

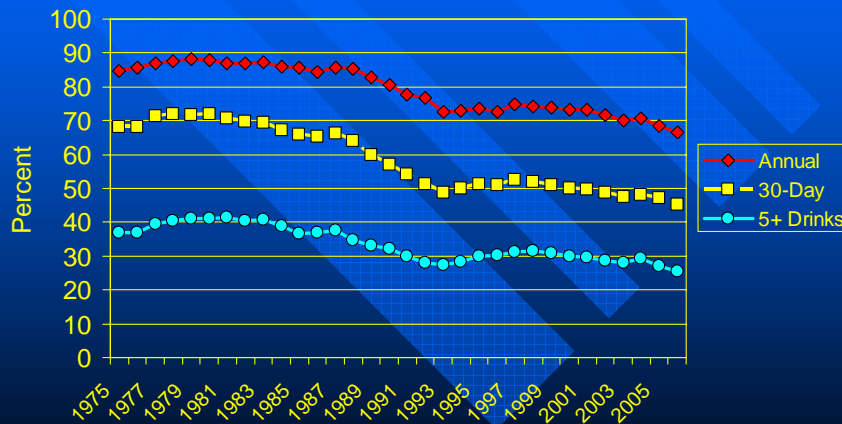
# Preventing Adolescent Alcohol-Related Problems: Alcohol Policy Approaches

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## Long-Term Drinking Trends Among High School Seniors (1975-2006)

(1975-2006)



Source: Johnston, O'Malley, Bachman, & Schulenberg, 2007

## Adult Vs. Youth Drinking Patterns

Kids drink more heavily than adults

For example :

- 5+ Drinks in a row past 30 days:  
46% of drinkers under 21  
36% of drinkers over 21
- Average drinks per occasion:  
4.5 drinks for drinkers under 21  
2.8 drinks for drinkers over 21

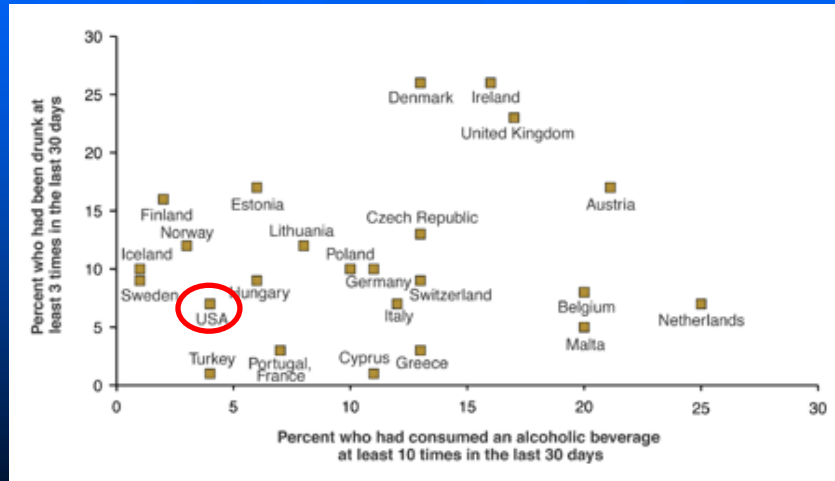
Sources: National Survey on Drug Use and Health, 2006  
Institute of Medicine, 2004

## Costs of Underage Drinking to Virginia (2005)

Problem	Costs (in millions)
Youth Violence	\$541.5
Youth Traffic Crashes	\$385.1
High risk sex	\$117.1
Youth Property Crime	\$53.4
Youth Injury	\$43.5
Poisonings and Psychoses	\$11.4
FAS (Mothers 15-20)	\$20.5
Youth Treatment	\$54.0
<b>TOTAL</b>	<b>\$1,226.4</b>

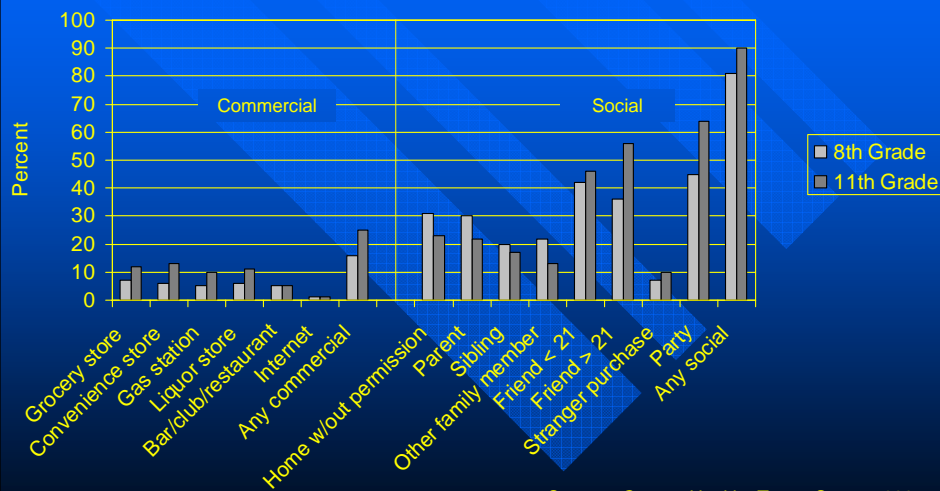
Source: <http://www.udetc.org/factsheets/Virginia.pdf>

## Youth Drinking: International Context



Source: Ahlström, S. & Österberg, E.L. (2005). International Perspectives on Adolescent and Young Adult Drinking. *Alcohol, Health, & Research*, 28, 258–268.

## Availability of Alcohol: Sources Used by Young Drinkers



Source: Oregon Healthy Teens Survey, 2005

## Availability and Underage Drinking

- Underage drinking, heavy drinking, and problems (DUI) increase as commercial and social availability increase
- Underage drinking and problems increase as perceived enforcement of MIP laws decreases
- Importance of social sources increases as commercial availability decreases
- Importance of commercial sources increases as social availability decreases

Source: Paschall, Grube, Black, & Biglan, 2006; Dent, Grube, & Biglan, 2005

## Purpose of Alcohol Policy

- Decrease *availability* of alcohol by increasing economic costs and opportunity costs
- *Deter* drinking, heavy drinking, or drinking-related problem behaviors
- *Reduce harms* associated with drinking

Overall goal of alcohol policy is to increase the *full-costs* of alcohol or for involvement in drinking-related risk behaviors

## Strong Evidence of Effectiveness

- Price/Taxation

Strong evidence from many studies  
10% increase in beer price → 3% decrease in fatal crashes

- Minimum Legal Drinking Age

Strong evidence from many studies  
MLDA of 21 reduced drinking prevalence by 3% - 5%  
SVN crashes by 11% - 16%

- Zero Tolerance/Graduated Licensing

Evidence from several studies  
≈ 19% reduction in drinking  
≈ 24% reduction in heavy episodic drinking  
≈ 27% reduction in alcohol-related crashes

## Estimated Impact of Increasing Beer Taxes to Keep Pace with Inflation (\$0.84 per Six-Pack)

### High School Seniors

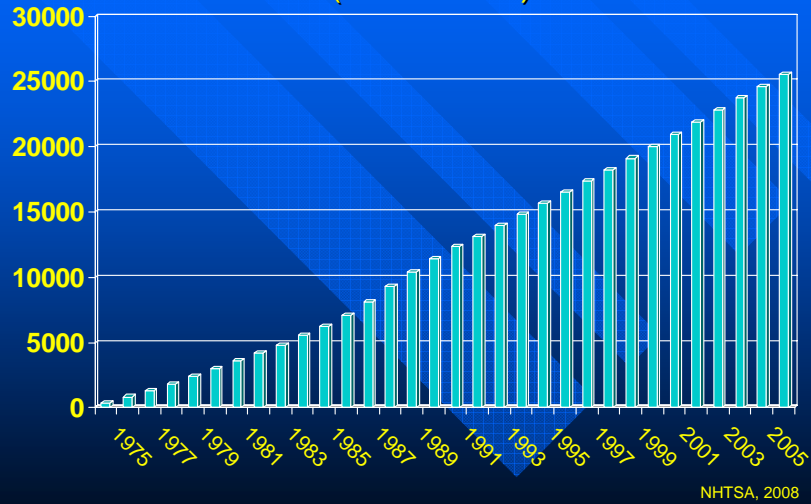
- Frequent Drinking\*                      ⇨    -19%
- Heavy Episodic Drinking\*\*           ⇨    -6.5%

\*9 Drinking episodes in past month

\*\*5 or More Drinks on an Occasion in past 2 weeks

Source: Laixuthai, et al., 1993

## Age 21 MLDA: Cumulative Lives Saved (1975-2006)



## Promising Policies

- **Responsible Beverage Service**

- Evidence from several studies
- Limited evidence on youth
- 12% reduction in sales to minors
- 46% reduction in sales to intoxicated patrons
- Mandatory may be more effective than voluntary

- **Outlet Density Restrictions**

- Evidence that density is related to problems
- Studies are cross-sectional

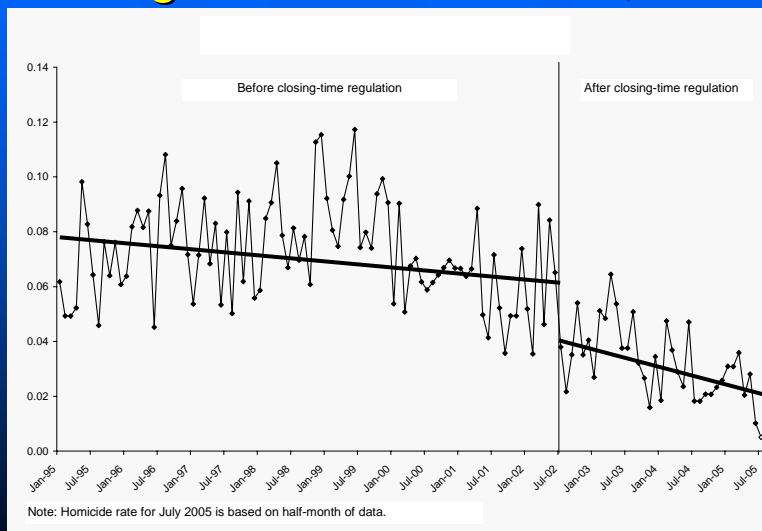
- **Dram Shop Liability**

- Limited evidence
- 3%-4% reduction in alcohol-related fatalities among youth
- 5%-6% reductions in SVN crashes
- Publicity important

## Conflicting Evidence of Effectiveness

- **Social Host Liability**  
Limited mixed evidence
- **Advertising Restrictions**  
Mixed evidence that advertising affects consumption  
Some evidence that restrictions reduce consumption  
Studies inconsistent
- **Hours of Sale**  
Mixed evidence  
Reductions in violence and injury

## Alcohol Availability and Homicides: Closing Hours in Diadema, Brazil



Source: Duailibi, et al., 2007

## No or Insufficient Evidence

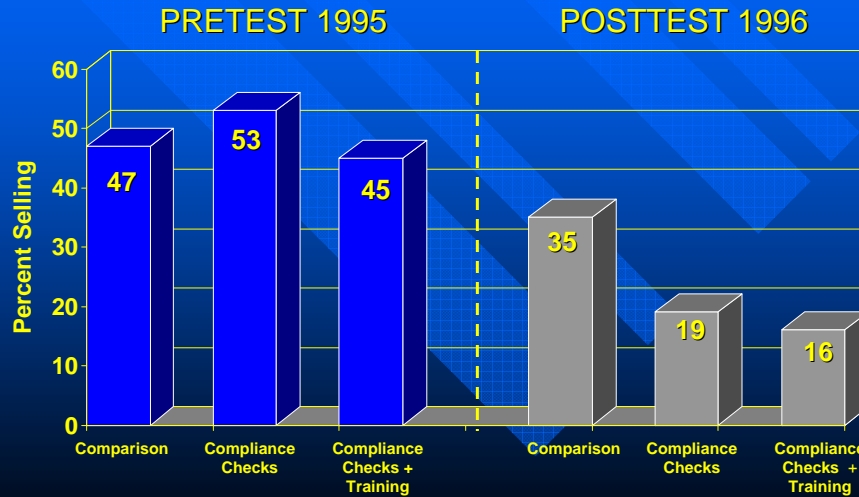
- **Designated Driver Programs**  
No available evidence of effectiveness
- **Safe Rides Programs**  
No evidence of effectiveness
- **Warning Labels/Counter Advertising**  
Evidence of no effect
- **Keg Registration**  
No evidence of effectiveness  
Cross-sectional correlation between KR and consumption - .29

## Enforcement

- **Sobriety Checkpoints**  
17% reduction in nighttime crashes (Charlottesville)  
18%-24% alcohol-related fatal crashes
- **Compliance checks**  
35%-50% reduction in sales to minors
- **Third party Transactions/Shoulder taps**  
Limited evidence
- **MIP Enforcement**  
Reduced consumption/heavy consumption
- **Reward and Reminder**  
Reduced sales and consumption



## Compliance Checks, RBS, and Sales to Minors



## Example: Interaction of Alcohol Taxes and Drinking Age on Youth Traffic Fatalities

Estimated Traffic Fatalities per 1,000 Population

Drinking Age	Beer Tax Constant at Mean	Beer Tax Increases by 10%	% Change in Fatalities
18	46.7	45.3	-3.1%
19	45.3	44.1	-2.7%
20	43.9	42.9	-2.3%
21	42.5	41.7	-1.9%
21 vs. 18	-8.9%	-7.9%	

Source: Ponicki, Gruenewald, & LaScala, 2007

## Barriers to Effective Policy

- Complexity
- Perceived lack of public support
- Interest group opposition
- Lack of enforcement
  - Difficult to detect (ZT)
  - Reluctance to enforce (minor in possession)
  - Costs (administrative vs. criminal proceedings)
- Lack of awareness

## Percent of US Population Supporting Alcohol Policies

Proposed Policy	Favor Strongly	Favor Somewhat	Oppose Somewhat	Oppose Strongly
Increase alcohol taxes by 5 cents to fund prevention	65.0	16.8	5.7	12.6
Restrict alcohol ads to make drinking less appealing to youth	52.6	26.0	10.5	10.8
Conduct compliance checks	46.5	19.0	9.5	25.0
Require keg registration	39.9	21.3	15.3	23.5

Source: Harwood, Wagenaar, & Zander, 1998

## Conclusion

- Based on available studies the most effective policies include:
  - Taxation
  - 21 MLDA
  - Zero tolerance/graduated licensing
- Effective enforcement strategies include:
  - Sobriety checkpoints
  - Compliance checks/R & R
  - MIP
- Effects are complex and interactive
- Implementation, enforcement, and public awareness essential
- Public support important