The Epidemiology and Culture of Alcohol Use and Impaired Driving in Wisconsin

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1. Epidemiology of Alcohol Use

Wisconsin and US
"Hello, my name is Bucky and I have a drinking problem..."
Alcohol use in past month among persons aged 12 or older, by state: 2008-2009

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2008 and 2009.
Binge Alcohol Use in Past Month: 2008-2009

Figure 3.5  Binge Alcohol Use in Past Month among Persons Aged 12 or Older, by State: Percentages, Annual Averages Based on 2008 and 2009 NSDUHs

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2008 and 2009.
...but they said a drink a day was good for you...

Wisconsin Binge Drinking
Total ethanol consumption per capita
Wisconsin and United States, 1970-2007

Gallons of ethanol

Heavy and Binge Drinkers in past 30 days: Wisconsin and United States, 2000-2010

Wisconsin 18-34 Year Olds
(UWPHI Survey, 9 Counties, 2011; n=2,652)

Number of Binge Drinking Occasions in past 30 Days:

- **Males**
- **Females**
Attitudes of Wisconsin 18-34 Year Olds  
(UWPHI Survey, 9 Counties, 2011; n=2,652)

...how much of a problem is:  *quite/great problem*  

- People driving under the influence of alcohol.........................82%
- Teens, under the age of 18, drinking alcohol............................65%
- Acceptance of heavy drinking as a part of normal life............57%
- Adults, ages 18 to 20, drinking alcohol.................................46%
- The drinking culture in Wisconsin........................................41%
- People having 5 or more drinks on one occasion....................27%

*Versus not a problem, a little problem, or somewhat of a problem*
2. Drinking and Driving

Wisconsin and the US
Drinking and Driving in Wisconsin

• WI is highest in the US (23.7% vs. 13.2% US) on admitted rate of “driven a vehicle while under the influence of alcohol” in the past year. (NSDUH Report, Dec. 9, 2010)

• About 1/3 of all US motor vehicle deaths in 2010 were linked to alcohol use
Ice Cold Miller with your Fill Up?
Figure 1. Percentages of Persons Aged 16 or Older Driving under the Influence of Alcohol in the Past Year, by State: 2006 to 2009

Source: 2006 to 2009 SAMHSA National Surveys on Drug Use and Health (NSDUHs).
Driving under the Influence in Past Year: US Data--NSDUH

Wisconsin’s 2010 Rate was 23.7 percent!
(NSDUH, 2010)
Wisconsin 18-34 Year Olds  
(UWPHI Survey, 9 Counties, 2011; n=2,652)

Among drinkers:

- 16% of men, 10% of women reported that they had driven while impaired in the past month
- 50% of men, 58% of women indicate they had selected a designated drivers before starting to drink.
Driving under the influence of alcohol in the past year by age:
2010 United States

Source: 2010 National Surveys on Drug Use and Health, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, US department of Health and Human Services
Rate of arrests (adult and juvenile) for operating while under the influence (OWI) per 100,000 population, Wisconsin and the United States, 1996-2008

Sources: Crimes and Arrests in Wisconsin, Wisconsin Office of Justice Assistance; Crime in the United States, U.S. Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Division, Wi DOT.
Substance Use Continuum
—WI SBIRT Primary Care Results

ABST

No alcohol or drug use: 35%

LOW-RISK USE

Drinking within NIAAA cut-offs
No drug use: 32%

AT-RISK USE

Drinking beyond NIAAA cut-offs
Drug use: 22%

ABUSE

Repeated negative consequences of use: 8%

DEP

Abuse plus:
Loss of control
Compulsive use
Preoccupation ± Phys dep

3%
### Drivers in Fatal Crashes
#### US, 2006 (NHTSA, 2008)

<table>
<thead>
<tr>
<th>BAC Level</th>
<th>With Prior DWI</th>
<th>No Prior DWI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With Prior DWI</td>
<td>No Prior DWI</td>
<td>Total</td>
</tr>
<tr>
<td>.08 or higher</td>
<td>8% 1049 (58% of column)</td>
<td>92% 11,492 (20% of column)</td>
<td>12,491 (22%)</td>
</tr>
<tr>
<td>.01 to .07</td>
<td>4% 94 (5% of column)</td>
<td>96%</td>
<td>2,349 (4%)</td>
</tr>
<tr>
<td>.00</td>
<td>1% 588 (34% of column)</td>
<td>99%</td>
<td>42,855 (74%)</td>
</tr>
<tr>
<td>Total</td>
<td>3% 1731 (100%)</td>
<td>97% 55,964 (100%)</td>
<td>57,695 (100%)</td>
</tr>
</tbody>
</table>
WI Alcohol-Related Crashes and Fatalities 1976-2008

WI DOT, 2011
Motor vehicle crash injuries and alcohol-related injuries per 100,000 population, Wisconsin 2000-2008

Source: Numbers of injuries were drawn from yearly crash statistics, Wisconsin DOT.
National Trends in Weekend Nighttime Impaired Driving

*The National Roadside Survey (NRS) is a stratified random sample of weekend nighttime drivers in the contiguous 48 states conducted by either the National Highway Traffic Safety Administration and/or the Insurance Institute for Highway Safety. In the 2007 survey, breath-alcohol measurements were obtained from 9,413 drivers.
3. What Works to Address Impaired Driving?

Evidence for Program, Policy and Cultural Approaches
Perspectives on Addressing OWI

• Impaired driving can be considered from multiple perspectives (“constructs”):
  – Transportation safety
  – Disease view--alcoholism
  – Public/population health
  – Legal/Moral
  – Peer culture and informal social control
What Works to Reduce Alcohol Impaired Driving?

- 0.08% blood alcohol concentration (BAC) laws  
  Recommended
- Lower BAC laws for young or inexperienced drivers  
  Recommended
- Maintaining minimum legal drinking age (MLDA) Laws  
  Recommended
- Sobriety checkpoints  
  Recommended
- Mass media campaigns  
  Recommended
- Multicomponent interventions with community mobilization  
  Recommended
- Ignition interlocks  
  Recommended

Source:
## What Works-2

### School-based programs
- **Instructional programs**
  - Recommended
- **Peer organizing interventions**
  - Insufficient Evidence
- **Social norming campaigns**
  - Insufficient Evidence

### Designated driver promotion programs
- **Incentive programs**
  - Insufficient Evidence
- **Population-based campaigns**
  - Insufficient Evidence

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**Source:**
What Works-3

(Voas and Lacey, 2011)

• Environmental and policy measures to reduce risky drinking in general (which leads to impaired driving)

• Increase *perceived* probability of being apprehended; swift consequences (*administrative suspension of DL*); severity less of a factor and can be counter-productive.
  – Visible enforcement (e.g., checkpoints) with sustained public attention. Media campaign alone inadequate.

• Severe penalties can be effective as tertiary prevention--a sanction of last resort for repeat offenders.
  – Mandatory jail time—weak/contradictory evidence, may be leverage for treatment (e.g., OWI Courts) but without treatment no effect on subsequent OWI
  – License suspension effective but suspended OWI drivers are hi risk
  – Ignition Interlocks
# Attitudes of Wisconsin 18-34 Year Olds
(UWPHI Survey, 9 Counties, 2011; n=2,652)

## Alcohol-Related Policies

<table>
<thead>
<tr>
<th>Policy</th>
<th>% Somewhat or Strongly Support*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing penalties for first OWI Offense</td>
<td>66%</td>
</tr>
<tr>
<td>Increasing enforcement of existing laws/ordinances</td>
<td>55%</td>
</tr>
<tr>
<td>Use sobriety check points</td>
<td>41%</td>
</tr>
<tr>
<td>Limit amount of alcohol advertising</td>
<td>40%</td>
</tr>
<tr>
<td>Ban public intoxication</td>
<td>35%</td>
</tr>
<tr>
<td>Limit number of bars and liquor stores in specific areas</td>
<td>32%</td>
</tr>
<tr>
<td>Increase tax on beer</td>
<td>26%</td>
</tr>
<tr>
<td>Limit total number of bars and liquor stores in community</td>
<td>25%</td>
</tr>
<tr>
<td>Ban drink specials...that increase amount of alcohol served</td>
<td>19%</td>
</tr>
</tbody>
</table>

*Versus strongly or somewhat oppose or neutral
In Summary…

• WI has very high rates of risky binge drinking and alcohol impaired driving.

• Alcohol impaired driving and binge drinking is most common among young men (18-34).

• Most Alcohol-related highway deaths occur among drivers with no prior OWI (not multiple OWI recidivists).

• While alcohol consumption is fairly stable, there is a decline in alcohol-related crashes and mortality in US and WI
In Conclusion...

• Need to implement evidence-based policies and programs that are also culturally and politically acceptable.
• Acceptability and community readiness changes over time, and influences behavior.
• Avoid single paradigm focus and be clear about the goal.

THANK YOU!