

Case Closed: Research Evidence on the Positive Public Health Impact of the Age 21 Minimum Legal Drinking Age in the United States

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ABSTRACT. Objective: In 2006, the nonprofit organization Choose Responsibility called for repealing the 1984 National Minimum Drinking Age Act, which had led all 50 states to establish a minimum legal drinking age (MLDA) of 21 years, and allowing the states to lower their MLDA to 18 years. Two years later, the organization assembled a small group of college and university presidents (the Amethyst Initiative) to call publicly for a critical reexamination of the law. Public health and traffic safety experts responded to these efforts by generating new research on the age 21 MLDA, thus warranting an updated review of the literature. **Method:** This review focuses primarily on research published since 2006, when Choose Responsibility began its public relations campaign to lower the MLDA. **Results:** Recent research on the age 21

MLDA has reinforced the position that the current law has served the nation well by reducing alcohol-related traffic crashes and alcohol consumption among youths, while also protecting drinkers from long-term negative outcomes they might experience in adulthood, including alcohol and other drug dependence, adverse birth outcomes, and suicide and homicide. **Conclusions:** The age 21 law saves lives and is unlikely to be overturned. College and university leaders need to put into effect workable policies, stricter enforcement, and other evidence-based prevention efforts that have been demonstrated to reduce underage drinking and alcohol-related problems on campus and are being applied successfully at prominent academic institutions (*J. Stud. Alcohol Drugs, Supplement 17*, 108–115, 2014)

IN 2005, MOTHERS AGAINST DRUNK DRIVING (MADD) and other traffic safety activists celebrated the 21st anniversary of the National Minimum Drinking Age Act (23 U.S.C. § 158), which President Reagan signed into law in 1984. MADD organized a 21-city tour to celebrate the law, which the organization reported had saved “nearly 21,000 lives” since its passage. MADD’s support for the law is unwavering: “Hailed as one of the most effective anti-drunk driving laws ever passed, the law stands as one of MADD’s most successful legislative achievements” (MADD, 2005, p.3).

With National Prohibition repealed in 1933, the states assumed responsibility for regulating the distribution and sale of alcohol, and most established a minimum legal drinking age (MLDA) of 21 years. During the Vietnam War era, when the national voting age was lowered to 18 years, 29 states lowered their MLDA to 18, 19, or 20 years, which led to a dramatic increase in alcohol-related traffic fatalities among young people ages 18–20 years (Wagenaar and Toomey, 2002). Faced with these statistics, many states reversed course, but the problem remained of young people traveling across state lines to drink legally in states with a lower MLDA (Toomey et al., 2009).

As a result, MADD, Remove Intoxicated Drivers, the National Parent Teacher Association, and other groups pressured Congress to pass legislation that would in effect prohibit the purchase and public possession of alcoholic beverages by any person younger than 21 years (Lerner, 2011). The 1984 law incentivized the states to adopt the higher MLDA by threatening to withhold a percentage of highway funds (authorized under the Federal Highway Aid Act) from noncompliant states.

By December 1987, all 50 states had an age 21 MLDA that met the federal requirement. Policy information assembled by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) through its Alcohol Policy Information System reveals that many aspects of the MLDA laws vary from state to state (NIAAA, 2013). In several states, for example, the MLDA law does not explicitly prohibit consumption of alcohol by a person under age 21. Depending on the state, it can be legal for minors to possess alcohol with the consent or in the presence of a parent or guardian, for a parent or guardian to furnish alcohol to a minor, and for people under 21 to work as a clerk or server in an alcohol retail outlet.

The public continues to support the current age 21 law. According to a 2007 Gallup poll ($N = 1,001$), 77% of U.S. adults ages 18 and older would oppose a federal law to lower the drinking age to 18, whereas only 22% would support such a law (Carroll, 2007). In addition, 60% favored stricter penalties for underage drinking. A poll conducted in 2008 by the Opinion Research Corporation for Nationwide Mutual

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Insurance (2008) found similar results ($N = 2,006$). Moreover, approximately three fourths of the respondents agreed that there should be increased enforcement of both underage drinking laws and laws that prohibit providing alcohol to minors, plus increased penalties for adults who provide alcohol to minors. Fully 52% said they would be less likely to vote for a state representative who supports lowering the legal drinking age.

The Amethyst Initiative

In 2004, as he stepped down after 13 years as president of Middlebury College (Middlebury, VT), John M. McCardell published an op-ed in *The New York Times* to express his views on faculty tenure, faculty–student ratios, and the legal drinking age (McCardell, 2004). These were opinions, he explained, that he was not bold enough to state while president. What gained particular notice was McCardell’s declaration that the age 21 law was “bad social policy and terrible law” that has “driven drinking behind closed doors and underground” and therefore contributes to “binge drinking” (i.e., heavy episodic drinking). McCardell’s preferred solution, he said, is to lower the drinking age and teach college students how to drink responsibly: “Colleges should be given the chance to educate students, who in all other respects are adults, in the appropriate use of alcohol, within campus boundaries and out in the open.”

Four years later, more than 100 college and university chancellors and presidents signed on to McCardell’s “Amethyst Initiative,” which he launched through the auspices of Choose Responsibility, a nonprofit organization he started with generous funding from the Robertson Foundation. (There are more than 2,800 degree-awarding institutions of higher education in the United States, including both 2- and 4-year colleges and universities; Knapp et al., 2012).

A public statement released to the press called for “an informed and dispassionate public debate” over the effects of the age 21 law (Amethyst Initiative, 2008) but stopped just short of calling for a lower drinking age. Even though only a very small percentage of chancellors and presidents had signed on, the news media’s interest in McCardell, Choose Responsibility, and the Amethyst Initiative was intense, leading to extensive coverage in major national and regional newspapers, feature stories on cable news, a story on the highly regarded newsmagazine show *60 Minutes*, and even an appearance by McCardell on Comedy Central’s *The Colbert Report*. Public health and traffic safety experts responded to this flurry of news reports by generating new research to investigate the impact of the current law.

Method

This review focuses primarily on research published since 2006, when Choose Responsibility first began its public

relations campaign to lower the MLDA. We used the term *drinking age* in a PubMed search to identify articles in peer-reviewed journals, including but not limited to the *Journal of Studies on Alcohol and Drugs*. The selected articles had evaluated the age 21 MLDA in the United States or had investigated the potential effects of raising or lowering the MLDA. We examined several additional publications that were referenced in peer-reviewed articles or in various scholarly responses to the Amethyst Initiative.

Impact of the age 21 minimum legal drinking age on alcohol-related traffic crashes

McCardell’s public relations campaign took public health and traffic safety officials by surprise, given an extensive research literature showing that the age 21 MLDA reduces injuries and saves lives, even though the law is imperfectly enforced and widely disobeyed. Armed with this research, several public health and traffic safety experts wrote rebuttals to Choose Responsibility’s position (e.g., Fell, 2008; Hingson, 2009; McCartt et al., 2010; Saylor, 2011; Toomey et al., 2009; Voas and Fell, 2012; Wechsler and Nelson, 2010).

According to estimates produced by the National Highway Transportation Safety Administration (NHTSA), the age 21 law has saved up to 900 lives annually as a result of reduced alcohol-related traffic fatalities among underage drivers (Kindelberger, 2005; NHTSA, 2009). McCartt and colleagues (2010) noted that the biggest relative declines in both the number and per capita rate of fatally injured drivers ages 16–20 were seen between 1982 and 1995. During that period, which included passage of the National Minimum Drinking Age Act of 1984 (23 U.S.C. § 158), the number of fatally injured drivers with a positive blood alcohol concentration (BAC) decreased by 57% among those ages 16–20, compared with 39% for those ages 21–24 and 9% for those ages 25 and older. Declines in per capita rates were 50%, 26%, and 25%, respectively.

Wagenaar and Toomey (2002) published a definitive review of the U.S. literature on the age 21 MLDA in a supplement issue to the *Journal of Studies on Alcohol* (now the *Journal of Studies on Alcohol and Drugs*), which was timed to coincide with publication of *A Call to Action: Changing the Culture of Drinking at U.S. Colleges*, a report prepared by the Task Force on College Drinking organized by NIAAA (2002). Their article highlighted research studies that examined the impact of decreasing and then increasing the MLDA in various states. When reviewing this research, the authors identified 79 higher quality studies that used probability sampling or census data; analyzed pre–post, longitudinal, or time-series data; and incorporated some type of comparison group. Of these, 46 found that a higher legal drinking age led to fewer traffic crashes, whereas none found the opposite.

A review published by researchers with the Centers for Disease Control and Prevention came to the same conclusion, estimating that fatal and nonfatal injury crashes combined increased 10% when the MLDA was lowered but decreased 16% when the MLDA was raised to age 21 (Shults et al., 2001). In a subsequent econometric analysis, Carpenter and Dobkin (2011) estimated that decreasing the MLDA to age 18 would result each year in 4.74 more nighttime fatal motor vehicle crashes per 100,000 person-years for youth ages 18–20, a statistically significant 17% increase. The magnitude of increase for daytime fatal crashes, the vast majority of which would not be alcohol-related, was far less and not statistically significant. Decreasing the MLDA was predicted to increase nighttime fatal crashes for persons ages 21–24 by only 11%, with no increase projected for those ages 15–17 or 25–29.

Ponicki and colleagues (2007) demonstrated that raising the MLDA from 18 to 21 was associated with a 5%–9% decrease in all traffic fatalities among drivers ages 18–20. Moreover, increasing the MLDA caused a larger proportional drop in fatalities when state beer taxes were relatively low, leading to greater alcohol availability. A more recent investigation reported that the age 21 MLDA reduced traffic fatalities among drivers ages 18–20 in states that adopted that measure before the 1984 federal law but not in states that adopted it after the law went into effect (Miron and Tetelbaum, 2009). A possible explanation is that the latter states devote fewer resources to enforcing the MLDA law, but there may also be cohort effects or other differences between the two sets of states that contribute to this pattern of results.

Especially convincing evidence on the impact of the age 21 MLDA comes from an analysis by Fell and colleagues (2009) that used Fatal Analysis Reporting System data for 1982–2004 to examine the effects of the age 21 MLDA on the ratio of drinking to nondrinking drivers younger than age 21 involved in fatal crashes. Importantly, this analysis statistically controlled for the presence of several additional state laws designed to deter alcohol-impaired driving (e.g., administrative license revocation, use/lose laws) or to otherwise reduce traffic-related fatalities (e.g., mandatory seat belt laws, graduated license restrictions), plus state-level data for per capita beer consumption, unemployment rates, number of licensed drivers, vehicle miles traveled, the ratio of drinking to nondrinking drivers (according to roadside surveys), the number of drivers age 26 and over involved in fatal crashes and, among that group, the ratio of drinking to nondrinking drivers. The age 21 MLDA was independently associated with a 16% decline in the ratio of drinking to nondrinking drivers under age 21 involved in fatal crashes. By comparison, two measures that target drivers under age 21—use/lose laws, which call for driving license suspension or revocation for violating the MLDA law, and zero tolerance laws, which impose far lower BAC

per se limits for drivers under age 21 (e.g., $\leq 0.02\%$ BAC)—were associated with 5% declines.

A study by Lovenheim and Slemrod (2010) demonstrated the importance of having a national MLDA rather than a patchwork of varying state laws. Analyzing county-level data for 1977–2002, the authors found no reduction in youth involvement in fatal traffic crashes in counties with a higher MLDA but located within 25 miles of a state with a lower MLDA. In fact, among drivers ages 18–19, there was an increase in fatal crash involvement. In counties farther from the border, however, the results were consistent with other studies that have shown the age 21 MLDA to be protective.

Choose Responsibility has urged that individual states be allowed to experiment with lowering the MLDA while putting mandatory alcohol education programs in place (McCardell, 2006). Unfortunately, this proposal would reinstate the problem of young people traveling across state lines to drink legally in states with a lower MLDA and thus increasing their risk of being involved in a fatal traffic crash. Moreover, Choose Responsibility has not yet been specific about what content these education programs should include to ensure that they are consistent with evidence-based best practice.

Impact of the age 21 minimum legal drinking age on youth alcohol consumption

Choose Responsibility has also contended that the age 21 MLDA is contributing to heavy alcohol use on college campuses by forcing students to drink secretly and therefore more heavily (McCardell, 2006). In fact, there is no scientific evidence to support that argument.

According to the University of Michigan's Monitoring the Future study, heavy drinking rates for college students—defined as having five or more drinks in a row at least once during the past 2 weeks—have decreased from 43.2% in 1988, the first year when all 50 states had an age 21 MLDA, to 36.1% in 2011 (Johnston et al., 2012b). The corresponding rates for high school seniors (grade 12) decreased from 34.7% to 21.6% (Johnston et al., 2012a). An examination of 20 administrations of the National Survey on Drug Use and Health between 1979 and 2006 also showed decreases in heavy drinking rates among youth during this period (Gruca et al., 2009).

Choose Responsibility's argument has been that the age 21 MLDA is an unwarranted restriction that causes minors to drink more than they otherwise would (McCardell, 2006), consistent with what would be predicted by the theory of psychological reactance (Brehm and Brehm, 1981). Extensive research on drinking motivations has never identified reactance as an important motivator for youth drinking compared with social, enhancement, and coping motives (Baer, 2002; Kuntsche et al., 2005).

The commonsense counterargument is that raising the MLDA to age 21 has made alcohol less readily available and

thereby reduced youth consumption (Gruenewald, 2011), and that is what the research has shown, according to Wagenaar and Toomey (2002). For their review of the research literature, they identified 33 higher quality studies of MLDA and alcohol consumption: 11 found that a higher legal drinking age had led to less alcohol consumption, but only 1 found the opposite result.

The American public understands that reducing the legal drinking age would increase dangerous alcohol consumption among youth: When asked in the 2008 Nationwide Mutual Insurance poll if lowering the drinking age from 21 to 18 would reduce or increase “binge drinking” (i.e., heavy episodic drinking) among teens, 47% of the adults polled said there would be an increase, whereas only 14% said there would be a reduction, and 39% said there would be no impact (Nationwide Mutual Insurance, 2008).

Choose Responsibility has also stated that the minimum drinking age law is widely violated and cannot be consistently enforced, thus breeding cynicism and disrespect for the law (McCardell, 2006). Along these lines, a study of underage college students by Martinez and colleagues (2009) found a strong association between self-reported heavy and risky drinking and support for lowering the MLDA. It is important to emphasize, however, that defiance of the age 21 MLDA is not the majority view. A study conducted at 32 U.S. colleges and universities showed that 60% of undergraduate students supported tougher penalties for minors using a fake ID to make illegal alcohol purchases. Fully 46% supported undercover operations at bars, restaurants, and liquor stores to increase compliance with underage drinking laws (DeJong et al., 2007b).

Comparing the United States with other countries

Choose Responsibility also tapped into the popular misperception that, because European nations have lower legal drinking ages, they do a “better job” of introducing young people to alcohol and therefore have fewer alcohol-related problems (McCardell, 2006). In fact, the opposite is the case.

Data from the 2003 European School Survey Project on Alcohol and Other Drugs (EPAD) shows that the vast majority of the 35 participating countries have greater proportions of high school-aged youths who report heavy alcohol use and drinking to intoxication than does the United States (Grube, 2005). Subsequent EPAD surveys in the United States and Europe, plus similar surveys for the Health Behaviour in School-Aged Children project, have also shown that lifetime and annual prevalence rates are much higher in Europe than in the United States (Beccaria and White, 2012). Prevalence rates for drunkenness are also lower in the United States. In 2011, 36% of U.S. tenth-graders reported having been drunk in their lifetime, 29% in the past year, and 14% in the past month, compared with

47%, 37%, and 17%, respectively, of European youth ages 15–16 (Beccaria and White, 2012).

It should also be noted that, compared with other regions of the world, Europe has the highest per capita alcohol use, the highest percentage of deaths attributed to alcohol (about twice the worldwide percentage), the highest burden of disease (i.e., disability) related to alcohol, and the highest prevalence of alcohol dependence (Gilmore and Atkinson, 2010).

In contrast, a cross-national analysis by Keller and colleagues (2009) purportedly showed that the higher MLDA in the United States does not have a protective effect. The authors drew on survey data collected for the International Study of Heavy Drinking from students ages 17–30 enrolled in postsecondary institutions in the United States and 20 European countries (Dantzer et al., 2006). Heavy drinking was defined for men as having five or more drinks in one sitting at least once in the past 2 weeks, and for women as having four or more drinks. The authors calculated a simple Pearson product-moment correlation of .19 between the countries’ MLDAs and their heavy drinking rates; the correlation between the minimum legal purchase ages and the heavy drinking rates was .34. The authors failed to control statistically for country-level factors—for example, the demographic profile for each country’s students, the presence of additional laws designed to deter heavy alcohol consumption—and this greatly undermines the value of this study.

Broad national comparisons can be difficult to interpret, given the multiple factors other than the MLDA that affect youth drinking and its negative consequences, including restrictions on alcohol advertising and anti-impaired driving laws (Martinez et al., 2009). More directly on point is the impact of New Zealand’s 1999 decision to lower its legal alcohol purchase age from 20 to 18 years. Researchers determined that this policy led to modest increases in drinking among youth ages 18–19 but more sizeable increases among those ages 16–17, who were still legally underage (Huckle et al., 2011). A 2006 study showed that there were significantly more alcohol-related crashes among 15- to 19-year-olds than would have occurred had the law not been changed (Huckle et al., 2006; Kypri et al., 2006), whereas another investigation showed greater numbers of emergency room admissions for severe intoxication (Everitt and Jones, 2002). Not surprisingly, several public opinions polls in New Zealand have shown strong majority public support for going back to a legal alcohol purchase age of 20 (e.g., Davison, 2012). A 2009 poll with 500 respondents showed that 74% agreed that the lower drinking age had a “negative effect on society” (Research New Zealand, 2009).

Longer term effects of the minimum legal drinking age

Recent years have seen a growing interest in examining how historical variations in the states’ MLDA laws affected

longer term health-related outcomes. New research on this topic was stimulated by the recently initiated debate on the age 21 MLDA, plus extensive literature showing that early age at drinking onset is associated with a host of negative alcohol-related consequences: (a) alcohol dependence (Dawson et al., 2008; Hingson et al., 2006; Hingson and Zha, 2009; Pitkänen et al., 2005), (b) heavy episodic drinking (Hingson and Zha, 2009; LaBrie et al., 2008; Rothman et al., 2008), (c) committing alcohol-related violence (Hingson et al., 2001, 2009), (d) dating violence victimization (Ramisetty-Mikler, et al., 2006), (e) alcohol-related motor vehicle crashes (Hingson et al., 2002), (f) suicide (Birkmayer and Hemenway, 1999), (g) unintentional injury to oneself and others when under the influence of alcohol (Hingson et al., 2009; Hingson and Zha, 2009), (h) using drugs and drug dependence (Hermos et al., 2008; Hingson et al., 2008), (i) having unplanned and unprotected sex (Hingson et al., 2003), and (j) academic and employment problems (Ellickson et al., 2003).

Working with several years of data from the Monitoring the Future surveys, O'Malley and Wagenaar (1991) demonstrated that high school seniors and recent high school graduates drank less when the MLDA was 21 and then continued to do so through their early twenties, after they had reached the legal drinking age. A more recent analysis of Monitoring the Future data by Carpenter and colleagues (2007) found that exposure to an age 18 MLDA was associated with a higher prevalence of youth drinking (2.9 percentage points) and a higher prevalence of heavy drinking (1.7 percentage points). The authors estimated that national adoption of the age 21 MLDA was responsible for decreases in both outcomes of approximately 4%.

Plunk and colleagues (2013) examined data for past-year drinkers born between 1949 and 1972 from the 1991–1992 National Longitudinal Alcohol Epidemiologic Survey (NLAES) and the 2001–2002 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). They found that respondents who had been exposed to a lower MLDA as minors were more likely to report frequent heavy episodic drinking during the year before their survey interview, while also being less likely to report any past-year moderate drinking. At the same time, MLDA exposure did not affect overall drinking frequency or average alcohol consumption. The authors noted that the results were largely driven by men and those not attending college, perhaps because of alcohol being more readily available to underage college students.

Norberg and colleagues (2009), working with data from the same NLAES and NESARC surveys, showed that adults exposed to an MLDA less than 21 years during the 1970s and 1980s were more likely several decades later to meet criteria for an alcohol use disorder or other drug use disorder, as defined by the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (American Psychiatric

Association, 1994). Their analysis controlled statistically for state and birth-year fixed effects, age at assessment, alcohol tax rates, and other demographic and social background variables. This result did not appear to be mediated by age at drinking initiation, leading the authors to state that their findings are likely explained by the greater frequency and intensity of alcohol consumption among youths exposed to a lower MLDA.

Two studies examined the relationship between MLDA and birth outcomes for young mothers. Fertig and Watson (2009), using data from the National Vital Statistics for 1978–1988, found that an age 18 MLDA was associated with adverse outcomes for mothers ages 14–24, including low birth weight and premature birth, but not with congenital deformities. The effects were strongest for the children of Black women. Interestingly, in states with a lower MLDA, Black mothers were less likely to report paternal information on birth certificates, which the authors speculate may be due to there being more unplanned pregnancies in those states. They also reported that for women ages 18–20, there was a greater prevalence of drinking in the 12 months before child-birth and during the prenatal period when an age 18 MLDA was in effect.

In a similar investigation, Zhang and Caine (2011) looked at the effects of variable MLDAs on birth outcomes for 14-year-old mothers by combining two population-based data sets for the years 1985–2002: the Natality Detailed Files and the Behavioral Risk Factor Surveillance System. The authors reported that a lower MLDA was associated with a higher prevalence of low birth weight, low Apgar scores, and premature births. As also reported by Fertig and Watson (2009), these effects were stronger among children born to Black women compared with those born to White women. For Black women only, the authors reported, exposure to a lower MLDA was associated with a larger proportion of high school dropouts and a greater prevalence of heavy episodic drinking.

Using a similar analysis strategy, Grucza and colleagues (2012) examined data from the U.S. Multiple Cause of Death files for 1990–2004 to identify records for which either suicide or homicide was a contributing cause of death, based on International Classification of Diseases (ICD) codes. To conduct the analysis, the authors assumed that individuals who resided in their birth state at the time of death resided in their birth state when they were between ages 18 and 20. They found an increased risk of both homicide and suicide for adult women who were exposed to a lower MLDA and were legally permitted to drink when they were younger than ages 18–20. This effect only occurred for women born after 1960; the reasons for this finding require further investigation.

Collectively, these studies make clear that a commonly held view that the purpose of the age 21 MLDA is to prevent acute harm among young drinkers should be broadened to

include concerns about the serious long-term negative consequences that could be experienced by adults exposed to a lower MLDA when they are younger than 21 years old.

Conclusions

Recent research on the age 21 MLDA has reinforced the position that the current law has served the nation well by reducing alcohol-related traffic crashes and alcohol consumption among youths while also protecting drinkers from long-term negative outcomes they might experience in adulthood, including alcohol and other drug dependence, adverse birth outcomes, and suicide and homicide. The evidence is clear that, absent other policy changes and improved enforcement of the nation's alcohol laws, lowering the legal drinking age would lead to a substantial increase in injuries, deaths, and other negative health-related consequences.

Public interest in the Amethyst Initiative has waned, at least for now, and there is little likelihood of any state implementing a lower MLDA in the near future. A key reason for this outcome was the willingness of public health and traffic safety researchers to engage in the public debate by introducing the research evidence about the age 21 law's impact. Going forward, the role for public health researchers remains the same: to conduct research that evaluates the long-term impact of the age 21 law and addresses each of the arguments that were raised by proponents of a lower legal drinking age. The recent debate over the law should serve as a reminder that researchers should strive to communicate the results of their research to the general public through the news media and other accessible outlets, not just in scholarly journals.

It is important to remember that the age 21 MLDA has been effective even though it is indifferently enforced and widely disobeyed. For that reason, several agencies, including the Federal Trade Commission (2003), the Institute of Medicine (Bonnie and O'Connell, 2004), NIAAA's Task Force on College Drinking (NIAAA, 2002), and the Surgeon General's Office (U.S. Department of Health and Human Services, 2007), have all strongly recommended that there be stricter enforcement of the nation's underage drinking laws. Accordingly, future research should focus on developing and testing cost-efficient enforcement strategies and other programs to boost compliance with the age 21 MLDA, including measures directed at alcohol outlets and parents (Wagenaar et al., 2005).

For their part, college and university leaders need to accept the fact that the age 21 law saves lives and is unlikely to be overturned. With that, they should move on to put into effect workable policies, stricter enforcement, and other evidence-based prevention efforts that have been demonstrated to reduce underage drinking and alcohol-related problems on campus and are being applied successfully at prominent academic institutions (Cronce and Larimer, 2011; DeJong

et al., 2007a; Fairlie et al., 2012; Saltz, 2011; Toomey and Lenk, 2011).

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