

# Enforcing regulations on alcohol sales and use as universal environmental prevention

## *Hacer cumplir las regulaciones sobre venta y consumo del alcohol como prevención ambiental universal*

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### Abstract

The informal social control over alcohol consumption that was traditional in Southern European countries has weakened. At the same time there is an increase in binge drinking and drunkenness among young people in Spain. To mitigate this problem, regulations on alcohol and driving and restrictions on the sale and consumption of alcohol have been adopted. This paper documents the current regulations in the city of Barcelona and describes efforts to enforce them and their outcomes. Data from the municipal information systems on infringements reported for the period 2008-13 are provided.

There is an increasing pressure of municipal services to enforce the rules in two areas: a) alcohol sales at night (retailers); and b) consumption in the public space (citizens). An increase in the controls of drink-driving has also taken place, and the proportion above legal limits has decreased. The largest relative increase occurred in the control of retailers.

In Barcelona interventions are made to limit the supply and consumption of alcohol at low cost and during the night, and of driving under the influence of alcohol. There have been no documented episodes of massive drinking in public spaces (known as 'botellón') in the city. These actions, which complement other preventive efforts based on health education, can change the social perceptions of alcohol by minors in a direction less favorable to consumption, promoting environmental prevention.

*Key words:* alcohol, prevention, regulation, authority.

### Resumen

El control social informal sobre el consumo de alcohol, tradicional en los países del Sur de Europa, se ha debilitado. Este cambio ha ido acompañado de un incremento de los episodios de consumo intensivo y borracheras en jóvenes en España. Para mitigar este problema, se han adoptado regulaciones sobre alcohol y conducción, y otras que restringen la venta y el consumo de alcohol. Este trabajo documenta las regulaciones vigentes y describe los esfuerzos realizados en la ciudad de Barcelona en este campo y sus resultados. Asimismo, se recopilan datos de infracciones denunciadas en los sistemas de información municipal para el período 2008-13.

Se observa un incremento de la presión de los servicios municipales para hacer cumplir las normas en dos aspectos: a) la venta en horario nocturno (establecimientos); y b) el consumo en la vía pública (ciudadanía). Por otra parte, también se aprecia un aumento en la actividad de control de la alcoholemia de los conductores, mientras que la proporción que superan los límites legales descendió. El mayor incremento relativo se ha producido en las acciones sobre establecimientos.

En Barcelona se realizan intervenciones para limitar la oferta y consumo de alcohol a bajo coste y en horario nocturno, así como la conducción bajo la influencia del alcohol. En la ciudad no se han documentado episodios de botellón masivo en espacios públicos. Estas acciones, que complementan otros esfuerzos preventivos basados en la educación para la salud, pueden modificar la percepción social del alcohol por los menores en un sentido menos favorable al consumo, contribuyendo a crear un entorno de prevención ambiental.

*Palabras clave:* alcohol, prevención, regulación, autoridad.

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For many years it was considered that in the countries of southern Europe the consumption of alcohol was integrated within the cultural structure, with no restrictive mechanisms of formal control, and with problematic consumption being barely visible (Room & Mäkelä, 2000). With the social changes that have come in recent decades, however, this profile has been challenged (Anderson & Baumberg, 2006). On the one hand, average consumption is lower as is daily consumption, but on the other, an increase in episodes of binge drinking and drunkenness on the part of young people in this country can be appreciated, with health and social consequences (Villalbí & Brugal, 2012). This reflects that among some segments of young people there is a perception of intensive consumption as being the norm among their peers (Calafat Far, 2007; Pascual Pastor, 2002; Salamó, Gras, & Font-Mayolas, 2010) as well as easier access to alcohol. Progressively, various formal regulations have been adopted as a response to this problem (Villalbí, Bosque-Prous, Gili-Miner, Espelt, & Brugal, 2014). The most visible and best known of these are those relating to alcohol and driving, which have achieved an important reduction in traffic accident injuries in Spain (Pulido et al., 2014). Other relevant regulations are those affecting the availability of alcohol, by means of restrictions on its sale and consumption (Valencia-Martín, Galán, & Rodríguez-Artalejo, 2007), that several local and regional governments have adopted and have then applied in different ways, according to the context. The value of regulatory policies aimed at reducing the problematic consumption of alcohol has been exhaustively reviewed recently (Babor et al., 2010).

The city of Barcelona has, since 1989, approved action plans to combat drug dependency, including both illicit and licit drugs, with a special emphasis on alcohol. These plans were approved in plenary sessions of the city council with political consensus (Manzanera et al., 2000). They are intersectoral and incorporate objectives related to various municipal and health services (Brugal, Guitart & Espelt, 2013). From the beginning, the public health services now concentrated in the Agència de Salut Pública de Barcelona (Barcelona Public Health Agency, ASPB in its Catalan initials) coordinated and evaluated them. This agency is a consortium-style body run jointly by the local government and that of the autonomous region (Catalonia) which groups together all the public health services of the city and, in the field of the Drug Plans, acts in coordination with other municipal services and also with the Departamento de Salud and the Servicio Catalán de la Salud (Health Department and the Catalan Health Service) (Guix et al., 2008). As part of this work, it fosters the effective enforcement of the regulations on the promotion, sale and consumption of alcohol in the city and collects data on the enforcement actions of the various municipal services in this area.

The objective of this paper is to document the efforts made to apply some regulations about alcohol in the city.

Information that reflects actions taken in this field and its evolution over time is compiled and analyzed, and its contribution is discussed from a comprehensive preventive perspective.

## Method

This is a descriptive study that is focused on the city of Barcelona over a six-year period, from 2008 to 2013. Data was collected on the main categories of reports of infringements of the alcohol regulations dealt with by the Guardia Urbana de Barcelona (Barcelona Local Police), registered in the municipal database of infringements, reports and sanctions. Its evolution over this period is described, and the data from the first three-year period (2008-10) are compared with those of the second, from 2011-13. The changes are measured by means of the chi-squared test for the comparison of proportions or the calculation of the confidence interval at 95%, using the Epidat program. The information systems from which violation reports are extracted are centralized in municipal computer applications. The aggregated and anonymized data regarding reported infringements related to alcohol were obtained by the central services of the Local Police who make them available to the public health services as part of the monitoring of the objectives of the Action Plan on Drug Dependency.

The regulations regarding alcohol that the Local Police enforce are basically three, and they are shown in Table 1. All of them were in force before 2008, which is the beginning of the period under study. State-wide traffic regulations are brought together in the Ley sobre Tráfico, Circulación de Vehículos a Motor y Seguridad Vial (Law on Traffic, Circulation of Motor Vehicles and Road Safety) and its successive modifications (*Real Decreto Legislativo 339/1990, de 2 de marzo, por el que se aprueba el Texto Articulado de la Ley sobre Tráfico, Circulación de Vehículos a Motor y Seguridad Vial, 1990; Royal Legislative Decree 339/1990, of March 2<sup>nd</sup>, by which the Articulated Text of the Law on Traffic, Circulation of Motor Vehicles and Road Safety, 1990, is approved.*). This law prohibits driving if the level of alcohol in the blood is above certain limits. Above these are the corresponding administrative sanctions, such as the withdrawal of points from the driving license and fines, habitually of €500.

The regulations governing the sale and consumption of alcohol are included in the Catalan law covering prevention and assistance in the matter of substances which may cause dependence, and its successive modifications (*Llei 20/1985, de 25 de juliol, de prevenció i assistència en matèria de substàncies que poden generar dependència, 1985; Law 20/1985, of July 25<sup>th</sup>, for the prevention and assistance in the matter of substances which may cause dependence, 1985*). This law prohibits the sale of alcohol in retail establishments in which consumption is not permitted (food stores) from 23:00 until 08:00 the following morning and since 1998 shopkeepers must

Table 1. *Some aspects of the regulations in force governing the sale of alcohol, driving of vehicles and drinking in the public thoroughfare. Barcelona, 2008-13*

| Purpose of the regulation                                | Territorial scope of the regulation | Form of the regulation   | Specific aspects regulated  | Date of the regulation       | Principal agents to ensure their compliance | Infringements and sanctions                            |
|--|-------------------------------------|--|---|------------------------------|---|--|
| Driving of vehicles while under the influence of alcohol | Spain                               | Law on Traffic, Circulation of Motor Vehicles and Road Safety (RDL 339/1990)                                     | Quantities of alcohol in exhaled air when driving greater than 0.25 mg/L (0.15 for novice and professional drivers).  | 1990, amended in 2006        | Local Police and Catalan Police             | Very serious offence (€500) and loss of license points |
|  |                                     |  | Quantities of alcohol greater than 0,6 mg/L in exhaled air.   | 2007 (amendments to the Law) | Local Police and Catalan Police             | Crime against traffic safety with criminal penalty     |
| Sale of alcohol  | Catalonia                           | Law for the prevention and assistance in the matter of substances which may cause dependence, 1985 (Law 20/1985) | Sale prohibited in establishments where consumption is not permitted between 23:00 and 08:00.   | 1998 (amendments to the Law) | Local Police and Catalan Police             | Serious offence (3,000 €)                              |
|  |                                     |  | Sale to minors under the age of 18 prohibited.  | 2002 (amendments to the Law) | Local Police and Catalan Police             | Serious offence (3,000 €)                              |
| Consumption of alcohol in the public thoroughfare        | City of Barcelona                   | Ordinance of measures to foster and guarantee the coexistence of citizenry in public spaces                      | Consumption of alcohol in the public thoroughfare when it may inconvenience neighbors and passers-by and in bottles or cans (outside of pavement cafés) prohibited. | 2006                         | Local police                                | Minor offence (30€)                                    |

display a sign that states this in a visible place. Also, the sale of alcoholic beverages to persons under the age of 18 has been prohibited since 2002. Infringements for selling to the under-18s and for selling at night are considered serious, violation reports are sanctioned with fines of a minimum of €3,000 and require administrative procedures.

The Municipal Ordinance of measures designed to foster and guarantee the coexistence of the citizenry in public spaces (*Ordenanza de medidas para fomentar y garantizar la convivencia ciudadana en el espacio público de Barcelona*, 2005; Ordinance of measures to foster and guarantee the coexistence of citizenry in public spaces of Barcelona, 2005), popularly known as the civic ordinance, came into force in 2006. It includes two relevant prohibitions: the consumption of alcohol in the public thoroughfare when it may inconvenience neighbors and passers-by, and the consumption of alcohol in bottles or cans, except at café and restaurant terraces. Infringements of this type are considered minor, and therefore, when reported, carry a minimum fine of €30, which may be substituted by alternative measures.

## Results

In Figure 1, the number of breath alcohol tests (BAT) carried out by the Local Police on drivers from 2008 to 2013 are shown, as well as the proportion of tests that were over the established limit. The number of BAT appears to be stable, although there are variations: the mean is of 129,000 a year, and the values show a range of between 115,023 and

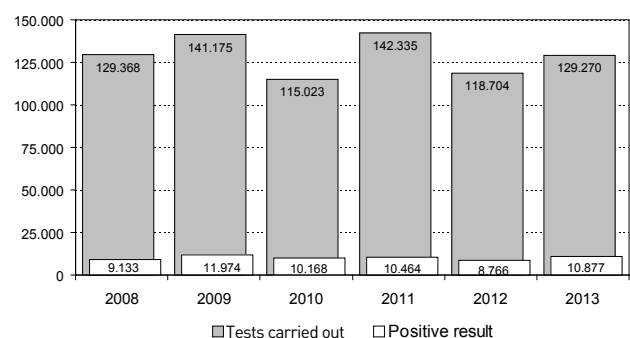


Figure 1. Breath alcohol tests carried out by the Local Police on drivers of vehicles and number over the limit. Barcelona, 2008-13.

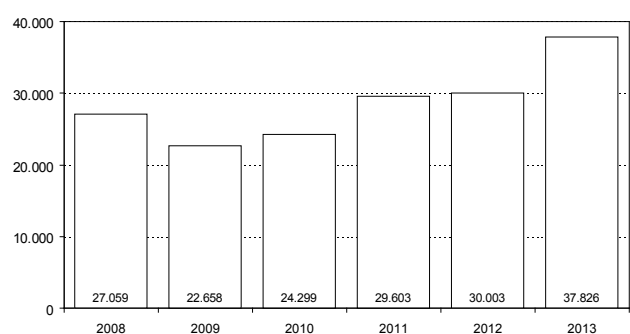


Figure 2. Violation reports issued by the Local Police for the consumption of alcohol in the public thoroughfare against the municipal ordinances. Barcelona, 2008-13.

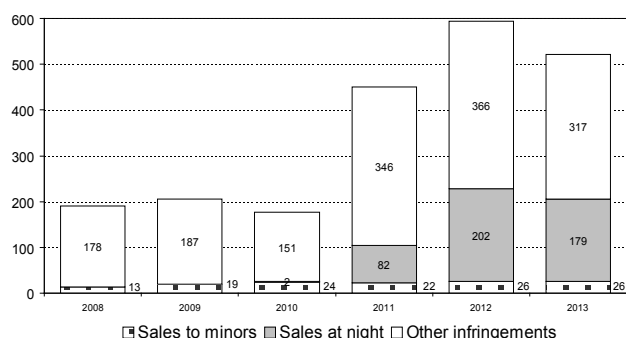


Figure 3. Violation reports issued by the Local Police to commercial establishments for infringements of the regulations governing the sale of alcohol, by type of infringement. Barcelona, 2008-13.

142,336. During the period from 2011 to 2013, 1.2% more BAT were carried out than between 2008 and 2010. These BAT generated between 9,000 and 11,000 fines a year for driving over the limit, shown by means of a breath test. In the period from 2008 to 2011, 8.11% of the BAT (CI 95%: 8,03-8,20) gave positive, while from 2011 to 2013, the figure was 7.71% (CI 95%: 7,63-7,80), a lower proportion.

Figure 2 shows the fines issued by the Local Police for consumption of alcohol in the public thoroughfare. After the municipal ordinance came into force, the annual figure increased from 27,000 in 2008 to approximately 38,000 in 2013. In terms of three-year periods, they go from 74,016 to 97,432 tickets handed out, which in yearly figures would be 1,759.77 (CI 95%: 1.747,12-1.772,50) and 2,316.50 (CI 95%: 2.301,98-2.331,09) fines per 100,000 inhabitants over the age of 14.

Figure 3 illustrates the number of violation reports issued by the Local Police to establishments frequented by the public (principally food stores, bars and cafeterias) for alcohol-related infringements between 2008 and 2013. The graph shows those due to the sale of alcohol to minors, to the sale of alcohol after hours, and to other infringements, (mostly for lack of signage). As can be seen, the number of reports increased notably after 2011, with the emergence of those due to selling alcohol after hours. These go from being merely token and limited to gas stations within the city limits to around 200 fines a year, and from 0.35% of fines in the first three-year period to 29.57% in the second ( $p < 0.0001$ ). Fines handed out for selling alcohol to minors doubled from 13 to 26 a year, but represent a lower percentage of the total, going down from 9.76% to 4.73% ( $p < 0.0001$ ).

## Discussion

Although news stories about fines to shops or individuals for selling or consuming alcohol frequently appear in the media and on Internet, we have not found any data from other cities or communities on their absolute or relative frequency; only the data related to road safety are system-

atically gathered together in the reports of the Dirección General de Tráfico (Directorate General of Traffic, DGT) or those of the regional or autonomous police forces. Data from Barcelona indicate that, in the city, the changes in the law in recent years are translating into an organized and ever more coherent effort aimed at reducing the supply and consumption of low cost alcohol available to young people, its sale at night, and drink-driving. In accordance with the scheme proposed by Foxcroft (2014), these actions, which complement other preventive efforts based on health education, should change the social perception that minors have of alcohol consumption in a sense less favorable to consumption, contributing to the creation of a preventive environment. Maybe in the future this will mean differences in patterns of adolescent consumption in the city with regard to other areas. In any case, there are no documented cases in the city of large groups of young people having open-air binge drinking sessions (botellón), which have taken place in other cities in Spain (Rodríguez-Martos, 2007).

We can attempt to estimate the relative magnitude of these efforts, which will be key for the public's perception. It is estimated that in Barcelona there are 968,000 registered vehicles, as well as those that circulate in the city coming from the metropolitan area (Departament d'estadística, Ajuntament de Barcelona, Department of Statistics, City Council of Barcelona, 2013). This means that there are 13 alcohol checks carried out every year per 100 registered vehicles. Checks are carried out with greater frequency at night and at weekends, and in areas where there are more leisure spots, and one infringement is detected for every 13 checks made. The actions of the Local police are added to those of the *Mossos d'Esquadra* (the police force of Catalonia): between 400,000 and 600,000 checks are carried out per year in Catalonia, especially on interurban roads. Together, this makes for a sizable pressure regarding the control of drink-driving, which has meant a favorable impact on the indicators of breathalyzer tests based on representative samples and on injuries from traffic accidents (Alcañiz et al., 2014; Pulido et al., 2014; Sarasa-Renedo et al., 2014). Regarding small retail outlets selling food, it is estimated that there are 4,200 of them in the city, most of which close before 21:00. If we use as a denominator the fines issued for nighttime sales of alcohol in this sector, it would be around five out of every hundred establishments over the last year studied. We cannot estimate it for those that open at night as we have no reference figures, but it would supposedly be much higher. These estimations of relative frequency, such as those made for fines handed out for drinking in the street, are not real rates (as they would require assumptions to be made on numerators and denominators that are not fulfilled), but they are indicative.

This dynamic must be put in the context of the changes that have come about in the market for the sale of alcohol-

lic beverages and in the leisure available in the city. On one hand, the increasing deregulation of shopping hours has meant that the sale of alcohol in food stores (traditional in our context, and not subject to alcohol license) has extended to the night and the weekends. The limitation on sales at night is precisely an attempt to reduce the problems that come with easy access to cheap alcoholic beverages (Villabí et al., 2014). On the other hand, the hospitality sector has expanded notably in a city in which tourism has an ever greater weight in the economy (Barcelona Tourist Office, 2014; Department of Statistics, City Hall of Barcelona, 2014). Finally, the changes in family dynamics and the patterns of adolescent and youth leisure time lead to a growth in the proportion of young people (including minors) who stay out until late, and this is associated with risky consumption (Llorens, Barrio, Sánchez, Suelves, & ESTUDES Working Group, 2011). Therefore, the efforts made in terms of regulations and enforcement go against other social changes that favor greater consumption. Another force to take into account is the marketing of the alcohol industry, of which there are signs of its impact on consumption (Montes-Santiago, Alvarez Muñoz, & Baz Lomba, 2007).

Evidently, other actions on the part of the public health services to reduce the consumption of alcohol among adolescents and young people have to be taken into account. Important in the city are the educational programs aimed at universal prevention (Foxcroft & Tsertsvadze, 2012) offered in secondary education, and which are very extensive (Juárez, Pasarín & Arcas, 2014), as well as the selective prevention actions based on unspecific prevention interventions in neighborhoods deemed to be high-risk (Bartoli et al., 2012; Bartoli, Espelt, Castellano, & Brugal, 2012), as well as the indicated prevention programs (Guitart et al., 2012). But as the reviews of the literature show, population-based prevention actions have the greatest preventive potential (Martineau, Tyner, Lorenc, Petticrew, & Lock, 2013). We should contemplate the actions of exercising authority to enforce the formal regulations governing the sale and consumption of alcohol in our milieu as universal prevention actions, which modify the environment (Burkhart, 2011; Foxcroft, 2014). The sequence that goes from the approval of regulations on the consumption of alcohol until their effective enforcement is the key to reducing the social perceptions that have led to the banalization of alcohol consumption among some population groups. This influences the balance between costs and benefits of consumption perceived by young people, as well as the perceived social norm (Vries, Backbier, Kok, & Dijkstra, 1995), which are key determinants of behavior.

### Conflict of interests

The authors declare that they have no conflict of interests.

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