

August 25, 2016

The Arizona Public Health Association (AzPHA) supports the adoption of the following APHA Policy Statement 201410 - Regulating Commercially Legalized Marijuana as a Public Health Priority and its action step recommendations.

Policy Statement: 201410

### **Abstract**

As of 2014 four states, Colorado, Washington, Alaska, and Oregon, and the District of Columbia have legalized the sale and use of marijuana through a commercial market, and many other states are considering the option. So far the federal government has not challenged state laws legalizing commercial marijuana as long as states maintain strict rules involving sales and distribution. This policy statement calls for a public health approach to regulating and controlling commercially legalized marijuana and urges that regulation of legalized marijuana be viewed as a public health priority. Regulation will provide oversight of a market that is currently uncontrolled and can help address the unforeseen effects of marijuana legalization. If marijuana is legalized, federal, state, and local governments should develop, adopt, monitor, and evaluate strict regulatory mechanisms to control marijuana production, sales, and use while advancing the public health goals of preventing access by minors, protecting and informing consumers of legalized marijuana, and protecting third parties from unwanted consequences of legalized marijuana use. These mechanisms may include taxes, age limits, product labeling requirements, product quality testing, potency limits, labeling requirements, motor vehicle operation restrictions, and advertising restrictions.

### **Relationship to Existing APHA Policy Statements**

- APHA Policy Statement 8817(PP): A Public Health Response to the War on Drugs: Reducing Alcohol, Tobacco and Other Drug Problems among the Nation's Youth
- APHA Policy Statement 7121: Substance Abuse as a Public Health Problem
- APHA Policy Statement 7014: Marijuana and the Law
- APHA Policy Statement 201312: Defining and Implementing a Public Health Response to Drug Use and Misuse

### **Problem Statement**

Marijuana is the most widely used illegal drug in the United States. In 2012, more than 111 million Americans 12 years or older (nearly 43% of this population) admitted to having tried marijuana in their lifetime, and almost 19 million had used it in the preceding month.[1,2] More than half of US states and the District of Columbia currently provide legal protections for patients whose doctors recommend the medical use of marijuana. After voters in Colorado and Washington elected to legalize marijuana, these states began to establish regulatory schemes for its cultivation, distribution, and retail sale to those 21 years of age and older. Under these and other regulatory proposals,

marijuana would be regulated in a manner similar to alcohol, with age limits, licensing controls, and other regulatory and public health mechanisms. The federal government decided to not challenge state laws legalizing commercial marijuana as long as states maintain strict rules involving sales and distribution. The areas of regulatory emphasis for the federal government include preventing distribution to minors, preventing revenue from being directed to illegal enterprises, stopping drugged driving, ensuring that marijuana does not cross to states where it is illegal, preventing marijuana activity from being used as a cover for other illegal drug activity, and stopping marijuana from being grown on public land.[3] While the decision to not challenge state adoption of commercial marijuana was an executive branch decision, the recent change in the political control of Congress is unlikely to alter the federal government's stance. Since Washington and Colorado became the first states to legalize marijuana, other states have considered commercial legalization of the drug, with legislative proposals in Oklahoma, Maryland, Massachusetts, New York, New Jersey, Hawaii, New Hampshire, New Mexico, Pennsylvania, and Vermont and voter initiative efforts in Alaska, California, Missouri, Rhode Island, and Oregon.[4]

With the onset of commercial legalization of marijuana, several questions arise: How will access and availability to adolescents be prevented? How will the impact on vulnerable populations be addressed? What types of quality and informational controls will protect consumers? How will unwanted exposures and driving impairment be handled?

Increased availability: The national Monitoring the Future study has consistently shown that roughly 80% of 12th graders, 70% of 10th graders, and 40% of 8th graders in the United States report that marijuana is either "fairly easy" or "very easy" to obtain.[5–7] Concern exists that commercial legalization will increase the availability of marijuana to adolescents. The density of marijuana retailers is also an issue that needs to be addressed by regulation. If retailers congregate in a few locations, the populations in those areas will be more exposed to use, misuse, and abuse of marijuana. Advertising by retailers will also need to be examined, especially in light of studies revealing that alcohol and tobacco advertising is more prevalent in communities of color and areas of lower income.[8]

Passive exposures: As with the smoking of tobacco, passive exposure to marijuana smoke among children, tenants of multiunit housing developments, and nonsmokers is a concern. Protection for workers who cultivate commercial marijuana is also a concern since they may be exposed to pesticides, fertilizers, and other unhealthy adulterants. For example, a group of workers at a medical marijuana cultivator in Maine filed a complaint with the National Labor Relations Board because of the cultivator's use of pesticides and the workers' exposure to mold.[9]

Quality control and consumer protection: Because marijuana remains illicit, there are no mechanisms for its production to be monitored, its potency and quality to be

standardized and tested, or its labeling for potential health effects before being sold. Research has shown that potency can vary widely depending on the strain of marijuana and that the drug can be contaminated by fungi and bacteria, heavy metals, pesticides, growth enhancers, and substances (e.g., glass beads) that are intended to increase its weight or give the appearance of a higher potency.[10] A failure to provide accurate and credible information about marijuana's potency and quality can lead to consumer harm.

**Motor vehicle safety:** The “evidence of cannabis’s culpability in on-road driving accidents and injury is far less robust, with some reviews acknowledging an association between cannabis consumption and an increased risk of motor vehicle crashes while others have not.”[11] Evidence does show that marijuana can “increase driving reaction times, impair time and distance estimation, and decrease motor coordination for up to three hours after dosage impairment.”[12] One “meta-analysis of studies examining acute cannabis consumption and motor vehicle collisions [revealed] a near doubling of risk of a driver being involved in a motor vehicle collision resulting in serious injury or death.”[13] An examination of data from the National Highway Traffic Safety Administration’s Fatality Analysis Reporting System showed that “detection of cannabis in drugged drivers [involved in fatal motor vehicle crashes] increased from 28.8% in 1993 to 36.9% in 2010.”[12] During the same period, detection of cocaine fell from 20.6% to 9.8%, while detection of prescription drugs increased from 42.2% to 46.5%.[12] However, the researchers were unable to show causality between marijuana or other drug use and involvement in fatal vehicle crashes.[12] As with other substances and products that impair the operation of motor vehicles, the issue of commercial marijuana use and motor vehicle safety will need to be addressed through federal, state, and local regulatory schemes.

**Health effects:** The health effects of smoking marijuana are not fully understood. A recent study published in the Journal of the American Medical Association investigated the association between marijuana use and lung function in a cohort of more than 5,000 US adults over a period of 20 years; the study’s results suggested that “occasional use of marijuana...may not be associated with adverse consequences on pulmonary function.”[14] However, marijuana, like tobacco, contains toxic gases and other substances that can cause harm to the pulmonary system.[15] A recent review published in the New England Journal of Medicine documented the effects of long-term or heavy marijuana use, including addiction for about 9% of all regular users, altered brain development and cognitive impairment among adolescent users, chronic bronchitis symptoms, and an increased risk of chronic psychosis disorders among those who are predisposed to such orders. Short-term effects include short-term memory impairment, impaired motor control, altered judgment, and, for some, paranoia and psychosis with high doses.[16]

### **Strategies to Address the Problem**

Jurisdictions that legalize or consider the legalization of commercial marijuana should

develop, adopt, monitor, and evaluate regulatory schemes for marijuana production, sale, and use that protect and promote public health. Regulation of commercial marijuana can have positive effects on public health. For example, evidence from the Netherlands—which has adopted a de facto legalization policy regarding retail sales and regulatory guidelines that include limits on the amount a person can buy in a day, a ban on advertisements, and a prohibition on sales to individuals under 18 years of age—indicates that the Dutch use marijuana at lower rates than some other European countries, do not escalate early use relative to other countries in Europe and the United States, and do not use marijuana as a gateway drug.[17]

A strict, rigorous regulatory response to commercial sales of marijuana should focus on access to and availability of the drug among adolescents, informing and protecting consumers, and protecting third parties and vulnerable populations from the potential consequences of marijuana use (e.g., passive exposure and impaired driving). Regulatory interventions might include but should not be limited to age restrictions; taxation; time and date limitations for sales; potency and quality standardization, testing, and monitoring; advertising and packaging restrictions; place of use restrictions; extension of liability for injury to retailers; labor protections; and continued monitoring and evaluation of regulatory interventions. Many of these interventions are used to control alcohol and tobacco use and could also be used to control the use, misuse, and abuse of commercial marijuana.

Age restrictions: Age restrictions and enhanced enforcement of age restrictions can be used to limit the use of marijuana by adolescents, just as they are used to control tobacco use and alcohol use among adolescents, which have declined significantly over the past several years. According to the Monitoring the Future study, daily use of cigarettes by 12th graders decreased from 26.9% in 1975 to 8.5% in 2013, while the 30-day prevalence of use of alcohol by 12th graders decreased from 54% in 1991 to 39.2% in 2013.[18,19] Studies and estimates show the impact of minimum legal drinking ages (MLDAs) for alcohol and minimum legal purchase ages (MLPAs) for tobacco on alcohol-related motor vehicle crashes and the prevalence of adolescent smoking. According to estimates from a 2001 systematic review of interventions designed to reduce alcohol-impaired driving, fatal and nonfatal vehicle crashes increase by 10% with lower MLDAs and decrease by 16% with higher MLDAs (i.e., age 21).[20] In another study, the researchers concluded that raising the MLPA in the United States from 18 to 21 years would reduce the prevalence of smoking among 15- to 17-year-olds to 7.5% after 75 years as a result of delayed smoking initiation, removal of social sources of cigarettes (i.e., friends who are 18 to 20 years old), and better recognition by retailers of adolescent purchasers (i.e., it would be easier for retailers to distinguish between a 16-year-old and a 21-year-old than a 16-year-old and an 18-year-old).[21] Maintaining retailer compliance with MLDA laws through enhanced enforcement of these laws against retailers and underage purchasers also reduces access to alcohol among minors.[22]

**Taxation:** Taxing commercial marijuana to price adolescents out of the market may also prevent many adolescents from using marijuana. Increasing the price of cigarettes through taxes can cause adolescents to stop smoking.[23] One study of state tobacco taxes showed that every \$1.00 in increased state tax could potentially result in a 5.9% decrease in past-month smoking and a 4.1% decrease in frequent smoking among US high school youth.[24] Also, according to a meta-analysis of 112 studies on alcohol, higher taxes tend to reduce alcohol consumption among adult and teenage social drinkers as well as problem drinkers.[25]

**Time and date restrictions:** Marijuana use, misuse, and abuse can also be addressed by instituting time and place restrictions on commercial sales and imposing liability risks on commercial marijuana retailers. For example, alcohol control measures that limit the number of days and hours that alcohol can be sold as well as restricting the location and density of alcohol outlets can help decrease alcohol consumption and consumption-related harms.[26–29]

**Retailer liability:** Dram shop liability laws are effective in reducing and preventing harms associated with alcohol consumption by deterring overservice of alcohol to customers.[30] These laws allow licensed establishments such as restaurants, bars, and liquor stores that sell or serve alcohol to individuals to be held liable for any injuries or deaths that result from a customer's intoxication. Although litigation involving dram shops can be expensive and inefficient,[31] extending dram shop liability to marijuana retailers may serve as a way to reduce marijuana use, misuse, and abuse.

**Standardizing, testing, and monitoring potency and quality:** Regulatory frameworks can also be developed to standardize and determine the quality of commercial marijuana to protect consumers from adulterants (e.g., pesticides, mold, mildew, toxins) and inform them of the product's potency. Similar requirements are already in place for alcohol sales. For example, federal law and agency rules require alcohol beverage labels to include the brand name, the class and type of alcohol, the alcoholic content, the name and address of the bottler or packer, the country of origin, and a disclosure of additives and sulfites.[30,32,33] Also, the Family Smoking Prevention and Tobacco Control Act allows the US Food and Drug Administration to set standards for nicotine levels in tobacco products.[34]

**Warning labels:** Marijuana products could also be labeled to warn consumers of health risks. Tobacco products in the United States must display the surgeon general's warning about the risk of tobacco use. Labels on alcohol must also contain a specific warning about health risks.[35,36] While research has shown little effect on drinking behavior from alcohol labels, tobacco labeling's impact on consumer attitudes and behaviors is more apparent.[37]

Advertising restrictions: Advertising restrictions can also be used to control marijuana use and protect consumers, just as they are used for alcohol and tobacco. Restricting advertisements can have profound health effects. For example, according to one study, a complete ban on alcohol advertising would result in 7,609 fewer deaths and a 16.4% drop in alcohol-related life-years lost.[38] Current First Amendment protections for corporate speech would likely prevent advertising regulations aimed at adult consumers but would allow restrictions on advertising aimed at adolescents and children.[39] Consideration should also be given to the impact advertising may have on communities of color and/or groups of low socioeconomic status.

Impaired driving: Concerns about driving while impaired by marijuana can be addressed with current laws against driving under the influence or by amending those laws to include marijuana impairment. One option may be to increase “penalties for drugged driving in localities with greater accessibility to [marijuana].”[12] Some states have adopted per se drugged driving laws, meaning that any trace of illicit drugs in a driver is considered a drugged driving violation. While such a standard may be useful when prosecuting a drugged driving case, a recent study questions the effectiveness of per se drugged driving laws in lowering traffic fatality rates.[40] Research should be conducted on reliable and valid methods of determining marijuana impairment. Also, similar to the case with alcohol, education on marijuana use and driving should be available.

Passive exposure: Regulatory policies should be developed to limit passive exposures to marijuana. Passive exposures can also be addressed through prohibiting use of the drug in public locations and in the presence of minor children, as well as through restricting its use in multi-unit housing to avoid smoke drifting to neighboring units. In addition, states and localities can amend existing smoke-free laws to include marijuana smoke. Also, federal and state laws regulating the use of pesticides and fertilizers and the passive exposure of workers to such chemicals and other unsafe working conditions need to be extended to individuals working for marijuana cultivators.

Monitoring and evaluating regulatory schemes: Since the regulatory scheme for commercially legal marijuana is untested and involves many unknown elements, a final strategy is to monitor and evaluate the public health impact of regulations. Regulations can then be modified according to evidence regarding their effects on public health.

### **Opposing Arguments/Evidence**

Arguments opposing public health regulations often center on personal autonomy, the freedom to do business, and economic costs to consumers and businesses. Those who oppose regulating passive exposure to marijuana smoke and marijuana-impaired driving will focus on the lost autonomy of people who use marijuana in the presence of children, use the drug in multi-unit housing complexes, and drive after becoming impaired. Rates of alcohol-related motor vehicle fatalities have decreased since 1982, with some of the credit being given to laws aimed at deterring intoxicated driving.[41]

Laws aimed at deterring marijuana-impaired driving could lead to similar trends. Also, smoke-free laws are associated with lower risks of smoking-related cardiac, cerebrovascular, and respiratory diseases.[42]

Advertising and information restrictions along with required disclosures such as warning labels may be viewed as government interference with the protected right to free speech. However, these restrictions are designed to counter statements and messages that encourage harmful behavior, and, as noted above, a ban on alcohol advertising would result in fewer deaths and alcohol-related life-years lost.[38]

Age restrictions limit the accessibility of marijuana to adolescents, and opponents view these restrictions as an infringement upon the autonomy of youth. Restrictions that are set at 21 years of age may also be opposed because they limit access among adults (i.e., people 18 to 20 years of age). As noted, however, age restrictions could reduce health risks associated with alcohol and tobacco use among adolescents. For example, age restrictions on the use of alcohol and tobacco have been shown to decrease the prevalence of alcohol-related motor vehicle crashes and the prevalence of adolescent smoking.[21,22] These same regulatory measures could apply to marijuana.

Regulation of commercial marijuana's quality and potency and limitations on times and dates of marijuana sales could be perceived as impairing business interests and leading to increased consumer costs. However, these actions could provide protections to consumers and limit the accessibility of marijuana among adolescents. Today, many types of commercial products are subject to content and disclosure requirements to protect consumers and allow them to make informed decisions. For example, the Family Smoking Prevention and Tobacco Control Act requires tobacco companies to disclose the contents of cigarettes and allows the Food and Drug Administration to determine nicotine levels.[34]

Regulatory opponents will argue that protecting marijuana cultivation workers from dangerous working conditions by regulating pesticide exposures interferes with business activities and interests and increases consumer costs. However, popular organophosphate pesticides are associated with "nausea, dizziness, vomiting, headaches, abdominal pain, and skin and eye problems [as well as] chronic health problems or health symptoms such as respiratory problems, memory disorders, dermatologic conditions, cancer, depression, neurologic deficits, miscarriages, and birth defects." It is clear that limiting workers' exposure to harmful pesticides would create safer and healthier work environments.[43]

Finally, those who oppose regulating commercial marijuana through taxation may contend that taxation adds to consumer costs and interferes with business interests. Evidence in the realm of alcohol control demonstrates that taxation reduces the use of alcohol. For example, a systematic review of 112 studies examining the association

between taxes on and prices of alcohol and alcohol sales and use revealed significant relationships between taxes or prices and overall consumption and heavy drinking.[25]

Despite any opposition to the regulation of legalized marijuana, there is strong evidence from the areas of tobacco control and alcohol control that a regulatory scheme for commercial marijuana would have an impact on marijuana accessibility and use.

### **Action Steps**

APHA believes that, in jurisdictions that legalize the commercial sale of marijuana, the preponderance of evidence supports regulating marijuana as an important public health policy.

Therefore, APHA

- Urges federal, state, and local governments to:
  - o Regulate commercially legalized marijuana as a public health priority and develop, adopt, monitor, and evaluate regulatory controls for commercially legalized marijuana that reduce and prevent the drug's use, misuse, and abuse.
  - o Support and fund research into the health effects of marijuana use, misuse, and abuse.
  - o Coordinate their efforts to effectively regulate commercial marijuana in an effort to reduce and prevent its use, misuse, and abuse.
  - o Regulate commercially legalized marijuana in partnership with state and local health departments, including the provision of resources to local and state public health agencies for the purpose of reducing and preventing marijuana's use, misuse, and abuse.
  - o Tax commercial marijuana and dedicate the revenue to funding prevention, treatment, research, and regulatory frameworks to offset the costs and effects incurred through the increased availability of marijuana and other products containing tetrahydrocannabinol (THC).
  - o Develop and fund standards for the quality and potency of commercial marijuana and ensure safe working conditions for those cultivate marijuana.
  - o Exercise their authority to limit and restrict the advertising of commercial marijuana and develop required written disclosures to protect commercial marijuana consumers.
  - o Develop standards for determining impaired operation of motor vehicles.
  - o Ensure the development and availability of linguistically competent educational and informational materials for individuals with limited English proficiency.
- Calls on the federal and state governments and all federal and state agencies involved in research, policies, and programs related to marijuana to develop an evidence base regarding the public health benefits of regulating commercial marijuana.
- Calls for states that may consider legalizing commercial marijuana to refer to evidence-based regulatory controls for legalized marijuana and review and assess the regulatory frameworks of those states that have already legalized the drug.

## References

1. Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Table 1.24A: Marijuana use in lifetime, past year, and past month among persons aged 12 or older, by demographic characteristics: numbers in thousands, 2011 and 2012. Available at: <http://www.samhsa.gov/data/NSDUH/2012SummNatFindDetTables/DetTabs/NSDUH-DetTabsSect1peTabs1to46-2012.htm#Tab1.24A>. Accessed January 16, 2015.
2. Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Table 1.24B: Marijuana use in lifetime, past year, and past month among persons aged 12 or older, by demographic characteristics: percentages, 2011 and 2012. Available at: <http://www.samhsa.gov/data/NSDUH/2012SummNatFindDetTables/DetTabs/NSDUH-DetTabsSect1peTabs1to46-2012.htm#Tab1.24B>. Accessed January 16, 2015.
3. US Department of Justice. Guidance regarding marijuana enforcement. Available at: <http://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>. Accessed January 16, 2015.
4. Mother Jones. Will your state be next to legalize pot? Available at: <http://www.motherjones.com/politics/2014/02/pot-marijuana-legalization-map-states>. Accessed January 16, 2015.
5. Monitoring the Future. Trends in availability of drugs as perceived by 12th graders. Available at: <http://www.monitoringthefuture.org/data/13data/13drtbl14.pdf>. Accessed January 16, 2015.
6. Monitoring the Future. Trends in availability of drugs as perceived by 10th graders. Available at: <http://www.monitoringthefuture.org/data/13data/13drtbl13.pdf>. Accessed January 16, 2015.
7. Monitoring the Future. Trends in availability of drugs as perceived by 8th graders. Available at: <http://www.monitoringthefuture.org/data/13data/13drtbl12.pdf>. Accessed January 16, 2015.
8. Barbeau EM, Wolin KY, Naumova EN, Balbach E. Tobacco advertising in communities: associations with race and class. *Prev Med.* 2005;40:16–22.
9. Quimby B. Pot dispensary workers rally in Portland. Available at: <http://www.pressherald.com/2013/04/06/medical-pot-workers-protest-in-portland/>. Accessed January 16, 2015.
10. McLaren J, Swift W, Dillon P, Allsop S. Cannabis potency and contamination: a review of the literature. *Addiction.* 2008;103:1100–1109.
11. Armentano P. Cannabis and psychomotor performance: a rational review of the evidence and implications for public policy. *Drug Test Anal.* 2013;5:52–56.
12. Wilson FA, Stimpson JP, Pagan JA. Fatal crashes from drivers testing positive for drugs in the U.S., 1993–2010. *Public Health Rep.* 2014;129:342–350.
13. Asbridge M, Hayden JA, Cartwright JL. Acute cannabis consumption and motor vehicle collision risk: systematic review of observational studies and meta-analysis. *BMJ.* 2012;344:e536.
14. Pletcher MJ, Vittinghoff E, Kalhan R, Richman J, Safford M, Sidney S, Lin F,

- Kertesz S. Association between marijuana exposure and pulmonary function over 20 years. *JAMA*. 2012;307:173–181.
15. Tashkin DP. Airway effects of marijuana, cocaine, and other inhaled illicit agents. *Curr Opin Pulm Med*. 2001;7:43–61.
  16. Volkow ND, Baler RD, Compton WM, Weiss SR. Adverse health effects of marijuana use. *New Engl J Med*. 2014;370:2219–2227.
  17. MacCoun RJ. What can we learn from the Dutch cannabis coffeeshop system? *Addiction*. 2011;106:1899–1910.
  18. Monitoring the Future. Trends in prevalence of use of cigarettes in grades 8, 10, and 12. Available at: <http://www.monitoringthefuture.org/data/13data/13tobtbl1.pdf>. Accessed January 16, 2015.
  19. Monitoring the Future. Trends in 30-day prevalence of use of various drugs in grades 8, 10, and 12. Available at: <http://www.monitoringthefuture.org/data/13data/13drtbl3.pdf>. Accessed January 16, 2015.
  20. Shults RA, Elder RW, Sleet DA, et al. Reviews of evidence regarding interventions to reduce alcohol-impaired driving. *Am J Prev Med*. 2001;21:66–88.
  21. Ahmad S, Billimek J. Limiting youth access to tobacco: comparing the long-term health impacts of increasing cigarette excise taxes and raising the legal smoking age to 21 in the United States. *Health Policy*. 2007;80:378–391.
  22. Elder RW, Lawrence B, Janes G, et al. Enhanced enforcement of laws prohibiting sale of alcohol to minors: systematic review of effectiveness for reducing sales and underage drinking. *Transp Res E-Circular*. 2007;E-C123:181–188.
  23. Ding A. Youth are more sensitive to price changes in cigarettes than adults. *Yale J Biol Med*. 2003;76:115–124.
  24. Carpenter C, Cook P. Cigarette taxes and youth smoking: new evidence from national, state, and local youth risk behavior surveys. *J Health Econ*. 2008;27:287–299.
  25. Wagenaar AC, Salois MJ, Komro KA. Effects of beverage alcohol price and tax levels on drinking: a meta-analysis of 1003 estimates from 112 studies. *Addiction*. 2009;104:179–190.
  26. Middleton JC, Hahn RA, Kuzara JL, et al. Effectiveness of policies maintaining or restricting days of alcohol sales on excessive alcohol consumption and related harms. *Am J Prev Med*. 2010;39:575–589.
  27. Hahn RA, Kuzara JL, Elder R, et al. Effectiveness of policies restricting hours of alcohol sales in preventing excessive alcohol consumption and related harms. *Am J Prev Med*. 2010;39:590–604.
  28. Ashe M, Jernigan D, Kline R, Galaz R. Land use planning and the control of alcohol, tobacco, firearms, and fast food restaurants. *Am J Public Health*. 2003;93:1404–1408.
  29. Campbell CA, Hahn RA, Elder R, et al. The effectiveness of limiting alcohol outlet density as a means of reducing excessive alcohol consumption and alcohol-related harms. *Am J Prev Med*. 2009;37:556–569.
  30. Federal Alcohol Administration Act, 27 USC §§ 201 et seq.
  31. Rammohan V, Hahn RA, Elder R, et al. Effects of dram shop liability and enhanced

- overservice law enforcement initiatives on excessive alcohol consumption and related harms: two Community Guide systematic reviews. *Am J Prev Med*. 2011;41:334–343.
32. Labeling and Advertising of Malt Beverages, 27 CFR Part 7.
  33. Labeling and Advertising of Distilled Spirits, 27 CFR Part 5.
  34. US Food and Drug Administration. Overview of the Family Smoking Prevention and Tobacco Control Act. Available at: <http://www.fda.gov/downloads/TobaccoProducts/GuidanceComplianceRegulatoryInformation/UCM336940.pdf>. Accessed January 16, 2015.
  35. Alcoholic Beverage Labeling Act of 1988, 27 USC §§ 213 et seq.
  36. Alcoholic Beverage Health Warning Statement, 27 CFR Part 16.
  37. Wilkinson C, Room R. Warnings on alcohol containers and advertisements: international experience and evidence on effects. *Drug Alcohol Rev*. 2009;28:426–435.
  38. Hollingworth W, Ebel BE, McCarty CA, et al. Prevention of deaths from harmful drinking in the United States: the potential effects of tax increases and advertising bans on young drinkers. *J Stud Alcohol*. 2006;67:300–308.
  39. *Lorillard v. Reilly*, 533 US 525 (2001).
  40. Anderson DM, Rees DI. Per se drugged driving laws and traffic fatalities. Available at: <http://ssrn.com/abstract=2189786>. Accessed January 16, 2015.
  41. US Department of Transportation, National Highway Traffic Safety Administration. Statistical analysis of alcohol-related driving trends, 1982–2005. Available at: <http://www-nrd.nhtsa.dot.gov/Pubs/810942.pdf>. Accessed January 16, 2015.
  42. Tan CE, Glantz SA. Association between smokefree legislation and hospitalizations for cardiac, cerebrovascular and respiratory diseases: a meta-analysis. *Circulation*. 2012;126:2177–2183.
  43. McCauley LA, Anger WK, Keifer M, Langley R, Robson MG, Rohlman D. Studying health outcomes in farmworker populations exposed to pesticides. *Environ Health Perspect*. 2006;116:953–960.