College Campuses, Communities, and High Risk Drinking by College Students

Mark Wolfson, PhD
Kendal McDevitt, MA
Mark Wolfson, PhD
Department of Social Sciences and Health Policy
Wake Forest School of Medicine

Kendal McDevitt, MA
Wellness Promotion Coordinator
Appalachian State University
Presentation Overview

- Problem of High-Risk Drinking by College Students
- Role of Campus/Community, Environmental Approaches
- Barriers to Effective Campus Prevention
Turn ON your cell phones!
(polleverywhere.com)

- Create a new text message to 22333

No cell phone?

Answer the questions on your own, then compare your answers to those on the screen.
The Problem...

Figure 1-2. News Stories About College Drinking, 1966–2007

Source: Author; see text.

The Problem (cont.)

High Risk Drinking is Common among College Students

- Past 30 Day Drinking: 68%
- Daily Drinking: 4%
- Heavy (Binge) Drinking (Past 2 Weeks): 37%
- Drunk (Past 30 Days): 40%

Source: Johnson et al., 2013. Data reported are for 2012.
And...most rates are higher than for their same-aged peers

- Past 30 Day Drinking: 68% vs. 54%
- Daily Drinking: 4% vs. 4%
- Heavy (Binge) Drinking (Past 2 Weeks): 37% vs. 30%
- Drunk (Past 30 Days): 40% vs. 35%

Source: Johnston et al., 2013. Data reported are for 2012.
Selection…or socialization?
(Is it the heavy drinking kids who go to college, and continue to
do so once they get there? Or, is there just
something about the college environment…?)

In high school, college-bound students, especially in
earlier grades, were far less likely to drink alcohol at any
level compared to their non-college-bound peers; thus,
the relative and absolute increases in alcohol use among
college students in the first few years following high
school are quite striking.

Johnston et al., 2012
Selection…or socialization (cont.)?

“A college’s overall drinking level imparts significant risk to incoming students beyond that conferred by the student’s drinking level in high school…”

“That colleges and universities may have somewhat stable environments of high-risk drinking points to the need to change the extra-individual, college-wide values, structures, policies, and environments.”

Ip et al., in press. (SPARC data, 8 schools)
High rates of drinking translate into serious health & social consequences

- 1,825 deaths
- 599,000 unintentional injuries
- 696,000 assaults
- 97,000 sexual assaults
- 100,000 too drunk to consent to sex
- 400,000 unprotected sex
- 3.36 million driving under the influence of alcohol

...including “second-hand” consequences (due to other students’ drinking)

- Found cans, bottles, other litter in/around own residence: 59%
- Sleep interrupted: 46%
- Study interrupted: 36%
- Threatened with physical violence (6%)
- Taken advantage of sexually (4%)
- Pushed, hit, or assaulted (4%)
- Physical fight (4%)
- Victim of sexual assault/date rape (1.5%)
- Victim of another crime (2%)

Expert Opinion & Recommendations

• 1999: NIAAA convened the Task Force on College Drinking

• 2002: The Task Force issued its recommendations in: *A Call to Action*.

  • Noted that most research was on interventions at the individual level

  • Strongly encouraged NIAAA & researchers to undertake studies of universal strategies applied to the college environment
• A Call to Action identified “Tier 2” strategies, which had demonstrated “evidence of success with general populations that could be applied to college environments”

  - Increased enforcement of minimum drinking age laws
  - Implementation, increased publicity, and enforcement of other laws to reduce alcohol-impaired driving
  - Restrictions on alcohol retail outlet density
  - Increased prices and excise taxes on alcoholic beverages
  - Responsible beverage service policies in social and commercial settings
  - Formation of a campus and community coalition involving all major stakeholders may be critical to implement these strategies effectively
A Call to Action also identified “Tier 3” strategies, which had demonstrated “evidence of logical and theoretical promise, but require more comprehensive evaluation”

- Adopting campus-based policies and practices that appear to be capable of reducing high-risk alcohol use.
- Increasing enforcement at campus-based events that promote excessive drinking.
- Increasing publicity about and enforcement of underage drinking laws on campus and eliminating "mixed messages."
- Consistently enforcing disciplinary actions associated with policy violations.
- Conducting marketing campaigns to correct student misperceptions about alcohol use.
- Provision of "safe rides" programs.
- Regulation of happy hours and sales.
- Informing new students and their parents about alcohol policies and penalties before arrival and during orientation periods.
Study to Prevent Alcohol Related Consequences

- Group-Randomized Trial

- 10 Public & Private Universities in NC

Intervention:
- Community organizing intervention to plan, promote, and implement environmental strategies on campus and in the surrounding community.

Results:
- Significant decreases in severe consequences due to students’ own drinking
- Significant decreases in alcohol-related injuries caused to others
Out of the darkness came…
a SPARC of light…

CMCA
EUDL
RUD

Town/Gown Coalitions

NIAAA
RFAs
A Call to Action

Wake Forest School of Medicine
SPARC Funding

• National Institute on Alcohol Abuse and Alcoholism

• North Carolina Department of Health & Human Services

• Wake Forest School of Medicine
SPARC Conceptual Model

SPARC Intervention
- Community Organizing
  - Hold one-on-one meetings
  - Understand self-interest
  - Analyze power
  - Build coalition
  - Identify actionable issues
  - Develop strategies
  - Plan & implement actions
- Environmental Strategies
  - Reduce availability
  - Address price/marketing
  - Improve social norms
  - Minimize harm
  - Elements
    - Policy
    - Enforcement
    - Action

Intermediate Outcomes
- Community Cultures
  - Government
  - Neighborhoods
  - Law enforcement
- Campus Cultures
  - Students
  - Administration
  - Alumni
  - Faculty
- Community Policy
- Campus Policy

Larger Environment

Long-term Outcomes
- High-risk Drinking
  - Indicators
    - Quantity
    - Frequency
    - Physical setting
    - Social setting
    - Timing
    - Underage use
  - Consequences
    - Health
    - Social
    - Violence
    - Legal
    - Academic
    - Victimization

Wake Forest School of Medicine
SPARC Design

5 Intervention

10 universities randomly assigned

5 Comparison
Evaluation Instruments

- Intervention Tracking
- Site visits
- Coalition Survey
- Archival Data Collection
- Alcohol Policy Tracking
- College Drinking Survey
- Resident Advisor Survey
- Injury & Incident Reports

- Community Organizing
- Environmental Strategies
- Culture / Context
- High-risk Drinking

Wake Forest School of Medicine
Timeline for SPARC I & II

<table>
<thead>
<tr>
<th>Year</th>
<th>I/C</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPARC I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9/10/02-7/31/07)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPARC II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8/01/07-7/31/11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1/04-7/09)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process Evaluation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1/04-12/10)</td>
<td>I/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome Evaluation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10/03-10/10)</td>
<td>I/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SPARC Implementation Process

Inputs:
- University/Stakeholder Accountability Group
- Community Organizer
- Coalition

Process:
- Sustainability
- Action
- Strategic Planning
- Coalition Building
- Assessment
- Re-assessment
SPARC Environmental Strategies

1. Reduce Alcohol Availability
2. Address Price/Marketing
3. Improve Social Norms
4. Minimize Harm
<table>
<thead>
<tr>
<th>Availability</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Restrict provision of alcohol to underage or intoxicated students</td>
<td>5</td>
</tr>
<tr>
<td>Increase/improve coordination between campus &amp; community police</td>
<td>5</td>
</tr>
<tr>
<td>Restrict alcohol purchases, possession</td>
<td>4</td>
</tr>
<tr>
<td>Restrict alcohol use at campus events</td>
<td>3</td>
</tr>
<tr>
<td>Increase responsible beverage service policies &amp; practices</td>
<td>2</td>
</tr>
<tr>
<td>Conduct compliance checks</td>
<td>2</td>
</tr>
<tr>
<td>Educate landlords about their responsibilities and liabilities</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Price/Marketing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit amount, type &amp; placement of pro-drinking messages seen on campus</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Norms</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish consistent disciplinary actions associated with policy violations</td>
<td>5</td>
</tr>
<tr>
<td>Create campaign to correct misperceptions about alcohol use</td>
<td>4</td>
</tr>
<tr>
<td>Enhance awareness of personal liability</td>
<td>4</td>
</tr>
<tr>
<td>Provide notifications to new students, parents of alcohol policies, penalties</td>
<td>4</td>
</tr>
<tr>
<td>Provide alternative late night programs</td>
<td>2</td>
</tr>
<tr>
<td>Provide alcohol-free activities</td>
<td>2</td>
</tr>
<tr>
<td>Provide parental notification of student alcohol violations</td>
<td>1</td>
</tr>
<tr>
<td>Create policy to provide brief motivational module for all freshmen</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Harm Minimization</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Enact party monitoring program</td>
<td>3</td>
</tr>
<tr>
<td>Create and utilize safe ride program</td>
<td>2</td>
</tr>
<tr>
<td>Increase harm reduction presence at large-scale campus events</td>
<td>1</td>
</tr>
</tbody>
</table>
Impact of SPARC
Severe Consequences due to Own Drinking

Percentage with 1+ times in past 30 days

Year

2003  2004  2005  2006

SPARC schools  Comparison schools

p=0.02

Wake Forest School of Medicine
This translates into an average of 228 fewer students in each intervention school experiencing 1 or more severe consequences due to their own drinking in the past 30 days compared with the Comparison Schools.
Alcohol-related Injuries Caused to Others Requiring Medical Treatment

Percentage with 1+ injuries in past 12 months

Year

SPARC schools
Comparison schools

p=0.03
This translates into an average of 107 fewer students in each intervention school causing alcohol-related injuries to others that required medical treatment in the 12 months preceding the survey compared with the Comparison Schools.
Evidence of Impact: Summary

**College Drinking Survey**
- Severe Consequences, due to own drinking \((p=0.02)\)
- Alcohol-related Injuries, caused to others \((p=0.03)\)

**Resident Advisor Survey**
- Consequences \((p=0.04)\)
- Environment \((p=0.01)\)
- Aggregate \((p=0.03)\)

**Injury & Incident Reports**
- Police reports of alcohol-related incidents \((p=0.04)\)
- Police reports of # of citations for underage alcohol use \((p=0.008)\)
ESIS Results

• Higher levels of fidelity were associated with (p<0.05):
  • Lower prevalence of interpersonal consequences due to others’ drinking and injuries caused to others
  • Reduced consequences of drinking for RA survey
  • Reduced high-risk drinking environment for RA survey
Impact of a Randomized Campus/Community Trial to Prevent High-Risk Drinking Among College Students


Background: High-risk drinking by college students continues to pose a significant threat to public health. Despite increasing evidence of the contribution of community-level and campus-level environmental factors to high-risk drinking, there have been few rigorous tests of interventions that focus on changing these interlinked environments. The Study to Prevent Alcohol Related Consequences (SPARC) assessed the efficacy of a comprehensive intervention using a community organizing approach to implement environmental strategies in and around college campuses. The goal of SPARC was to reduce high-risk drinking and alcohol-related consequences among college students.

Methods: Ten universities in North Carolina were randomized to an Intervention or Comparison condition. Each Intervention school was assigned a campus/community organizer. The organizer worked to form a campus–community coalition, which developed and implemented a strategic plan to use environmental strategies to reduce high-risk drinking and its consequences. The intervention was implemented over a period of 3 years. Primary outcome measures were assessed using a web-based survey of students. Measures of high-risk drinking included number of days alcohol was consumed, number of days of binge drinking, and greatest number of drinks consumed (all in the past 30 days); and number of days one gets drunk in a typical week. Measures of alcohol-related consequences included indices of moderate consequences due to one’s own drinking, severe consequences due to one’s own drinking, interpersonal consequences due to others’ drinking, and community consequences due to others’ drinking (all using a past 30-day time frame). Measure of alcohol-related injuries included (i) experiencing alcohol-related injuries and (ii) alcohol-related injuries caused to others.

Colleges and communities can reduce alcohol-related harm to students NIH-supported study finds coordinated efforts limit the impact of high-risk drinking

Coordinated strategies that address alcohol availability, alcohol policy enforcement, and drinking norms can help colleges and their communities protect students from the harms of high-risk drinking, according to a new study supported by the National Institutes of Health.

“This study adds to a growing body of evidence suggesting that strategic changes to the environment on campus and in the surrounding community can have an impact on high-risk drinking and its consequences among college students,” said Kenneth R. Warren, Ph.D., acting director of the NIH's National Institute on Alcohol Abuse and Alcoholism (NIAAA).

“It is particularly noteworthy that this combined campus/community effort not only reduced harms personally experienced by the drinker, but also harms resulting from others' alcohol misuse,” said Ralph Hingson, Sc.D., director of the Division of Epidemiology and Prevention Research at NIAAA.
Takeaways

The Approach
• Community Organizing
• Environmental Strategies
• Focus on College Campus & Surrounding Community

Evidence of Effectiveness
• Student Self Reports (1\textsuperscript{st} and 2\textsuperscript{nd}-hand consequences)
• RA Survey, Official Reports

Growing Evidence that this “Family” of Approaches Works
• Saltz (2010)
Questions so far . . . ?
Appalachian State University
Why address this issue?

- ↑ student health and safety
- ↓ student conduct violations
- ↑ quality of life for all
- ↑ student success, retention, and graduation
Comprehensiveness is the key

SPARC Strategies:
• Availability
• Price/Marketing
• Social Norms
• Harm Minimization
Assessment Example:
Availability Domain Data Review

<table>
<thead>
<tr>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restrict provision of alcohol to under-age or intoxicated students</td>
</tr>
<tr>
<td>Increase/improve coordination between campus &amp; community police</td>
</tr>
<tr>
<td>Restrict alcohol purchases, possession</td>
</tr>
<tr>
<td>Restrict alcohol use at campus events</td>
</tr>
<tr>
<td>Increase responsible beverage service policies &amp; practices</td>
</tr>
<tr>
<td>Conduct compliance checks</td>
</tr>
<tr>
<td>Educate landlords about their responsibilities and liabilities</td>
</tr>
</tbody>
</table>
Strategy #1: Increase Compliance Checks

• Relationship-Building
  • Individual meetings
  • Group meetings/engagement
  • Free resources, RBS training

• Impact on Fake ID Use
  • 6% ↑, caught using fake ID
  • 6% ↓, bar patronage
Compliance Check Impact: New Input and Reassessment

*Off-campus policy in need of updates

*43% repeat offenders

*Majority of violent crime AOD related

*Policy & enforcement “about right”

*Stricter sanctions for repeat offenders

Strategy #2: Off-Campus Jurisdiction Policy refined

Policy Revision:
All off-campus alcohol and other drug violations referred to the Office of Student Conduct.
Off-Campus Jurisdiction Policy Outcomes

↑ Student Conduct Referrals

↓ Drunkenness

Community Collaboration and Good Will

<table>
<thead>
<tr>
<th>0 days drunk / week</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
</tr>
<tr>
<td>2010</td>
</tr>
</tbody>
</table>
Coalition Building/Community Organizing

**What Worked?**

- Member numbers and coalition composition
- The “right” people at the table
- Community organizer autonomy
- Educated about the public health approach
- Partnered with a local non-profit

But a “how to” manual may have helped us succeed faster . .
SPARC Manual

• Manual helps address a need for translating evidence-based, environmental interventions from research to practice

• There is currently a lack of “how to” materials for implementing environmental interventions

• 241 evidence-based programs or practices listed in the Substance Abuse and Mental Health Services Administration’s National Registry of Evidence-based Programs and Practices (http://www.nrepp.samhsa.gov).

• 6 (2%) were categorized as involving environmental strategies.
Outline of the Manual

• Overview of the SPARC intervention
• Core elements of SPARC, theoretical and empirical foundations, program design, resources, environmental strategies, community organizing
• The 5 steps to implementing the SPARC intervention:
  1. conducting an assessment,
  2. building a coalition,
  3. developing a strategic plan,
  4. implementing an action plan, and
  5. sustaining your efforts
Role of Campus/Community, Environmental Approaches

- Growing empirical support
- But…modest uptake
Growing Empirical Support

“Growing number of studies...provide evidence that an environmental approach, if implemented with commitment and intensity, can reduce rates of problems associated with high-risk drinking on college campuses.”

Examples include:

- Clapp et al., 2005
- Nelson et al., 2005
- Saltz et al., 2009, 2010
- Weitzman et al., 2004
- Wood et al., 2009
- Wolfson et al., 2012

Source: Wolfson et al., 2012.
But...modest uptake!!

Percentage of administrators reporting implementation of NIAAA-recommended strategies

Nelson et al., 2010. Data are from a nationally representative sample of administrators at 351 4-year colleges.
Discussion: What are barriers to effective prevention on college campuses?
Contact Information

Mark Wolfson, PhD
Department of Social Sciences and Health Policy
Wake Forest School of Medicine
mwolfson@wakehealth.edu
336-716-0380

Kendal McDevitt, MA
Appalachian State University Wellness Center
mcdevittkb@appstate.edu
828-262-3148

SPARC Website
WWW.WAKEHEALTH.EDU/SPARC