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Commentary on Fitzpatrick et al. (2012): Forecasting the Effect of the Amethyst Initiative on College Drinking

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Abstract

Background—There is considerable evidence that heavy episodic drinking (HED) is a serious problem among college students. Concern with this problem has led 135 college presidents to endorse the Amethyst Initiative, which promotes the lowering of the minimum legal drinking age (MLDA) from 21 to 18. The Amethyst Initiative claims that the current MLDA of 21 encourages underage college students to drink in unsupervised locations where they adopt misconceptions regarding the normative level of student drinking that leads to excessive consumption or HED. The study by Fitzpatrick et al. (2012) in this issue challenges this hypothesis by contrasting the potential reduction in misapprehension of the drinking norm against the increase in consumption that would be expected if the MLDA were lowered to 18.

Method—This commentary places the Fitzpatrick study within the larger context of the MLDA, noting that full consideration of the lowering the MLDA requires the inclusion of 18- to 20-year-old noncollege youths in the work force and 15- to 17-year-old high school students who will have increased access to alcohol through their 18-year-old peers.

Results—Research suggests that alcohol consumption and its associated problems will increase for 15- to 20-year-olds if the MLDA were lowered. This commentary also identifies alternative strategies for reducing college student HED that do not require lowering the MLDA.

Conclusion—Although college binge drinking is a significant problem, reducing the drinking age is unlikely to be effective. Instead, it will increase the risk of alcohol problems faced by even younger high school students.

Keywords

Amethyst Initiative; MLDA; College drinking; Underage drinking; Binge drinking

Introduction

As described in the Fitzpatrick et al. (2012) article in this issue, Dr. John McCardell and the Amethyst Initiative advocated lowering the minimum legal drinking age (MLDA) to 18 several years ago. Approximately 135 college presidents of about 3,500 college presidents in the United States signed the Initiative calling for a public debate on the “failure” of the current drinking age of 21. The Initiative is based on the argument that the MLDA-21 encourages underage college students to drink in unsupervised locations where heavy drinking cohorts produce a misconception of normative drinking that, in turn, leads to heavy episodic drinking (HED) or binge drinking. The study by Fitzpatrick and his colleagues is

important because it provides a quantitative estimate of the effect on college student drinking if the MLDA is lowered to 18. The authors contrasted the effects of two key factors believed to be related to HED and overall drinking by college students: (1) the misconception of drinking norms, and (2) the potential increase in drinking due to the greater availability of alcohol should the drinking age be lowered to 18. Fitzpatrick et al. (2012) analyzed data collected from 32 college campuses from past studies and simulated the effects on HED if college students' misperceptions about other students drinking were reduced from a high level to a very low level by reducing the MLDA to age 18. They also simulated the increase in overall drinking by college students due to the increase in alcohol availability if the MLDA were lowered to 18, making most college students eligible to drink. They called this resulting change the "wetness" of college campuses. The authors concluded from the simulation model that even the best possible decrease in HED due to a reduction in the social norm misperception is more than offset by a modestly estimated 25% increase in alcohol availability (wetness).

We agree with their conclusion, and we are pleased that there is now a quantification of the effect of lowering the MLDA in the literature (albeit an estimated effect) rather than speculation and estimates based upon studies conducted decades ago. We also believe this simulation of the effects is conservative. It compares a maximum possible reduction in the misperceptions about drinking and the resulting decrease in college student HED with a modest increase in wetness. As the authors concluded, "One might expect a much larger increase in wetness from the increased availability of alcohol associated with making the entire college population, rather than approximately half, to be of legal drinking age." (p. 4)

18- to 21-Year-Olds' Drinking

We emphasize, however, that the issues involved in lowering the drinking age go well beyond the college student drinking studied by Fitzpatrick et al. (2012). The larger portion of the 18- to 21-year-old population is in the work force. Their drinking behavior has received less study than college students' drinking behavior. Thus, it is unclear whether these young workers are motivated by the MLDA to drink in unsupervised locations or whether drinking in such locations produces misperceptions of drinking norms. It appears likely that allowing drinking in bars primarily patronized by adults aged 21 to 34, who generally drink more heavily than those aged 18 to 21, might expose them to a higher-risk drinking norm than they experience at unsupervised locations. Nevertheless, this noncollege group would be fully exposed to the increase in availability of alcohol resulting from a lower drinking age.

Research shows that when the drinking age is 21, those younger than 21 drink less and continue to drink less through their early twenties. The lower rates of drinking before 21 are not compensated for by a higher rate of drinking after reaching 21 (O'Malley and Wagenaar, 1991). The opposite is true. Early legal access (at age 18) is associated with higher rates of drinking later in life. Forty percent of those who start drinking before age 15 meet criteria for alcohol dependence at some point in their lives. This is four times greater than for those who begin drinking at age 21; 28% who start drinking at age 17 and 15% who start at age 18 develop a dependence on alcohol. Persons who start drinking at age 18 are 1.4 times more likely to become alcohol dependent than those who start at age 21 or older; 15% who start drinking at age 18 became alcohol dependent versus 9% for those who start at age 21 or older. Youth who start drinking at age 18 have twice the odds of drinking to intoxication than youth who start at age 21 (Hingson et al., 2000). Further, youth who start drinking at age 18 have a 33 to 52% greater chance of being injured while under the influence of alcohol in their lifetimes, a 2.4-fold increase in the risk of being involved in a motor-vehicle crash because of drinking too much in the past year, and a 50 to 60% greater chance of being

in a physical fight while or after drinking in the past year or ever compared to youth who start drinking at age 21 (Hingson et al., 2001).

15- to 17-Year-Olds' Drinking

If the drinking age were lowered to 18, youth in this country will start drinking at younger and younger ages. It will be much easier for 15- to 17-year-olds to obtain alcohol via their 18-year-old peers. This “trickle-down” effect was demonstrated in New Zealand (Kypri et al., 2006) when the drinking age was lowered from 20 to 18. Its alcohol-related crashes increased among those affected (18- and 19-year-olds), and that effect was even greater for 15- to 17-year-olds. Thus, we strongly believe that lowering the drinking age will expand the college-age drinking problems into the younger and more vulnerable high school population.

Early onset of drinking by youth has been shown to significantly increase the risk of future alcohol-related problems (e.g., addiction, getting into fights, drinking-driver crashes, and other unintentional injury) (Grant and Dawson, 1997; Hingson et al., 2006). Studies reveal that youth who start drinking before age 15, compared to those age 21, are 12 times more likely to be unintentionally injured while under the influence of alcohol, 7 times more likely to be in a motor-vehicle crash after drinking, and 10 times more likely to be in a physical fight after drinking (National Research Council and Institute of Medicine, 2004).

The Current Drinking Age Law is Working

When the MLDA-21 restriction was initiated across all states in the USA, driver alcohol involvement in fatal traffic crashes declined more significantly among the 16- to 20-year-olds than among drivers aged 21 and older. From 1982 to 2004, drinking drivers aged 21+ involved in fatal crashes declined 33%, and drinking drivers aged 20 and younger involved in fatal crashes declined 62% (NHTSA, 2007). Tougher legislation, better enforcement, and greater public awareness of the drinking-driving problem contributed to the overall decline in drinking driver fatalities, but the MLDA-21 law had an additional effect on young drivers (Shults et al., 2001).

The National Highway Traffic Safety Administration (NHTSA) has estimated that MLDA laws save approximately 800-900 lives a year in traffic fatalities alone (Kindelberger, 2005). Other studies show reductions in homicides, suicides, and unintentional injuries by 18- to 20-year-olds associated with raising the MLDA to 21 (Birckmayer and Hemenway, 1999). Fell et al. (2009) indicated that the laws making it illegal for youth to possess or purchase alcohol if they are aged 20 or younger have reduced the rate of underage drinking drivers in fatal crashes by 16%. That analysis controlled or accounted for numerous other factors—other drunk driving laws, alcohol consumption, the economy, the culture of the state, and vehicle miles driven in the state—that could have affected underage drinking and driving. Nevertheless, the core laws raising the MLDA to 21 still substantially reduced youth traffic fatalities. This confirms the findings of prior research but has a stronger design.

Carpenter and Dobkin (2011), in an econometric study, considered whether it made sense to lower the drinking age from 21 to 18 by determining whether the increase in consumer surplus was large enough to justify the increase in alcohol-related harm. They estimated that, if the drinking age were lowered to 18 in the United States, there would be an additional 8 deaths per 100,000 person-years for 18- to 20-year-olds. They concluded that the hidden cost of each drink due to the increased mortality risk was \$15+ for the drinker, plus the cost of the drink. The costs imposed on others (other than the drinker) is at least \$2.63 per drink. These estimates strongly suggest that the increase in harms by lowering the drinking age are likely larger than the value most people put on additional drinking. This evidence supports

setting the drinking age at 21, as it is substantially better from a cost-benefit perspective than setting it at 18, which again supports the role for government intervention to deal with this externality. The authors state that any proposal to reduce the drinking age “should face a very high burden of proof” (p. 154).

In a report to Congress on the Prevention and Reduction of Underage Drinking (Substance Abuse and Mental Health Services Administration, 2011, May), due to a combination of countermeasures and programs, the prevalence of binge drinking in the past 2 weeks by 12th graders with college plans has decreased significantly from 30% in 1998 to 23% in 2008. The report concluded that recent increases in the age of first drink and reductions in binge drinking by youth give reason for optimism.

Gruzca et al. (2012) analyzed data on suicide and homicide deaths for persons born between 1949 and 1972, the years during which the MLDA in the states was in flux. The researchers concluded that lower drinking ages in the states resulted in an elevated risk of suicide and homicide among women born after 1960 and that raising the drinking age to 21 may prevent an estimated 600 suicides and 600 homicides annually.

Is There an Effective Alternative to MLDA-21?

If the MLDA were lowered to 18, Dr. McCardell suggests issuing special licenses to 18- to 20-year-olds that would allow them to drink alcohol if they complete an alcohol education course. However, there is no evidence that lowering the drinking age to 18 for those who complete an education program will reduce the binge drinking or HED problem. In fact, there is strong evidence to the contrary from our experience with driver education programs in high schools. These programs were designed to teach young drivers about the dangers of driving and give them the skills and knowledge to drive responsibly. In some states, these programs are mandatory for high school students. These programs successfully provide students with a better understanding of the driving risks and with sufficient driving skills to pass the driving license tests. But completion of driver education resulted in earlier entry to the driving environment that increased the number of crashes among young drivers. The knowledge gained did not offset the increase in driving exposure (Mayhew and Simpson, 2002). Thus, there is reason to expect the same problem will occur in training young people to drink. For example, Johnson et al. (2008) found that young drinkers had difficulty using and interpreting blood alcohol concentration (BAC) information from self-testers and were prone to using poor judgment in responding to the information when, for example, the results suggested that they might have one more drink and still be below the illegal limit for driving (.08 g/dL). Based on this study, it seems unlikely that a 40-hour alcohol education program would reduce underage drinking problems.

More Effective Solutions

The MLDA-21 law has not totally eliminated underage drinking or the deaths and injuries that result from high-risk drinking by those aged 20 and younger. However, the evidence appears strong that reducing the age to 18 will not produce the desired reduction to the problem. Thus, when evaluating the policy proposed by the Amethyst Initiative, it will be important to consider policy alternatives directed at reducing college-drinking problems and producing greater benefits at a lower cost. For example, Lenk et al. (2012) conducted an online survey of programs directed at reducing drinking problems in 351 four-year colleges. They identified and assessed 31 alcohol policies (e.g., prohibiting alcohol sales at athletic events, fraternity parties and sometimes anywhere on campus) being promoted at the surveyed colleges. They found that though most colleges in their sample had one or two alcohol policies, only 2 in 10 had a comprehensive set of evidence-based programs. Clearly,

colleges can expand their efforts to reduce risky drinking and increase education on social norms related to drinking.

Beyond the policies on college campuses, many policies and programs can reduce underage alcohol consumption. Among those are better enforcement of laws against alcohol sales to minors (Wagenaar et al., 2005). In addition, some community programs have effectively reduced underage drinking. One program is Communities That Care (CTC), which uses advances in prevention science to provide information, training, and materials to mobilize coalitions and empower community stakeholders to prevent drug and alcohol use by adolescents. These interventions include school-based programs, community-based youth-focused programs, and family-focused programs. Hawkins et al. (2009) found that students in the non-CTCs were 60% more likely to use alcohol between grades 7 and 8 than were students in the CTCs.

Conclusions

There is strong evidence that uncontrolled drinking is a major problem on many college campuses. This was demonstrated in the 2007 National Roadside Survey of more than 10,000 drivers on U.S. roads across the country where, compared to employed persons, students were 50% more likely to have illegal (.08) BACs and twice as likely to report monthly binge drinking. It certainly appears unpromising to treat the problem by making alcohol available to 18- to 20- year-olds, which would present a major risk to all youths.

In conclusion, when the lives and well-being of so many young people are at stake, it is appropriate for the federal government to step in and protect the public. States are still free to set their drinking age lower than 21, if they are willing to accept the increase in youthful deaths and give up federal highway funds. The federal government is not directly coercing any state to adopt 21 as the drinking age. The National Uniform Drinking Age 21 Act has been a balanced, effective, and popular tool in helping to combat the many problems associated with youthful drinking—for students or nonstudents alike.

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