking and alcohol-related harm in New Zealand: a national study. *Journal of Epidemiology and Community Health*, 65(10): 841–846.
- Gosselt JF et al. (2007). Mystery shopping and alcohol sales: do supermarkets and liquor stores sell alcohol to underage customers? *Journal of Adolescent Health*, 41:302–308.
- Grubestic TH, Pridemore WA (2011). Alcohol outlets and clusters of violence. *International Journal of Health Geographics*, 10:30.
- Gruenewald PJ et al. (2006). Alcohol prices, beverage quality and the demand for alcohol: quality substitutions and price elasticities. *Alcoholism: Clinical and Experimental Research*, 30:96–105.
- Hahn RA et al. (2010). Effectiveness of policies restricting hours of alcohol sales in preventing excessive alcohol consumption and related harms. *American Journal of Preventive Medicine*, 39(6):590–604.
- Hibell B et al. (2004). *The ESPAD report 2003: alcohol and other drug use among students in 35 European countries*. Stockholm, Swedish Council for Information on Alcohol and Other Drugs and the Pompidou Group at the Council of Europe.
- Hibell B, Skretting A (2009). *The 2007 ESPAD report: substance use among students in 35 European countries*. Stockholm, The Swedish Council for Information on Alcohol and Other Drugs.
- Holmila M, Karlsson T, Warpenius K (2010). Controlling teenagers' drinking: effects of a community-based prevention project. *Journal of Substance Use*, 15:201–214.
- Karlsson T, Österberg E (2002). Denmark. In: Österberg E, Karlsson T, eds. *Alcohol policies in EU member states and Norway. A collection of country reports*. Helsinki, Stakes:120–139.
- Kypri K et al. (2010). Effects of restricting pub closing times on night-time assaults in an Australian city. *Addiction*, 106:303–310.
- Livingston M (2011a). Alcohol outlet density and harm: comparing the impacts on violence and chronic harms. *Drug and Alcohol Review*, 30(5):515–523.
- Livingston M (2011b). A longitudinal analysis of alcohol outlet density and domestic violence. *Addiction*, 106(5):919–925.
- Mäkelä K, Österberg E, Sulkunen P (1981). Drink in Finland: increasing alcohol availability in a monopoly state. In: Single E, Morgan P, deLint J, eds. *Alcohol, society and state II: the social history of control policy in seven countries*. Toronto, Addiction Research Foundation:31–59.
- Mäkelä P (2002). Who started to drink more? A reanalysis of the change resulting from a new alcohol law in Finland in 1969. In: Room R, ed. *The effects of Nordic alcohol policies: analyses of changes in control systems*. Helsinki, Nordic Council for Alcohol and Drug Research:71–82.

- Møller L (2002). Legal restrictions resulted in a reduction of alcohol consumption among young people in Denmark. In: Room R, ed. *The effects of Nordic alcohol policies: analyses of changes in control systems*. Helsinki, Nordic Council for Alcohol and Drug Research:155–166.
- Noval S, Nilsson T (1984). Mellanölets effect på konsumtionsnivån och tillväxten hos den totala alkoholkonsumtionen [The effects of medium beer on consumption levels and the rise in overall alcohol consumption]. In: Nilsson T, ed. *När mellanölet försvann [When the beer disappeared]*. Linköping, Linköping University:77–93.
- Olafsdottir H (1998). The dynamics in shifts in alcoholic beverage preference: effects of the legalization of beer in Iceland. *Journal of Studies on Alcohol*, 59:107–114.
- Olafsdottir H (2002). Legalizing beer in Iceland. In: Room R, ed. *The effects of Nordic alcohol policies: analyses of changes in control systems*. Helsinki, Nordic Council for Alcohol and Drug Research:95–116.
- Österberg E, Karlsson T (2002). Alcohol policies in EU member states and Norway in the second half of the twentieth century. In: Österberg E, Karlsson T, eds. *Alcohol policies in EU member states and Norway. A collection of country reports*. Helsinki, Stakes:433–460.
- Paschall MJ, Grube JW, Kypri K (2009). Alcohol control policies and alcohol consumption by youth: a multi national study. *Addiction*, 104:1849–1855.
- Room R et al. (2002). *Alcohol in developing societies: a public health approach*. Helsinki, Finnish Foundation for Alcohol Studies.
- Rossow I, Norstrom T (2011). The impact of small changes in bar closing hours on violence. The Norwegian experience from 18 cities. *Addiction*, 107(3):530–537.
- Tael M (2011). *Alkoholsete jookide testostemise piloturing [Pilot study on alcohol purchase by youngsters]*. Tallinn, National Institute for Health Development.
- Tiihonen J et al. (2011). *Päivittäistavarakaupoissa myytävien juomien alkoholipitoisuuden alentamisen vaikutus alkoholin kulutukseen ja kuolemiin [The effects of decreasing the upper alcohol content limit of alcoholic beverages permitted to be sold in grocery stores]*. Helsinki, Government Institute for Economic Research.
- Vihmo J, Österberg E (2011). *Information on the Nordic alcohol market 2011*. Helsinki, Alko.
- Wagenaar AC, Toomey TL (2002). Effects of minimum drinking age laws: review and analyses of the literature from 1960 to 2000. *Journal of Studies on Alcohol*, 63:S206–225.
- WHO Regional Office for Europe (2009). *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm*. Copenhagen, WHO Regional Office for Europe ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0020/43319/E92823.pdf](http://www.euro.who.int/__data/assets/pdf_file/0020/43319/E92823.pdf), accessed 12 February 2012).