Changing the environment of underage alcohol use:

Science, Policy, Advocacy and the Community

Richard Yoast, Phd, American Medical Association
2005 Ventura County
The Drinkers’ Pyramid

Types of Drinkers:

- **5%** Probably Alcohol Dependent
- **20%** High-Risk Drinkers
- **35%** Low-Risk Drinkers
- **40%** Abstainers

Babor & Higgins-Biddle, WHO, 2001
Hazardous U.S. Alcohol Consumption

Rogers & Greenfield, 1999
Alcohol, Injury & Acute Care

- **Emergency Departments**
  - ~110 million visits/yr, ~\(\frac{1}{3}\) are injuries
  - Alcohol problems: 15 to 30%

- **Trauma Centers**
  - ~3½ million visits/yr, all are injuries
  - Alcohol problems: 40 to 60%

Dan Hungerford, CDC
5+ Drinks especially increase Bad Outcomes

- Impaired driving  (Naimi, *JAMA*, 2003)
- Unintentional injuries  (*Anda, JAMA*, 1988)
- SIDS  (*Iyasu, JAMA*, 2002)
- Violence  (*Rossow, Addiction*, 1996)
- Sexually transmitted diseases  (*Lauchli, AEP*, 1996)
Risk of Injury, by Usual Number of Drinks

Population Percent

Get hurt or injured

College Alcohol Survey, 1999
REASONS FOR TREATMENT:
72% involve alcohol

Source: Treatment Episode Data Set, DHHS/SAMHSA, Sept 2000
Alcohol - the Drug of Choice Among 12-20 Year Olds

![Bar chart showing the use of alcohol, cigarettes, and marijuana among 8th, 10th, and 12th graders.](chart)

- **Alcohol**: Increases from 8th to 12th grade.
- **Cigarettes**: Moderate use at all grades.
- **Marijuana**: Use is highest in 12th grade.

NSDUH Survey, 2002
Percent of Young Drinkers Who Binge (By Age)

Source: National Household Survey, 1997-PIRE/OJJDP
Underage alcohol use is an individual health problem

Underage drinking associated with:

- The leading causes of death and injury among youth 10-25: traumatic injury and death due to motor vehicle crashes, falls, fires, and drowning
- Tobacco and other drug use and abuse
- Additional immediate life threats:
  - Date and acquaintance rape
  - Alcohol poisoning/overdose
The Health Paradox of Adolescence – the healthiest, most resilient time of life

YET: morbidity & mortality rates increase 200-300% (middle childhood to early adulthood):

- Problems begin that show later as illness and as adult mortality: nicotine dependence, alcohol and drug use, poor health habits

- Compared to drinkers starting at age 21, regular consumers before age 14 are 3X more likely to develop diagnosable dependency
Youth drink less frequently than adults, but drink more per occasion.

Source: SAMHSA National Survey on Drug Use and Health, 2002

Evidence-Based Prevention Strategy: Delay Age of Onset of First Drink

Mean age of initiation: **16.2 years** (2000 NSDUH)

If drinking onset is delayed by 5 years, a child’s risk of serious alcohol problems later in life is reduced by 50%

Underage alcohol use is a public health problem:
<table>
<thead>
<tr>
<th>Category</th>
<th>Cost (1998 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>$52,788,000,000</td>
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<tr>
<td>Traffic Crashes</td>
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<tr>
<td>Violent Crime</td>
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<td>Burns</td>
<td>$189,000,000</td>
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<tr>
<td>Drowning</td>
<td>$426,000,000</td>
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<tr>
<td>Suicide Attempts</td>
<td>$1,512,000,000</td>
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<td>Fetal Alcohol Syndrome</td>
<td>$493,000,000</td>
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<tr>
<td>Alcohol Poisonings</td>
<td>$340,000,000</td>
</tr>
<tr>
<td>Treatment</td>
<td>$1,008,000,000</td>
</tr>
</tbody>
</table>

Source: OJJDP, Costs of Underage Drinking (1999)
Economic Costs of alcohol and other drug abuse are increasing; $277 billion in 1995

Impact of College Binge Drinking

More than two out of every five college students are binge drinkers, with excessive drinking accounting for a staggering 1,400 deaths, 70,000 sexual assaults and 600,000 assaults on campuses every year.
Youth have easy access to alcohol

- Home
- From adults (parents, merchants)
- Peers and older youth
- 88% of 10th graders & 75% of 8th graders report: it's “very easy” or “fairly easy” to get alcohol.

Youth rank alcohol a close second in perceived availability behind cigarettes, followed by marijuana and amphetamines (Johnston et al, 1996a).
ENVIRONMENTAL APPROACHES NEEDED FOR
A lot of people in the room are cold – what are the options?

- Have each one checked for a fever
- Tell them to adjust to it and stop complaining
- Tell the cold ones to go get a sweater
- Bring in hot drinks for those that feel cold OR
- CHANGE THE ENVIRONMENT: Turn up the heat or close the window
Smoking is bothering people in the room – options?

- Provide gas masks for non-smokers
- Ask smokers to smoke less – please
- Tell non-smokers to get over it – we all have individual rights
- Educate and negotiate with each smoker each time they crave a cigarette
- Bring in conflict resolution experts OR
- ENVIRONMENTAL CHANGE: Declare the room smoke-free, smokers can smoke outside
ENVIRONMENTAL STRATEGY:

CREATE POLICIES, NORMS AND LAWS WHICH AFFECT ENTIRE GROUPS OF PEOPLE WHERE THEY LIVE, WORK AND PLAY
Health Goals of Alcohol Control

- Reduce underage alcohol use
- Reduce high-risk, unhealthy use
- Reduce alcohol-related problems
- Protect non-drinkers & drinkers from alcohol-related harm
Ethical Principles & Goals for Alcohol Policy

1. All people have the right to a family, education, community and work life protected from accidents, violence and other negative consequences of alcohol consumption.
Ethical Principles & Goals for Alcohol Policy

2 All people have the right, starting early in life, to valid, scientific, impartial information and education on the consequences of alcohol consumption on health, the family, and society.
Ethical Principles & Goals for Alcohol Policy

3 All children, adolescents and young adults have the right to grow up and live in an environment protected from the negative consequences of alcohol consumption and, to the extent possible, from the promotion of alcoholic beverages.
Ethical Principles & Goals for Alcohol Policy

4 All people with hazardous or harmful alcohol consumption and members of their families have the right to accessible treatment and care.
5. All people who do not wish to consume alcohol, or who cannot do so for health or other reasons, have the right to be safeguarded from pressures to drink and be supported in their non-drinking behavior.
Environmental Targets

- **Access & Availability** (outlet density, sales terms, server behavior)
- **Industry behavior** (sales, labeling production, distribution)
- **Marketing** (promotion, advertising, sponsorship)
- **Enforcement**
- **Sales to Minors**
- **Cost** (Price, taxes, fees)
Environmental Targets

- **Consumer**: behaviors, norms, information, attitudes, lifestyle
- **International trade**

- **Media and decision makers’**: behaviors, norms, information, attitudes, messages
Publicize Second-hand Effects to:

- Create *new behavior standards*
- *Give voice to moderate and recovering consumers and non-drinkers*
- *Educate about social, medical, personal impacts of consumption* (public, students, media and decision-makers)
Why address the environment?

- Alcohol-related problems are found in all sectors of society, all states, all populations.
Many people say they drink because -

- they like the effects
- they like the price
- they’re in the mood

Yet, if we look at all drinkers and non-drinkers together, we find that .....
Decisions to not use/use alcohol are commonly influenced by 

**Personal and Environmental factors**
Common environmental influences

- AVAILABILITY
- PRICE
- ADVERTISING & PROMOTION
- Drinking sites & server behaviors
- SOCIAL & FAMILY NORMS - what’s OK/not OK
- MEDIA IMAGES
- LAWS that regulate when, where and how we drink
INDIVIDUAL CHANGE (private)

- **FOCUS**: individual behavior
- **GOAL**: personal control of alcohol
- **TOOLS**: clinical or education services: treatment, small group activities
- **WHO**: professional & client/patient

ENVIRONMENTAL CHANGE (public)

- **FOCUS**: population behaviors
- **GOAL**: community control of alcohol
- **TOOLS**: environmental policy, laws, norms:
  - advocacy, social pressure
- **WHO**: shared/community power
Advantages of changing environmental policy:

- Reach **entire populations** and community
- **Stays in place** and acts over a **long period of time**
- Often needs only **minimal maintenance**
- **Widespread support and awareness**
Environmental policies create a standard of behavioral expectations. They make it easier to do the right and/or healthy thing; harder to do what’s wrong and/or unhealthy.
Environmental policies often result from political struggles.
ENVIRONMENTAL STRATEGIES ARE COMPREHENSIVE AND EFFECTIVE

- Key elements working together: policy, enforcement, media (of policy, expectations, new behavior options & tools)
- Examples: smoking reductions, hypertension screening & control, DUI reductions, increased seat belt use, tuberculosis control, polio eradication, pollution control, civil rights
To change the environment we need to ask:
Who controls alcohol -

- production?
- advertising and promotion?
- sales and distribution?
- pricing and taxation?
- laws and enforcement?
- consumption?
- popular beliefs and attitudes?
Who’s in charge?
Who has power or influence?

- Consumers/drinkers
- Youth? Families?
- Businesses who profit from alcohol sales?
- Producers of alcohol products?
- Community?
- Media?
Environmental Target: easy access & availability -

- Sales to minors
- High density of outlets (stores, bars)
- Drive-in & gas station sales, home delivery
- Unmonitored service (to minors or intoxicated drinkers, open bars)
- Long sales hours
Environmental Target: strategies that keep alcohol cheap-

- Low taxes
- **Cheap drinks**: 2-for-1, all you can drink, discounts, free drink coupons
- Low license fees & fines
- Cost shifting (e.g., to admission, food) - makes each additional drink seem cheap or free
- No tax on advertising
Young people respond more to price than older people - that’s why they’re surrounded with cheap alcohol.
Percent of Alcohol Consumed by Frequent Bingers, Infrequent Bingers, and Nonbingers

- Frequent bingers are 6% of the population, but drink 56% of the alcohol.
- Overall, bingers are 16% of the population, but drink 75% of the alcohol.

Source: National Household Survey, 1998
The prevention paradox

Geoffrey Rose 1981; 1992:

‘A large number of people exposed to a small risk may generate many more cases than a small number exposed to high risk.’

‘A preventive measure that brings large benefits to the community offers little to each participating individual.’

The converse of the prevention paradox:

‘When many people each receive a little benefit, the total benefit may be large.’
But

- While heavy drinkers cause a disproportionate number of problems – and often the most severe problems
- More problems in total are caused by moderate drinkers because
- There are A LOT MORE OF THEM although each individually may cause few problems
That’s why

- Alcohol policies need to address moderate drinkers – not just the heavy – problem – drinkers
  - everyone is at risk for harm
  - all drinkers at some point have potential for causing harm (e.g., drinking and driving)
ABSOLUTE END.

- Nearly 50% of automobile fatalities are linked to alcohol.
- 10% of North Americans are alcoholics.
- A teenager sees 100,000 alcohol ads before reaching the legal drinking age.
So what are our most effective environmental change options?
POLICIES

- INCREASE THE COST OF ALCOHOL
- REGULATE ACCESS
- LIMIT ACCESS
- ENHANCE ENFORCEMENT
- COUNTER-MARKETING
- RESTRICT PROMOTION AND ADVERTISING
- REGULATE CONSUMPTION
- ENHANCE EXISTING DUI LAWS
remember

youth don’t bring alcohol into our communities –
they don’t produce, market, sell, distribute, or write the laws governing alcohol
ADULTS DO

[adult drinkers / brewers, distillers & wine producers / bars, taverns, restaurants / mass media / advertising / merchants / government.]
PANAMA CITY BEACH, FLORIDA
2002 SPRINGBREAK
THE WORLD'S #1 SPRING BREAK DESTINATION

WIN!
Spring Break Trips & Other Prizes inside

INSIDE...
Top Party Spots
What to Bring?
Road Trip Rules
Play The Spring Break Challenge

www.springbreakpanamacity.com
Effective change strategies >>>
effective policies:

- **Focus on Whole Environment** - product supply, consumer demand, product use
- **Hold business & law enforcement accountable** as well as consumers & youth
- **Use Targeted Communications: Media Advocacy**
- **Expand and renew Advocacy Partnerships:** law enforcement, faith community, recovery community, parents
A MATTER OF DEGREE (AMOD): The national effort to reduce high risk drinking among college students

A partnership of the
American Medical Association,
Robert Wood Johnson Foundation,
10 Universities and 10 Cities
University-City Coalitions

- U of Colorado - Boulder
- U of Delaware - Newark
- Florida State U - Tallahassee
- Georgia Institute of Technology - Atlanta
- U of Iowa - Iowa City
- Lehigh U - Bethlehem
- Louisiana State U - Baton Rouge
- U of Nebraska - Lincoln
- U of Vermont - Burlington
- U of Wisconsin - Madison
AMOD GOALS

- Test environmental change model to reduce high-risk drinking
- Create campus-community partnerships to address to change environment that promotes heavy & harmful consumption
- Sustained reductions in alcohol consumption and harms/2nd hand effects
Environmental Strategies Examples

**Availability:**
- Keg registration
- Mandatory responsible server training
- Curb alcohol sales without a license
- Over-service enforcement

**Legal sanctions:**
- Restrictive policy for fraternities/sororities
- Campus-community police collaboration on wild party enforcement
- Increase penalties and sanctions
Harvard School of Public Health evaluated AMOD 1997-2001

- Compared drinking and harm patterns at 10 AMOD schools to
- 32 non-AMOD colleges from the national Harvard College Alcohol Study
-- divided 10 AMOD colleges into 2 groups based on level of program implementation (# and variety of interventions) as of 2001:

- 5 high intervention
- 5 low intervention sites

**AMOD Findings: (1997-2001)**

Adapted from Weitzman, Nelson, Lee & Wechsler, *AJPrevMed*, 2004

<table>
<thead>
<tr>
<th>Interventions</th>
<th>High</th>
<th>Low</th>
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<td>Availability</td>
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<td>5</td>
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<tr>
<td>Legal sanctions</td>
<td>21</td>
<td>4</td>
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<tr>
<td>Physical context</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Advertising/promotion</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Key influencers</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Sociocultural</td>
<td>79</td>
<td>23</td>
</tr>
</tbody>
</table>
5 schools incorporating more AMOD-recommended environmental policies & programs had:

- **Significant changes in drinking & related harms** over time when compared to the non-AMOD colleges.
- **Decreasing relative risk** over time
• reductions did not occur at the 5 universities that implemented fewer of these changes, nor at the group of 32 comparison colleges
5 high intervention sites:
5-11% reductions in 6 of 7 consumption outcomes:

- “Binge” drink
- “Binge” frequently
- Taking up “binge” drinking in college
- Drink frequently
- Get drunk frequently
- Usually drink at “binge” level
Drinkers at 5 high implementation schools:

18% reductions in 5 or more alcohol related harms:

- miss or fall behind classes
- getting in trouble with police
- getting hurt or injured
- medical treatment for overdose
- do something regretted
- unprotected, unplanned sex
5 high intervention schools had 10% fewer 2nd-hand effects from other students’ heavy alcohol use.

Less
- property vandalized
- interrupted sleep or study time
- arguments, insults or assaults
- unwanted sexual advance
- baby sit a student
High vs Low Intervention Coalitions

- More formal structures & processes
- Higher member involvement in decisions
- Assume environment is changeable & supportive
- Clear, flexible, detailed strategic & action plans
- Staff facilitates rather than directs
- Responsible, trusted leadership
- Consensus-driven
Alcohol advertising and promotion strategies:

- Equate alcohol with fun, sex, music, sports, adult glamour
- Ignore harmful consequences
- Fail to mention abstinence
- Focus on individual responsibility
- Present alcohol as a valued product produced by good citizens
Restrictions on alcohol advertising and promotion can

- Reflect community values
- Reduce promotions to children
- Help assure accuracy of messages
- Be voluntary
- May be enacted & constitutional (e.g., billboard bans; no advertising near schools or churches; no advertising on public property; signage rules, etc.)
The alcohol industry supports policies and messages that:

- Attribute all alcohol problems to irresponsible use by individual consumers.
- Ignore the role and influence of producers, sellers and advertisers and.
- Ignore the product’s (alcohol) potential for harm.
- Promote but do not define “responsible” consumption.
Industry sponsorship & materials–build brand into community life

**Where**
- Community events & agencies: schools, arts, ethnic
- Professional and collegiate sports
- Targeted groups: minorities, gays, new market communities

**Why**
- to promote brand & company
- create positive image – avoid criticism & examination
- tie to things we feel good about
- exchange your name for their support
Public Service Materials

- Normalize ideas – ‘everyone drinks,’ only ‘irresponsible individuals’ cause problems
- Ignore problems caused by product and industry role in creating problems
- Reinforce idea – education, not policy is the way to make change
ENVIRONMENTAL STRATEGY:

CREATE POLICIES, NORMS AND LAWS WHICH AFFECT ENTIRE GROUPS OF PEOPLE WHERE THEY LIVE, WORK AND PLAY