A lower minimum legal drinking age was associated with increased suicide in youths 18–23 years of age


QUESTION: Does an association exist between the minimum legal drinking age (MLDA) and suicide among young people?

Design

Setting
48 contiguous states in the US.

Participants
Population figures were derived from the US censuses for 1970, 1980, and 1990. Data for the intervening years were calculated by attributing one tenth of the population change to each year.

Assessment of risk factors
The MLDA for beer was obtained from state statutes. The following potential confounding variables were also assessed: rates of high school completion, divorce, and unemployment; level of enforcement of drinking laws (police per capita and number of drinking law arrests); proportion of state residents living within 30 miles of a bordering state with a lower MLDA; and state tax on beer.

Main outcome measure
Suicide data were obtained from the Mortality Files of the National Center for Health Statistics.

Main results
A fixed effects Poisson maximum likelihood regression model was used to estimate the association between MLDA and suicide. After controlling for potential confounding variables, higher suicide rates were seen among young people (18–23 y of age) who lived in states with an MLDA of 18 years compared with 21 years (p < 0.01 for 18–20 y of age and p < 0.05 for 21–23 y of age) (table). No association between the MLDA and suicide was seen in young people who were 15–17 years of age.

Conclusion
In young people who are 18–23 years of age, a lower minimum legal drinking age was associated with an increased suicide rate.

<table>
<thead>
<tr>
<th>Age</th>
<th>Increase in suicide for MLDA of 18 y v 21 y*</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>18–20 y</td>
<td>8%</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>21–23 y</td>
<td>6%</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>

*Adjusted for proportion of residents within 30 miles of a bordering state with lower MLDA, education, divorce, unemployment, drinking law arrests, police per capita, and beer tax.

Commentary
Birckmayer and Hemenway have completed a carefully conceived study showing an association between a lower MLDA and an increased suicide rate. Other research has shown that higher MLDA’s are associated with lower levels of alcohol use among high school seniors and recent high school graduates and with reductions in deaths for motor vehicle drivers, unintentional injuries, and suicide. The authors noted that although these findings are not new, the potential effects on youth suicide compared with death from other causes did not contribute substantially to policy decisions about raising the MLDA.

A recent natural experiment highlights the relation between alcohol intake and suicide and the impact of government policies restricting alcohol on suicide as well as on other causes of violent death. Wasserman et al presented data on the decline in suicide rates of 32% for men and 19% for women during perestroika, 1984–90, in the former Soviet Union. The reduction in suicides has been hypothesised to result from Gorbachev’s restrictive anti-alcohol campaign that substantially raised the prices of alcoholic beverages rather than from other sociopolitical changes.

These 2 examples by Birckmayer and Hemenway and Wasserman et al underscore how mental health professionals must translate data about access to alcohol or guns into public policy initiatives that may be central to the prevention of suicide among young people.

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Evid Based Mental Health 2000 3: 59
doi: 10.1136/ebmh.3.2.59

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