

Impact of Legislation Raising the Legal Drinking Age in Massachusetts from 18 to 20

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Abstract: On April 16, 1979, Massachusetts raised its legal drinking age from 18 to 20 years. Massachusetts was compared with New York State, exclusive of New York City and Nassau County. New York State retained an 18-year-old drinking age. Random telephone surveys with approximately 1,000 16–19 year olds in each state were undertaken prior to the law's enactment and twice at yearly intervals after the law to assess the law's impact on teenage drinking, driving after drinking, and non-fatal accident involvement. Fatal crash data reported to the US Department of Transportation by each state from April 16, 1976–April 15, 1981 were also analyzed. After the law, although the modes of procuring alcohol changed. No significant changes were observed in Massachusetts relative

to New York in the proportion of surveyed teenagers who reported that they drank or in the volume of their consumption. The proportion of teenagers who drove after drinking heavily (six or more drinks at one time) did not decline in Massachusetts relative to New York. However, the frequency that teenagers reported driving after any drinking declined significantly in Massachusetts. Frequency of teenage driving after marijuana use and non-fatal teenage accidents declined at comparable rates in both states. The numbers of teenage nighttime single vehicle fatal accidents declined more in Massachusetts than New York, in the 18–19 year age group. Overall fatal accident trends among 16–19 year olds in the two states were similar. (*Am J Public Health* 1983; 73:163–170.)

Introduction

From 1970 to 1975 at least one-half of the states, including Massachusetts, passed laws which lowered their legal drinking age.¹ When Massachusetts also lowered its drinking age from 21 to 18 years of age in 1973, lively public debate arose about whether this change increased the likelihood of teenagers being involved in fatal accidents.

Studies in other states^{2–5} lowering their drinking ages have suggested that reductions in the legal drinking age produced increases in the 18–20 year old fatal traffic accident rates. However, research results on the impact of lowering the drinking age in Massachusetts have been contradictory.^{6–9} None of these studies compared Massachusetts with control states that did not lower their drinking ages.

Between 1976 and 1981, 16 states reversed the prior

trend by raising their legal drinking ages. Massachusetts did so effective April 16, 1979.

An analysis comparing nine states which raised their legal drinking ages to states whose statutes were not changed has concluded that states which raise their drinking age can expect a 28 per cent reduction in nighttime fatal accidents among drivers targeted by such changes.¹⁰ In Massachusetts state officials reported 39 per cent fewer teenage alcohol-related fatal accidents in 1980 compared to 1978.¹¹ However, no comparison was made to a state where the drinking age was not changed. Consequently, other factors which may be responsible for declines were not considered, e.g., reduced driving because of gasoline price increases and shortages, changes in the types of vehicles driven, or enforcement of other traffic safety laws.

This paper examines the impact of raising the drinking age in Massachusetts during the initial two years after enactment.

Methods and Materials

Data from Massachusetts are compared with those from New York State, exclusive of New York City and Nassau County. In New York State, the legal drinking age remained at 18. New York City and Nassau County were excluded

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LEGISLATION RAISING THE LEGAL DRINKING AGE IN MASSACHUSETTS

Commentary by Patricia F. Waller, Ph.D.

KEY WORDS: Massachusetts; legislation; minimum drinking age laws; evaluation

This study examining the impact of increasing the minimum legal drinking age (MLDA) in Massachusetts beautifully illustrates the complexity of measuring the effects of changes in public policy in the midst of other concurrent changes and historical trends. Hingson and colleagues performed their study during a time of transition, when some States had implemented increases in the drinking age whereas others had not. Moreover, States with an

increased MLDA already in effect had not been studied extensively using longitudinal evaluation; thus, many unanswered questions remained. For example: How would MLDA's eventually affect drinking levels of different age groups? How would the differences in MLDA affect population subgroups such as women? And how would differences in MLDA's of adjacent States affect regional drinking behavior?

When Hingson and colleagues undertook this study, there was a great need for objective, comprehensive evaluation of how, and if, raising the MLDA would affect drinking behavior and, more specifically, drinking and driving behavior among young people. Since their study, more research has been conducted on this topic. And although many public health and traffic safety experts today accept that the decrease in alcohol-related motor vehicle fatalities for young drivers was causally related to nationwide increases in the MLDA (e.g., Fell 1990; O'Malley and Wagenaar 1991; Jones et al. 1992; Wagenaar 1993; Chaloupka et al. 1993), other experts question whether these increases in MLDA actually had a measurable, beneficial effect on traffic safety (e.g., Asch and Levy 1990; Mooney et al. 1992).

Hingson and colleagues compared the drinking behavior of teenagers in Massachusetts with those in New York (excluding New York City and Nassau County). The two States had similar critical variables, such as laws concerning the age at which drivers could obtain their drivers' licenses and penalties for driving while intoxicated as well as similar weather conditions. However, Massachusetts raised the

MLDA from age 18 to 20 and New York retained age 18 as the MLDA. In the study, researchers compiled data from telephone surveys, crash data, arrest data, and interviews with law enforcement and other officials. They found that after raising the MLDA, the frequency of teen drinking in bars and clubs and the percentage of teens likely to purchase alcohol in liquor and grocery stores declined in Massachusetts, compared with New York. Still, a surprising 40 percent of the Massachusetts teenagers surveyed reported that they had attempted to purchase alcohol after the legislative change. Of the teenagers who continued to purchase alcohol, one-third were never asked for identification, and very few were arrested. Other Massachusetts teenagers readily adapted to the new law by getting older friends to purchase alcohol for them. When asked about drinking and driving, teenagers from Massachusetts and New York reported similar frequencies

of driving after heavy drinking (i.e., after consuming six or more drinks). However, the number of teenagers who reported that they drove after any drinking declined significantly more in Massachusetts.

Hingson and colleagues analyzed survey data on drinking, driving after drinking, and nonfatal accidents and found that the incidence of drinking and driving among older Massachusetts teenagers (i.e., 18 and 19 years old), who had previously been entitled to drink, was not significantly different from drinking and driving among younger teenagers (i.e., 16 and 17 years old). Nighttime single vehicle fatal crashes showed a greater decline for Massachusetts teenagers ages 18 and 19 than for teenagers of the same ages in New York, but no differences were found for younger teenagers in both States.

In their article, Hingson and colleagues noted that by raising the MLDA, officials in the State of Massachusetts provided a “symbolic statement” to teenagers that the citizens of that State disapproved of teen drinking and feared that accidents may result as a consequence of teen drinking. However, the researchers also acknowledged that enforcement of the new MLDA law was uneven across Massachusetts, with many police officers and other officials reluctant to impose sanctions. Police interviews conducted by Hingson and colleagues revealed that lack of personnel and competing priorities were the reasons most often cited for the uneven enforcement. Other comments offered by police officers showed that many of them did not heartily support the law. Indeed, the researchers reported that many officers did not perceive teenage purchasing of alcohol or drinking as a “sufficiently serious crime to stigmatize juveniles by putting an arrest on their records.” Enforcement of sanctions against retailers who sold to underage customers was even more lax; liquor license revocations by the State did not increase in frequency after the law’s passage.

Hingson and colleagues’ study focused on only a single State, with a second State used as a comparison. Subsequent studies combining larger numbers of States appear to show clearly the impact of increases in the MLDA in reducing teenage drinking and driving and involvement in alcohol-related crashes. Hingson and colleagues also were among the first to raise cautionary flags concerning interpretation of the impact of such strategies in reducing nonfatal and fatal crashes. As the researchers pointed out, it is not sufficient simply to enact legislation. If the public and,

in particular, the law enforcement community, do not completely support the legislation, its effectiveness is diluted.

The study performed by Hingson and colleagues exemplified the limitations of one strategy in reducing drinking and alcohol-related crashes among teenagers. Strategies designed to reduce drinking and driving are affected by and, in turn, affect the public’s attitude toward drivers who drink. The gradual improvement seen in traffic safety is undoubtedly a function of many strategies that have reinforced each other to bring about change. ■

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REFERENCES

- ASCH, P., AND LEVY, D.T. Young driver fatalities: The roles of drinking age and drinking experience. *Southern Economic Journal* 57(2):512–520, 1990.
- CHALOUKKA, F.J.; SAFFER, H.; AND GROSSMAN, M. Alcohol-control policies and motor-vehicle fatalities. *Journal of Legal Studies* 22:161–186, 1993.
- FELL, J.C. Effectiveness of raising the drinking age to 21 in all states in the U.S. *Alcohol, Drugs and Traffic Safety*, T89. *Eleventh Proceedings of the International Conference on Alcohol, Drugs and Traffic Safety*. Chicago: National Safety Council, 1990. pp. 507–515.
- HINGSON, R.W.; SCOTCH, N.; MANGIONE, T.; MEYERS, A.; GLANTZ, L.; HEEREN, T.; LIN, N.; MUCATEL, M.; AND PIERCE, G. Impact of legislation raising the legal drinking age in Massachusetts from 18 to 20. *American Journal of Public Health* 73(2):163–170, 1983.
- JONES, N.E.; PIEPER, C.F.; AND ROBERTSON, L.S. The effect of legal drinking age on fatal injuries of adolescents and young adults. *American Journal of Public Health* 82(1):112–115, 1992.
- MOONEY, L.W.; GRAMLING, R.; AND FORSYTH, C. Legal drinking age and alcohol consumption. *Deviant Behavior* 13(1):59–71, 1992.
- O’MALLEY, P.M., AND WAGENAAR, A.C. Effects of minimum drinking age laws on alcohol use, related behaviors and traffic crash involvement among American youth: 1976–1987. *Journal of Studies on Alcohol* 52(5):478–491, 1991.
- WAGENAAR, A.C. Research affects public policy: The case of the legal drinking age in the United States. *Addiction* 88(Supplement):75S–81S, 1993.