Community Regulation of Alcohol Availability:
Evidence of Effectiveness and Challenges for Implementation

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Abstract

Context
Regulation of the availability of alcohol has been found to be a very important factor in alcohol impaired driving, as well as other alcohol related problems. Such factors as minimum purchase age for alcohol, the density and location of alcohol outlets, and alcohol service and sales practices have all been found to be related to impaired driving. Recent research has added to knowledge about the potential for regulatory strategies to reduce alcohol impaired driving, giving communities additional tools for preventing alcohol related harm.

Objectives
This paper summarizes recent findings about alcohol regulation as related to impaired driving and will describe efforts to disseminate and facilitate the use of this information at the community level. It also describes some of the barriers to implementation of alcohol regulatory strategies. In particular, it highlights ongoing dissemination and education in a sample of cities in California (USA).

Key Outcomes
Local efforts to reduce alcohol impaired driving have included changing the alcohol environments on college campuses, improvements in enforcement of purchase age and responsible beverage service regulations, and zoning and licensing laws to regulate the density and location of alcohol outlets. Many of these strategies have shown positive results for drinking and driving as well as other alcohol related harm. Barriers to implementation of effective strategies include coordination among relevant agencies and groups, competing economic issues, and competing demands on enforcement resources.

Discussion and Conclusions
Research and evaluation have demonstrated that alcohol regulation is an effective and efficient way of preventing impaired driving. Many strategies can be implemented at the community level. Significant challenges must be overcome in order to optimize the use of these strategies.

Introduction
Alcohol is a commodity that is regulated at the federal, state, and local level in the United States. Some of these regulations are designed to insure that appropriate taxes and fees are collected. But regulations are also put in place to reduce a variety of alcohol related problems, including drinking by underage persons, violence, disorder, and illegal behavior associated with alcohol outlets, and other such problems. Among the problems addressed by regulations is alcohol impaired driving. Regulation of the availability of alcohol has been found to be a very important
factor in alcohol impaired driving. Such factors as minimum purchase age for alcohol, the density and location of alcohol outlets, alcohol service and sales practices, and the price of alcohol have all been found to be related to impaired driving.

The development, establishment, and implementation of alcohol regulation at the federal and state level can be quite powerful and affect a wide population. Passing such regulations can be challenging, given the variety of interest groups that must buy into these regulations and the number of obstacles that can be encountered. In some cases, implementation of local regulations can be more feasible and have important results for public safety in those localities.

This paper describes research that has added to knowledge about the potential for local regulatory strategies to reduce alcohol impaired driving at the local level, giving communities additional tools for preventing alcohol-related harm. It also describes efforts to disseminate and facilitate the use of this information at the community level, including some of the barriers to implementation of alcohol regulatory strategies. In particular, it highlights an ongoing dissemination and education project working with community agencies and organizations in a sample of cities in California (USA).

**Types of local regulation**

Local efforts to reduce alcohol impaired driving through regulation of alcohol availability have included:

- Improvements in enforcement of purchase age laws
- Establishment and enforcement of responsible beverage service regulations,
- Zoning and licensing laws to regulate the density and location of alcohol outlets.
- Changes in college campus environments

The evidence supporting each type of effort is described briefly below.

*Improvements in enforcement of purchase age laws*

In the United States, young drivers pose particular risks. Until they reach their mid- to late 20s, drivers have a higher crash risk, especially when crash rates are adjusted for exposure. Impairment by alcohol exacerbates these risks. (Voas et al., 2009; Gonzales et al., 2005). After the drinking age was changed to 21 in the U.S. in the 1980s, alcohol-related crashes declined dramatically among drivers under 21. More vigorous enforcement of minimum purchase age has been shown to reduce sales to minors (Flewelling 2012; Wagenaar et al., 2005), reducing attempted underage alcohol purchases and self-reported underage drinking (Paschall 2012), and reducing single vehicle nighttime crashes among drivers under 21 (Holder et al., 2000).

Many communities in the U.S. have implemented programs to reduce sales to minors, mainly focusing on enforcement campaigns utilizing decoy purchasers. These enforcement programs are usually combined with information campaigns aimed at alcohol outlets and public awareness.

*Establishment and enforcement of responsible beverage service regulations*

Establishment and enforcement of regulations requiring responsible beverage service by alcohol outlets can have an impact on impaired driving. Especially effective is enhanced enforcement of
laws against sales/service to intoxicated patrons. Studies in two U.S. locales found that when outlets were informed about enforcement campaigns and later visited by undercover police the percentage of driving under the influence (DUI) arrestees who reported having consumed their last drink in an intervention setting decreased by 31-36% (Ramirez et al., 2008; McKnight and Streff, 1994).

Many localities have implemented a variety of regulations and programs aimed at educating the management and servers in bars and restaurants that serve alcohol. These educational programs appear to be most effective when they are backed up by well-publicized enforcement of laws against over-service of alcohol.

**Zoning and licensing laws to regulate the density and location of alcohol outlets**

There is good research evidence that density of alcohol outlets is associated with alcohol-related motor vehicle crashes and other alcohol-related harms (Campbell et al., 2009). Studies consistently find significant correlations between how easily and conveniently alcohol is available and the occurrence of traffic crashes, even when many of the other features of the local environment are taken into account (Gruenewald, 2007). These relationships have been examined over time within specific zip codes, showing that changes in numbers of bars and off-premise establishments over time are related to changes in rates of alcohol-related crashes (Treno, 2006).

The question is sometimes raised as to whether creating high density in which drinkers don’t have to drive far to get to an outlet might reduce their risk of having a crash. In fact, when studied in communities, this reduction due to reduced exposure to driving risk is overwhelmed by greater frequencies of drinking due to greater availability of alcohol and greater opportunities for drinking in environments (such as at bars and restaurants) where the patron is likely to drive after drinking. There are more traffic crashes in neighborhoods with greater numbers of alcohol establishments, with most crashes occurring in areas where drinkers are driving away from outlets toward residential areas (Gruenewald and Treno, 2000).

**Changing College Campus Environments**

College students tend to have risky drinking patterns, including driving after drinking. The density of outlets around campuses has been shown to affect heavy drinking and drinking problems among students (Weitzman et al., 2003). Studies have shown, however, that changes in the alcohol environments on and around college campuses can reduce risky drinking and impaired driving. These interventions often combine the strategies described above. In one study, universities in California were randomly assigned as intervention and control schools. Interventions included 1) nuisance party enforcement operations that stepped up police response to disruptive parties, 2) minor decoy operations to prevent sales of alcohol to minors, 3) driving-under-the-influence checkpoints, and 4) social host ordinances that held party hosts or organizers responsible for nuisance parties. Campus and local media were used to maximize the visibility of environmental strategies. The results showed that students were significantly less likely to become intoxicated at intervention universities compared to the control campuses. Significantly fewer students at the intervention schools also reported that they became intoxicated the last time they drank at an off-campus party; a bar or restaurant; or across all settings (Saltz, 2010).
In another study, the intervention included a social marketing campaign, with prevention advertisements in the school newspaper, ads posted in public areas on campus, and ads distributed as postcards. The message in the ads warned students that “Drinking Driving Laws Are Strictly Enforced in the College Area.” These advertisements were backed up by strong media coverage on the local community stations and in the college paper. DUI checkpoints were operated by the campus police, with assistance from local city police and the highway patrol. The results showed a considerable drop in the students’ reports of driving after drinking (Clapp et al., 2005).

**Barriers to implementation of effective local strategies**

The literature is clear that several strategies for changing the local alcohol environment have the potential for reducing impaired driving as well as other alcohol related problems. Communities face many challenges to the implementation of these strategies.

One serious barrier is the lack of information easily accessible to communities about these strategies. While studies are published in professional journals, often these resources are not available to or in appropriate language for community leaders, regulators, and concerned citizens (Stewart, 2005).

Other barriers to implementation include other health, safety, and social problems that compete for local attention and resources. For example, while enforcement of underage drinking laws and laws against sales of alcohol to intoxicated patrons are known to be effective, enforcement agencies typically have many competing concerns and these types of enforcement may be given a low priority.

Another challenge that local communities face is the competing economic interests of alcohol sales and service establishments. Restrictions on outlet density or enforcement of sales regulations are often perceived as cutting into profits of local businesses and tax revenues available to the locality.

Establishment and implementation of effective regulations can be difficult. Many communities tend to prefer to work on easier strategies – for example, education programs in the schools. Many of these strategies lack the strong level of effectiveness of the strategies described here but may distract from more effective approaches.

**Promoting the adoption of effective local strategies**

The Prevention Research Center (PRC), as part of its Center Grant from the U.S. National Institutes on Alcohol Abuse and Alcoholism, is working to assist communities in learning about, selecting, and implementing effective strategies. Researchers at PRC carry out some of the most relevant research on environmental strategies to reduce alcohol harm, including those that occur at the local level.

Education and dissemination activities include making research findings accessible to communities through translation and synthesis of research findings into clear guidance for policy makers, advocacy groups, and concerned citizens. Communications channels include a website, periodic newsletters, social media, and presentations to organizations trusted by localities. We
have also worked directly with a sample of communities in California to adapt research findings to local conditions and share experiences of implementation from community to community.

These activities have been well received, but are labor intensive. Especially in times of reduced resources, even getting the attention of local organizations and agencies is challenging. In order to overcome some of these difficulties, we are in the process of developing a web-based tool to aid in planning and implementation of environmental strategies at the local level.

Conclusions

Research and evaluation have demonstrated that alcohol regulation is an effective and efficient way of preventing impaired driving, creating healthier community environments with respect to the availability and use of alcohol. Many of these strategies can be implemented at the community level. Significant challenges must be overcome in order to optimize the use of these strategies. We are designing and implementing dissemination techniques to aid in the adoption of effective strategies and improvement of community safety.

References


