ALCOHOL TAXES AND PUBLIC HEALTH

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My comments today are my own views and do not represent the official position of the Bloomberg School or Johns Hopkins University.
Excessive Drinking Has a Huge Public Health Impact in the United States

- 80,000 deaths every year
- 2.3 million Years of Potential Life Lost every year
- 3rd leading preventable cause of death
- Cost
  - $223.5 billion in economic costs (2006) or ~$1.90/drink
  - $94.2 billion (42%) paid by government or ~$0.80/drink
- Utah:
  - 419 deaths per year
  - 32 deaths of persons under age 21
  - $1.47 billion per year ($2.74 per drink)
Binge Drinking Is the Main Problem

- Accounts for most health and economic costs
  - >1/2 of the deaths due to excessive drinking
  - 2/3 of the Years of Potential Life Lost (YPLL)
  - 3/4 of the economic costs

- Definition of binge drinking
  - ≥4 drinks per occasion for women and ≥5 for men
  - Most common pattern of excessive drinking in the United States
    - >90% of excessive drinkers binge drink
Binge Drinking* Prevalence Has Not Declined, but the Number of Episodes Has Increased

<table>
<thead>
<tr>
<th>Measure</th>
<th>1993</th>
<th>2001</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence</td>
<td>14.2%</td>
<td>14.3%</td>
<td>15.2%</td>
</tr>
<tr>
<td>Total episodes</td>
<td>1.2 Billion</td>
<td>1.5 Billion</td>
<td>1.7 Billion</td>
</tr>
<tr>
<td>Episodes per person</td>
<td>6.3</td>
<td>7.4</td>
<td>7.1</td>
</tr>
</tbody>
</table>

*Defined as ≥5 drinks/occasion for men, ≥5 drinks/occasion for women from 1993-2005, and ≥4 drinks/occasion for women from 2006-2007
Health Effects of Binge Drinking

Binge drinking can lead to:

- Motor Vehicle Crashes
- Violence Against Others
- Spread of HIV and Sexually-Transmitted Diseases (STDs)
- Unplanned Pregnancy
- Fetal Alcohol Spectrum Disorders and Sudden Infant Death Syndrome (SIDS)
- Alcohol Dependence
Binge drinkers are not “alcoholics”

Prevalence of Past-Year Alcohol Dependence, NM BRFSS, 2002

All Respondents

- Dependent: 2%
- Non-Dependent: 98%

Binge Drinkers

- Dependent: 8%
- Non-Dependent: 92%

Prevalence of Binge Drinking Varies by State

CDC. Vital Signs: Binge Drinking Prevalence, Frequency and Intensity Among Adults—United States, 2010

<table>
<thead>
<tr>
<th>Prevalence (%)</th>
<th>Classification: Tertiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.9 – 16.7</td>
<td></td>
</tr>
<tr>
<td>16.8 – 18.6</td>
<td></td>
</tr>
<tr>
<td>18.7 – 25.6</td>
<td></td>
</tr>
<tr>
<td>Data unavailable</td>
<td></td>
</tr>
</tbody>
</table>
Intensity of Binge Drinking

Average largest number of drinks consumed by binge drinkers on any occasion

- 6.0 – 7.1
- 7.2 – 7.7
- 7.8 – 9.0
- Data unavailable

Classification: Tertiles
Alcohol taxes

- “...among the most cost-effective ways for a government to reduce alcohol-related harm.” (Babor et al. 2010)

- “...increasing the unit price of alcohol by raising taxes based on strong evidence of effectiveness for reducing excessive alcohol consumption and related harms. Public health effects are expected to be proportional to the size of the tax increase.” (Community Guide to Preventive Services, 2010)
Evidence suggests that:

- People increase their drinking when prices are lowered, and decrease their consumption when prices rise.
- Adolescents and problem drinkers are no exception to this rule.
- Increased alcoholic beverage taxes and prices are related to reductions in alcohol-related problems.
- The most important downside to raising alcohol taxes is smuggling and illegal in-country alcohol production, so they will only work if the illegal/informal market is under control.
Price and taxation

- Alcohol taxes reduce alcohol consumption
  - Review of 112 studies containing 1,003 estimates of effects of price on alcohol consumption and problems
  - Consumption declines for general population, as well as young people and heavy drinkers (Wagenaar et al. 2009)

- Alcohol taxes save lives
  - A 10% increase in the price of alcohol leads to a 2.2% decrease in alcohol-related disease (not injury) deaths (Maldonado-Molina and Wagenaar, 2010)
Health effects of alcohol taxes: specific studies

- Reduce:
  - Liver cirrhosis
  - Delirium tremens
  - Male suicide
  - Criminality
  - Hospitalizations
  - Alcohol-related disease mortality
  - Workplace injuries
  - STDs
  - IPV
  - Rape
  - Robbery
  - Severe violence towards children

- No impact on possible health benefits among moderate drinkers
Public health goals: alcohol taxation

- Equalize based on alcohol content
- Index for inflation
- Set minimum price
Alcohol Excise Taxes in the U.S.

Source: Xu and Chaloupka 2011
### Federal tax rates and inflation

<table>
<thead>
<tr>
<th></th>
<th>1951 rate</th>
<th>Current rate (1991)</th>
<th>Adjusted for inflation (since 1951)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beer</td>
<td>$9 / barrel</td>
<td>$18 / barrel</td>
<td>$76.23</td>
</tr>
<tr>
<td>Spirits</td>
<td>$10.50 / proof gallon</td>
<td>$12.50 / proof gallon</td>
<td>$88.94</td>
</tr>
<tr>
<td>Wine</td>
<td>$.17 / gallon</td>
<td>$1.07 / gallon</td>
<td>$1.44</td>
</tr>
</tbody>
</table>
## Impact of Alcoholic Beverage Tax Increases on Total Jobs Spending as General Revenue Spent

<table>
<thead>
<tr>
<th>State</th>
<th>Gross Impact</th>
<th>Net Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>-312</td>
<td>762</td>
</tr>
<tr>
<td>FL</td>
<td>-3113</td>
<td>4157</td>
</tr>
<tr>
<td>MA</td>
<td>-961</td>
<td>881</td>
</tr>
<tr>
<td>NM</td>
<td>-315</td>
<td>593</td>
</tr>
<tr>
<td>WI</td>
<td>-1023</td>
<td>1072</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>5 ¢</th>
<th>10 ¢</th>
<th>25 ¢</th>
<th>5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>-585</td>
<td>-1232</td>
<td>-187</td>
<td></td>
</tr>
<tr>
<td>FL</td>
<td>-5872</td>
<td>-12541</td>
<td>-2093</td>
<td></td>
</tr>
<tr>
<td>MA</td>
<td>-1809</td>
<td>-3849</td>
<td>-630</td>
<td></td>
</tr>
<tr>
<td>NM</td>
<td>-593</td>
<td>-1260</td>
<td>-200</td>
<td></td>
</tr>
<tr>
<td>WI</td>
<td>-1919</td>
<td>-4045</td>
<td>-619</td>
<td></td>
</tr>
</tbody>
</table>

Source: SHECAP
### Employment Impact of Alcohol Tax Increases in Utah

<table>
<thead>
<tr>
<th>Tax increase</th>
<th>Revenue to the General Fund</th>
<th>Revenue to Health Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>+.05 / drink</td>
<td>728</td>
<td>176</td>
</tr>
<tr>
<td>+.10 / drink</td>
<td>1,393</td>
<td>338</td>
</tr>
<tr>
<td>+.25 / drink</td>
<td>3,107</td>
<td>764</td>
</tr>
<tr>
<td>+5% sales tax</td>
<td>437</td>
<td>108</td>
</tr>
</tbody>
</table>

Utah has one of the smallest percentages of employment in the alcohol industry.
Proportion of Population and Total Costs Paid, by Drinking Status, $.05/drink in Utah

Proportion of total population, by drinking status:
- Nondrinker: 70.5%
- Non-excessive: 15.6%
- Excessive: 13.9%

Proportion of total costs paid, by drinking status:
- Excessive: 83.5%
- Non-excessive: 16.5%

Source: SHECAP
Are alcohol taxes regressive?

Not for the non-excessive drinkers… the additional cost per capita per year of a $.05 per drink alcohol tax increase for different income groups in Utah:

<table>
<thead>
<tr>
<th>Income Level</th>
<th>&lt; $25K</th>
<th>$25K - $50K</th>
<th>$50K - $75K</th>
<th>&gt; $75K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Per Capita Net Costs Among Non-Excessive Drinkers</td>
<td>$1.77</td>
<td>$2.28</td>
<td>$2.31</td>
<td>$2.62</td>
</tr>
</tbody>
</table>
Recent experiences

- **Massachusetts**
  - Alcohol added to states sales tax of 6.25% in July 2009
  - Tax repealed at the ballot in November 2010

- **Illinois**
  - Gov. Patrick Quinn increased tax in 2009 as part of package to fund infrastructure improvements
    - Beer up 25%, wine up 90%, spirits up 90%

- **Maryland**
  - Passed a 3% special sales tax on alcohol in 2011 – first increase since 1972
Illinois: Gonorrhea Rates
Net Effect Following Alcohol Tax Increase

- Beer/Cider – from 18.5¢ to 23.1¢ per gallon
- Wine – from 73¢ to $1.39 per gallon
- Liquor – from $4.50 to $8.55 per gallon

Staras et al., under review


-14%* -26%* -5% -32%* -12%* -50%* -9% -41%*

White Black

Staras et al., under review
SUMMARY

- A large scientific literature has concluded that alcohol tax increases reduce alcohol consumption and related problems.
- Young people and heavy drinkers reduce their consumption along with the rest of the population.
- Alcohol-related problems decline as a result.
- Government revenues benefit as well, as states are able to bring in more money but reduce consumption at the same time.
- The value of alcohol taxes has eroded substantially over time.
- Revenues from alcohol taxes do not come close to matching what alcohol costs the states in terms of health care, property damage, criminal justice system costs, productivity losses, and so on.
THANK YOU VERY MUCH!

QUESTIONS?