

# Prevention of College Student Drinking Problems:

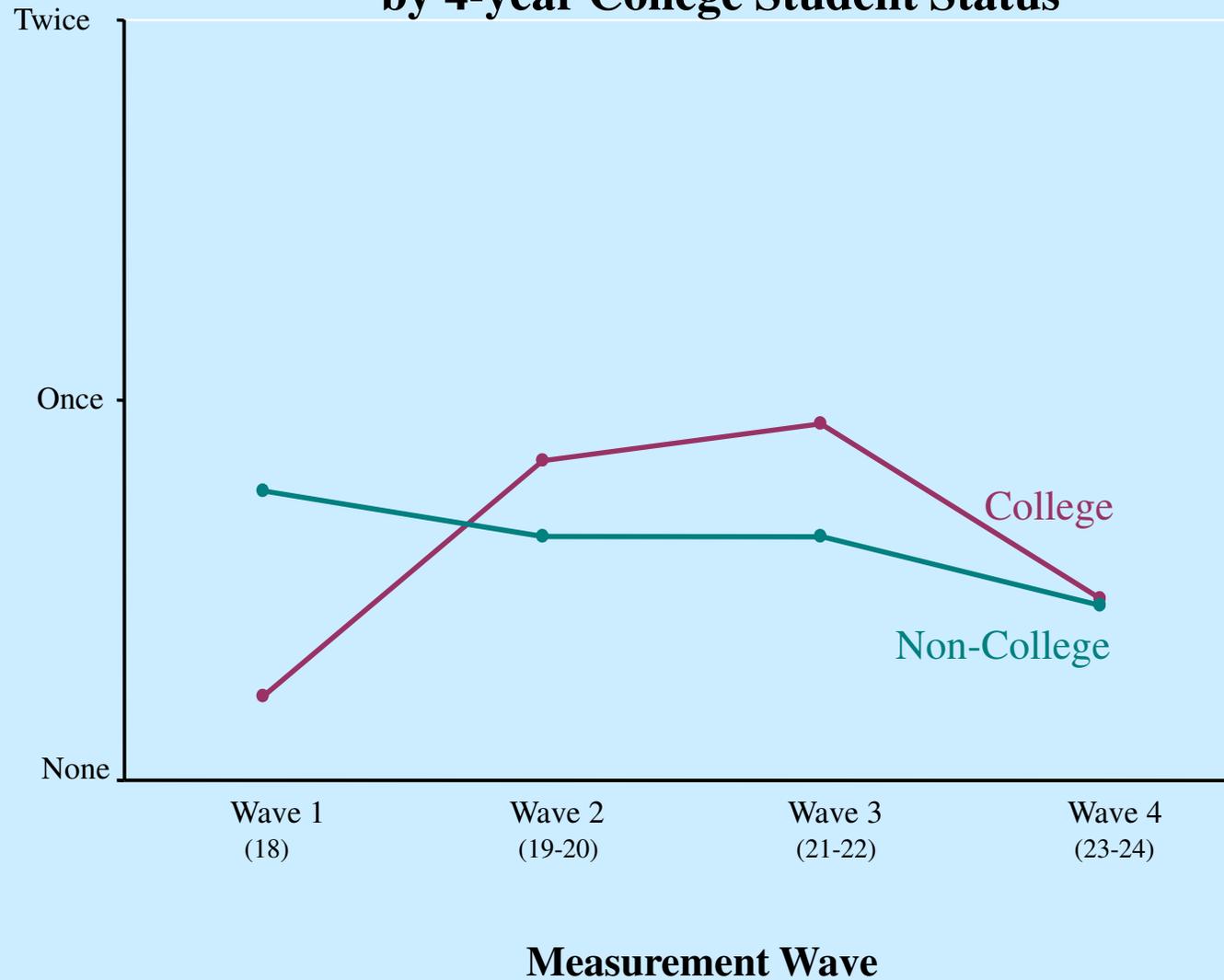
An update on research since the NIAAA Task Force Report

**Bob Saltz**  
**Prevention Research Center**  
**Oakland, California**

# Why Care About College Student Drinking?

- Over 1,700 deaths among 18-24 year old college students
- 2.8 million students between the ages of 18 and 24 drove under the influence of alcohol last year
- 590,000 unintentionally injured under the influence of alcohol
- More than 690,000 assaulted by another student who has been drinking
- More than 97,000 are victims of alcohol-related sexual assault or date rape
- About 25 percent of college students report academic consequences of their drinking including missing class, falling behind, doing poorly on exams or papers, and receiving lower grades overall

## Mean Score for 5+ Drinks in a Row in Past 2 Weeks by 4-year College Student Status



# A CALL TO ACTION:

**CHANGING THE CULTURE OF  
DRINKING AT U.S. COLLEGES**



Task Force of the National Advisory Council  
on Alcohol Abuse and Alcoholism

National Institutes of Health  
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

**COLLEGE**

[www.collegedrinkingprevention.gov](http://www.collegedrinkingprevention.gov)

# Task Force Recommendations

- **Tier 1: Evidence of Effectiveness Among College Students**
- **Tier 2: Evidence of Success With General Populations That Could Be Applied to College Environments**
- **Tier 3: Evidence of Logical and Theoretical Promise, But Require More Comprehensive Evaluation**
- **Tier 4: Evidence of Ineffectiveness**

# Recommendations – Tier 2

- 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 price and excise taxes on alcoholic beverages
- Responsible beverage service policies in social and commercial settings

...finally

- **The formation of a campus and community coalition may be critical to implement these strategies effectively**

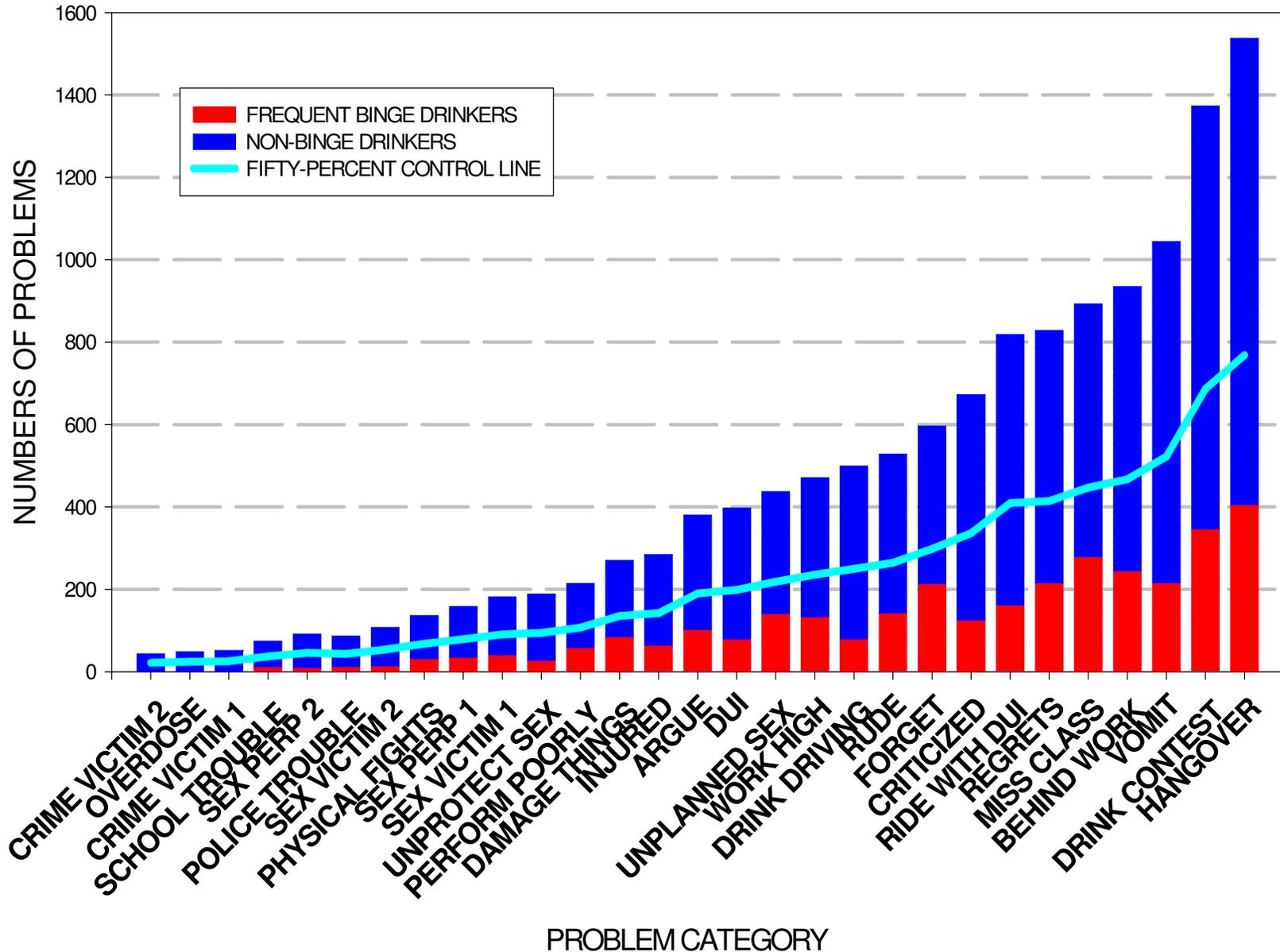
Sounds like a lot of work...

...why bother?

# So Why Not Just Go With Tier 1 Strategies?

- Problems not limited to high-risk drinkers

## RELATIVE PRODUCTION OF PROBLEMS BY FREQUENT BINGE VS. NON-BINGE DRINKERS



# So Why Not Just Go With Tier 1 Strategies?

- Problems not limited to high-risk drinkers
- Some difficult to implement with fidelity
- Can be labor intensive & costly for large populations
- Some individual-level strategies might be compromised in "hostile" environments
- Opportunity to create synergy across levels of intervention

...but there are challenges

## Typical Hurdles for Comprehensive Prevention Strategy

- Implicit assumption that the only “target” is high-risk drinkers
- Ambivalence about youth drinking
- Low perceived efficacy of preventive interventions
- Challenges of coordination and resource allocation
- Possible fears of “backlash”

# Ohio State University Police Get IED-Resistant Military Vehicle for Use on Football Game Days

SEPTEMBER 30, 2013 | 1:52 PM

BY MOLLY BLOOM

3 Comments

Email

Tweet 20

Recommend 682

Ohio State University's police department received a donated "**Mine Resistant Ambush Protected Vehicle**" this month complete with gun turret, armored siding and bulletproof glass.

University police say the vehicle is meant to be used for "large-scale emergency situations," but will primarily be used to carry university police around campus and to provide a police "presence" on football game days, the Ohio State University Lantern **reports**.



JONMALLARD / FLICKR

This is a Mine Resistant Ambush Protected Vehicle, but not Ohio State University's Mine Resistant Ambush Protected Vehicle.

Ohio State police tell the Lantern they'll remove the **gun turret** from the vehicle before deploying the vehicle on campus.

## Unique Hurdles for College Prevention

- Emphasis often on “process” over “outcome”
- Preference for persuasion over control
- Universities are complex, diffuse organizations
- Prevention staff trained in education, awareness strategies
- Prevention staff usually lacks authority to launch initiatives

# Safer California Universities Project Goal:

To evaluate the efficacy of a  
“Risk Management” approach to  
alcohol problem prevention

NIAAA grant #R01 AA12516  
with support from CSAP/SAMHSA.

# What are we trying to prevent?

- **Intoxication**
- **Harm related to intoxication**

# Random Assignment

## Intervention Sites

- CSU Chico
- Sacramento State
- CSU Long Beach
- UC Berkeley
- UC Davis
- UC Riverside
- UC Santa Cruz

## Comparison Sites

- Cal Poly SLO
- San Jose State
- CSU Fullerton
- UC Irvine
- UC Los Angeles
- UC San Diego
- UC Santa Barbara



# **Integrated Intervention Strategies for Off-Campus Parties**

- **Compliance Checks**
- **DUI Check Points**
- **Party Patrols**
- **Pass Social Host “Response Cost”  
Ordinance**
- **A Social Host Safe Party Campaign**

# Strategies for Implementation

- Focused on one (at most two) settings
- Focused on beginning of academic year
- Highly-specified planning and implementation process
- Maximum attention to tasks and implementation per se (rather than process)
- Planned mid-course correction

# Common Challenges

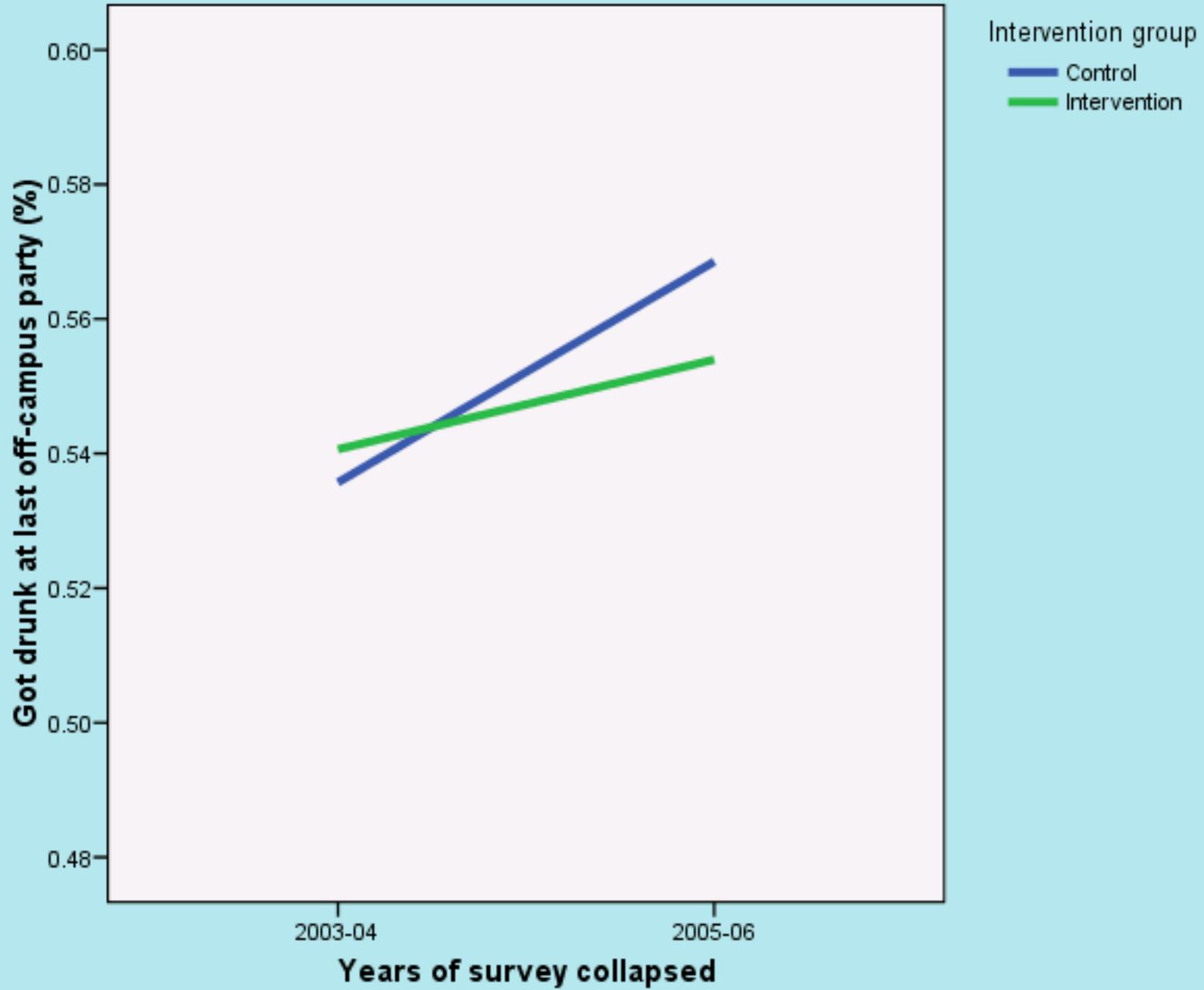
- Police feel unsupported by administration
- Police focus on minors in possession
- Police prefer to target “real” crime
- Insufficient publicity
- Publicity off-message

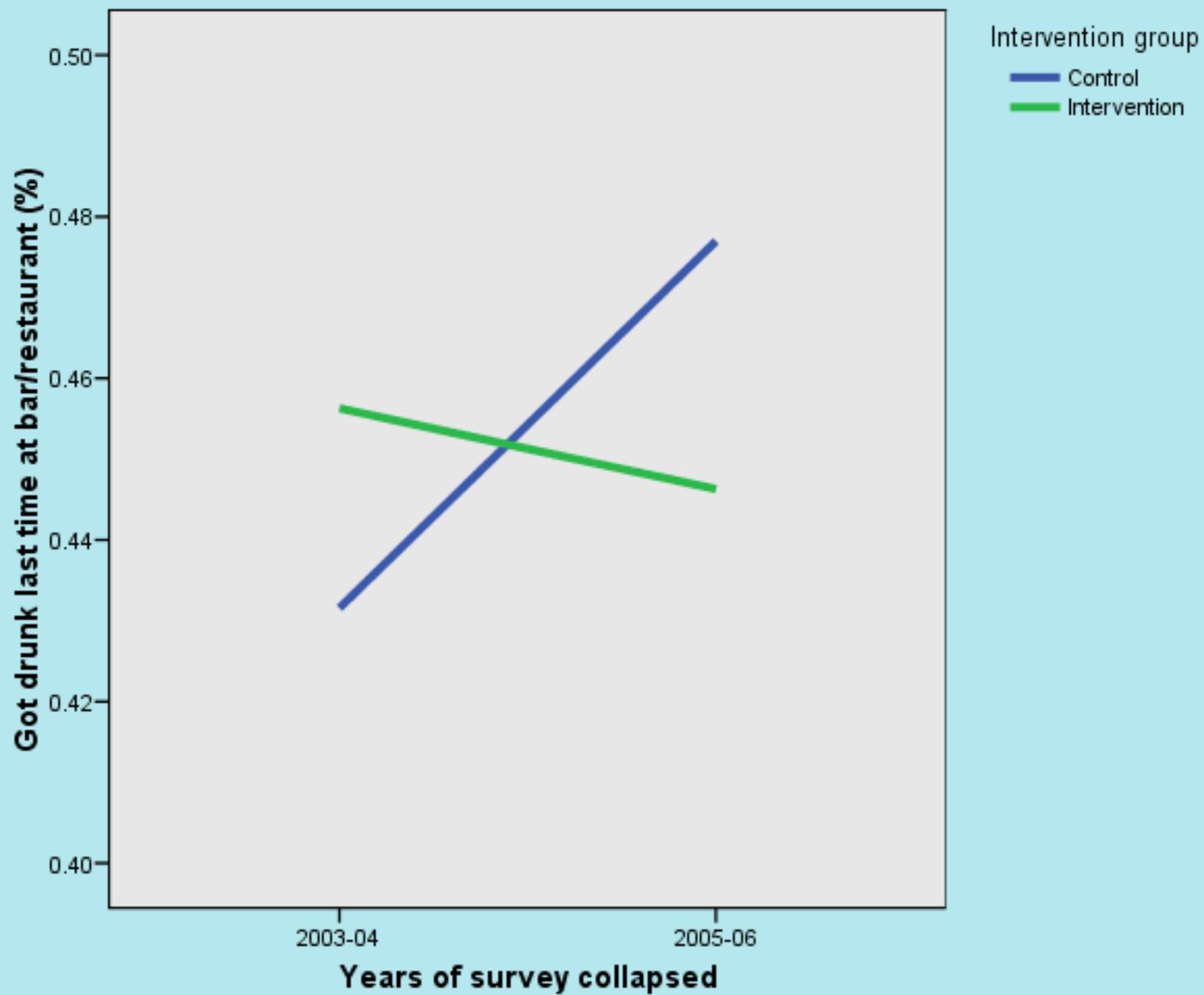
# Outcomes

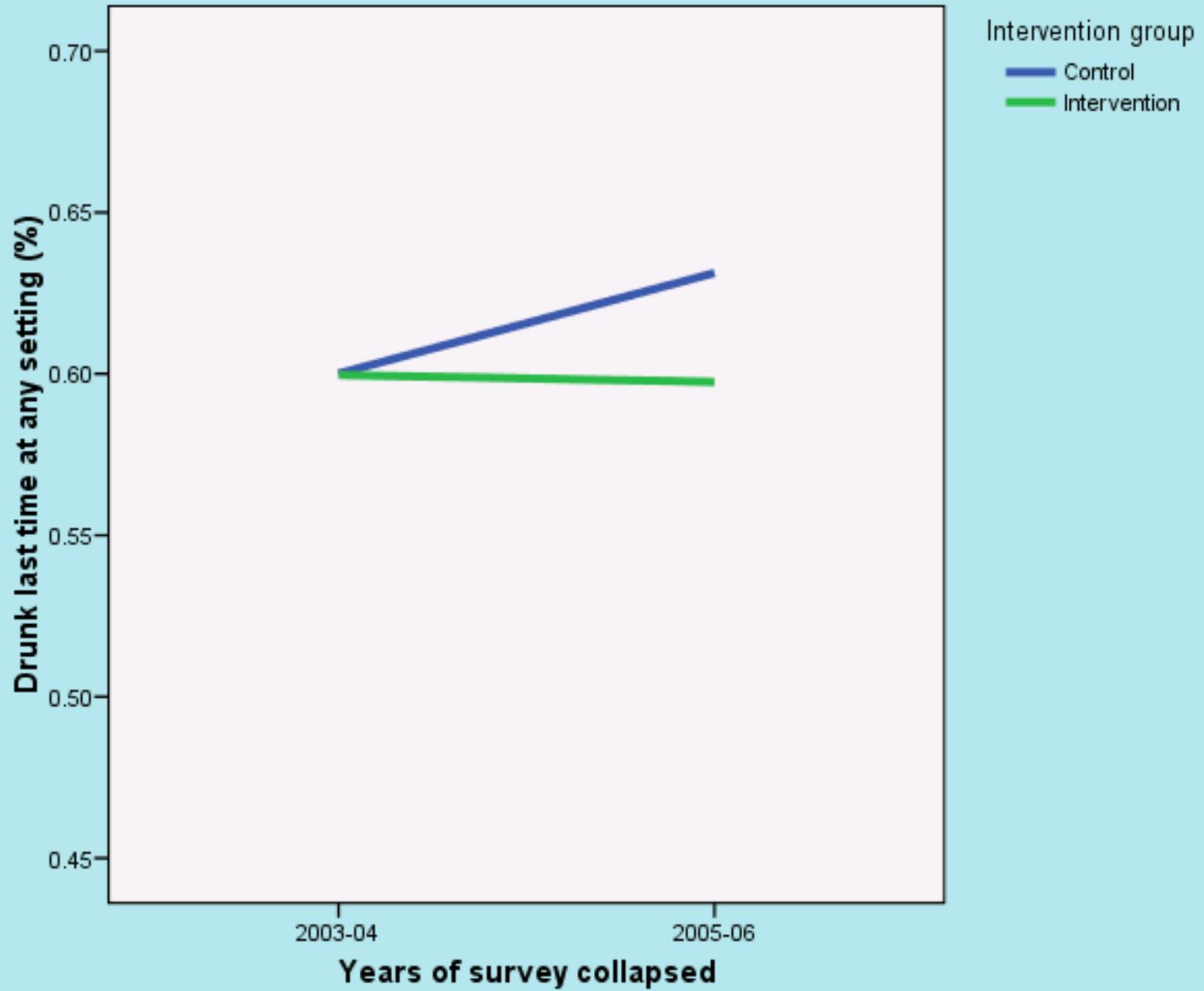
- Likelihood of getting drunk at a given generic setting (e.g., Greek parties; residence halls) plus additional aggregate measure across all settings
- Two baseline years combined vs. two years post-intervention combined
- Controlling for individual-level variables and campus/community variables

# HLM Analysis Results for Students at Settings

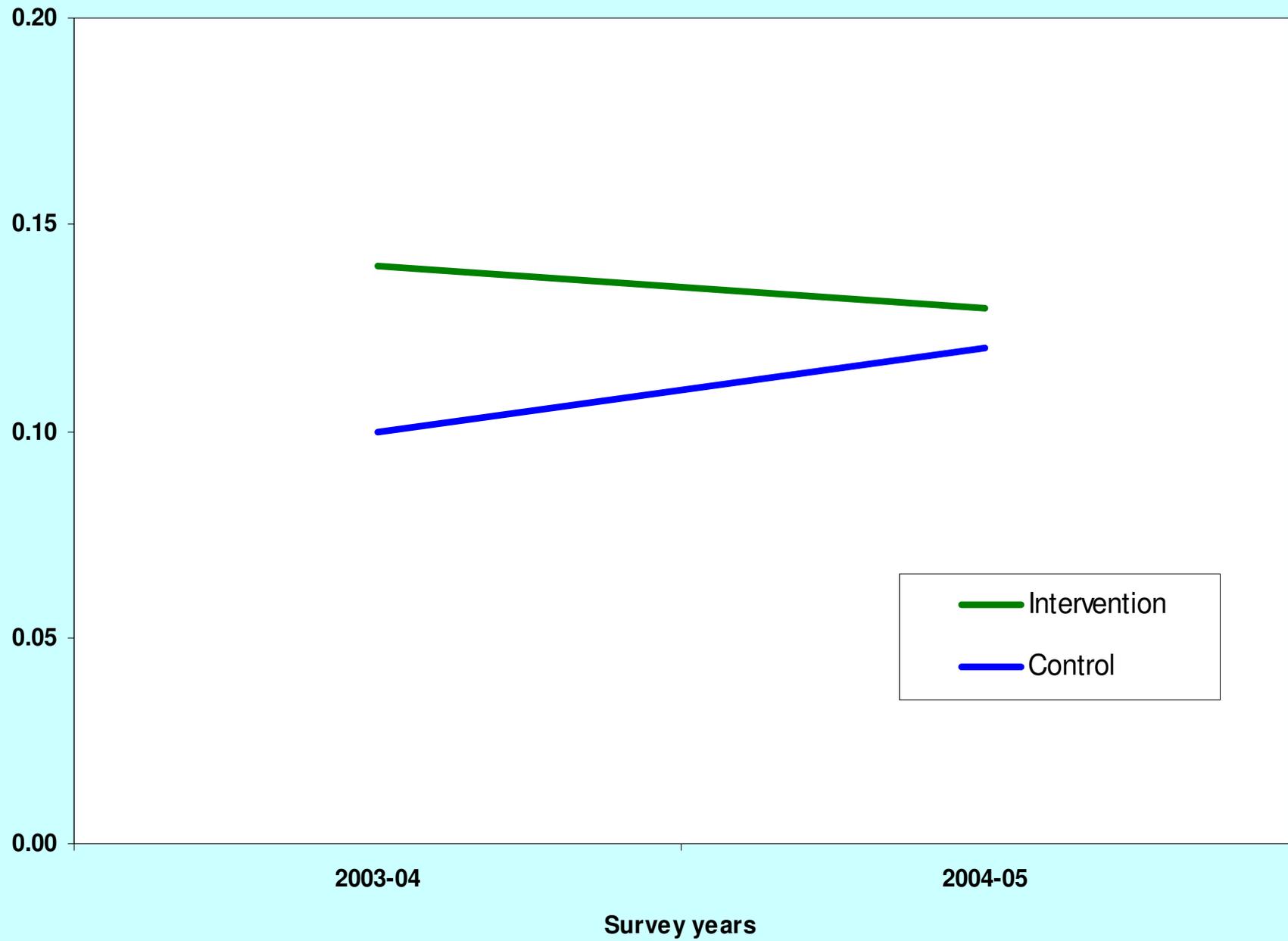
Outcome		Regression	N	Coefficient (SE)	Risk/Odds Ratio (95% C.I.)	p value
Greek parties	% drunk	Linear	5750	-.008 (.02)	---	.70
	Drunk last time	Logistic	4620	-.13 (.17)	0.88 (0.63, 1.23)	.45
Dorm Parties	% drunk	Linear	4138	.02 (.03)	---	.46
	Drunk last time	Logistic	2978	-.24 (.18)	0.78 (0.55, 1.13)	.19
Campus Events	% drunk	Linear	3884	-.02 (.02)	---	.34
	Drunk last time	Logistic	2034	-.02 (.21)	0.98 (0.64, 1.49)	.92
Off-Campus Parties	% drunk	Linear	17040	-.03 (.01)	---	.002
	Drunk last time	Logistic	13737	-.18 (.09)	0.84 (0.70, 0.99)	.04
Bar or Restaurant	% drunk	Linear	9766	-.04 (.01)	---	.004
	Drunk last time	Logistic	7690	-.26 (.10)	0.77 (0.63, 0.94)	.01
Outdoor Setting	% drunk	Linear	4828	-.01 (.02)	---	.59
	Drunk last time	Logistic	1945	.33 (.35)	1.39 (0.70, 2.76)	.34
All Settings	% drunk	Linear	20403	-.03 (.008)	---	.001
	Drunk last time	Logistic	16324	-.23 (.08)	0.79 (0.67, 0.93)	.005







## DUI or RWDD Related to Off-Campus Party



# Practical Significance

- At each campus, 900 fewer students drinking to intoxication at off-campus parties and 600 fewer getting drunk at bars/restaurants during the fall semester at intervention schools relative to controls.
- Equivalent to 6,000 fewer incidents of intoxication at off-campus parties and 4,000 fewer incidents at bars & restaurants during the fall semester at Safer intervention schools relative to controls

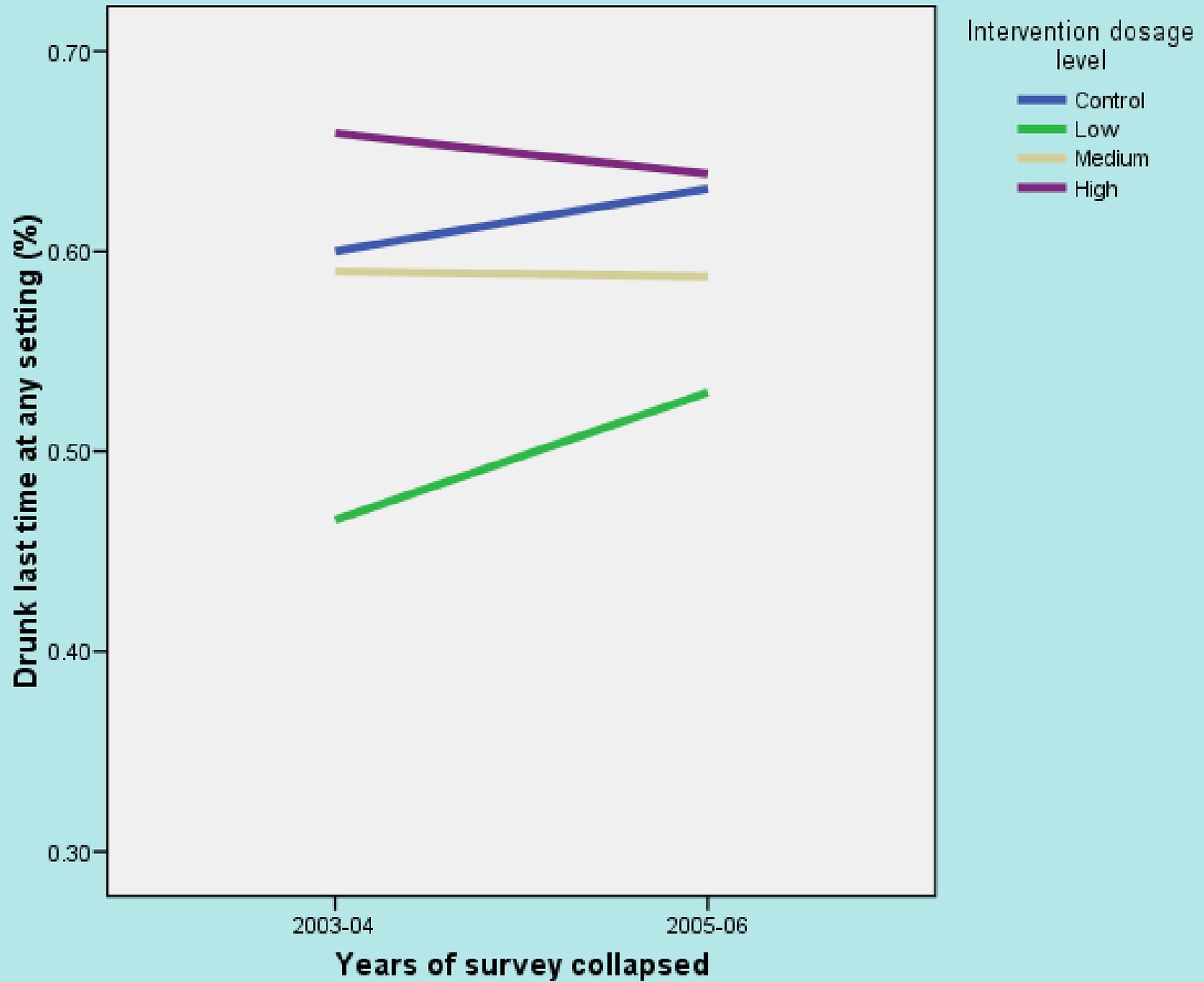
**In addition...**

**No Displacement**

# HLM Analysis Results for Students at Settings

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# Dosage Effects



# Replication

## Results of multilevel analysis

	Study phase × intervention condition	Baseline vs. Phase 1 × condition <sup>a</sup>	Phase 2 vs. Phase 1 × condition <sup>a</sup>
Proportion of times drunk	beta (SE)	beta (SE)	beta (SE)
Off-campus parties	-.015 (.004)**	.037 (.011)**	.008 (.012)
Bars/restaurants	-.011 (.006)†	.037 (.013)*	.014 (.014)
All settings	-.006 (.004)	.027 (.009)*	.016 (.009)†
Drunk last time	OR (95% C.I.)	OR (95% C.I.)	OR (95% C.I.)
Off-campus parties	0.94 (0.88, 1.00)†	1.25 (1.07, 1.45)**	1.11 (0.96, 1.29)
Bars/restaurants	0.92 (0.82, 1.03)	1.22 (1.01, 1.48)*	1.03 (0.82, 1.30)
All settings	0.96 (0.90, 1.02)	1.25 (1.04, 1.50)*	1.15 (0.99, 1.36)†

<sup>a</sup>Beta coefficients and odds ratios (ORs) are positive because Phase 1 served as the referent period.

†p<.10,\*p<.05, \*\*p<.01

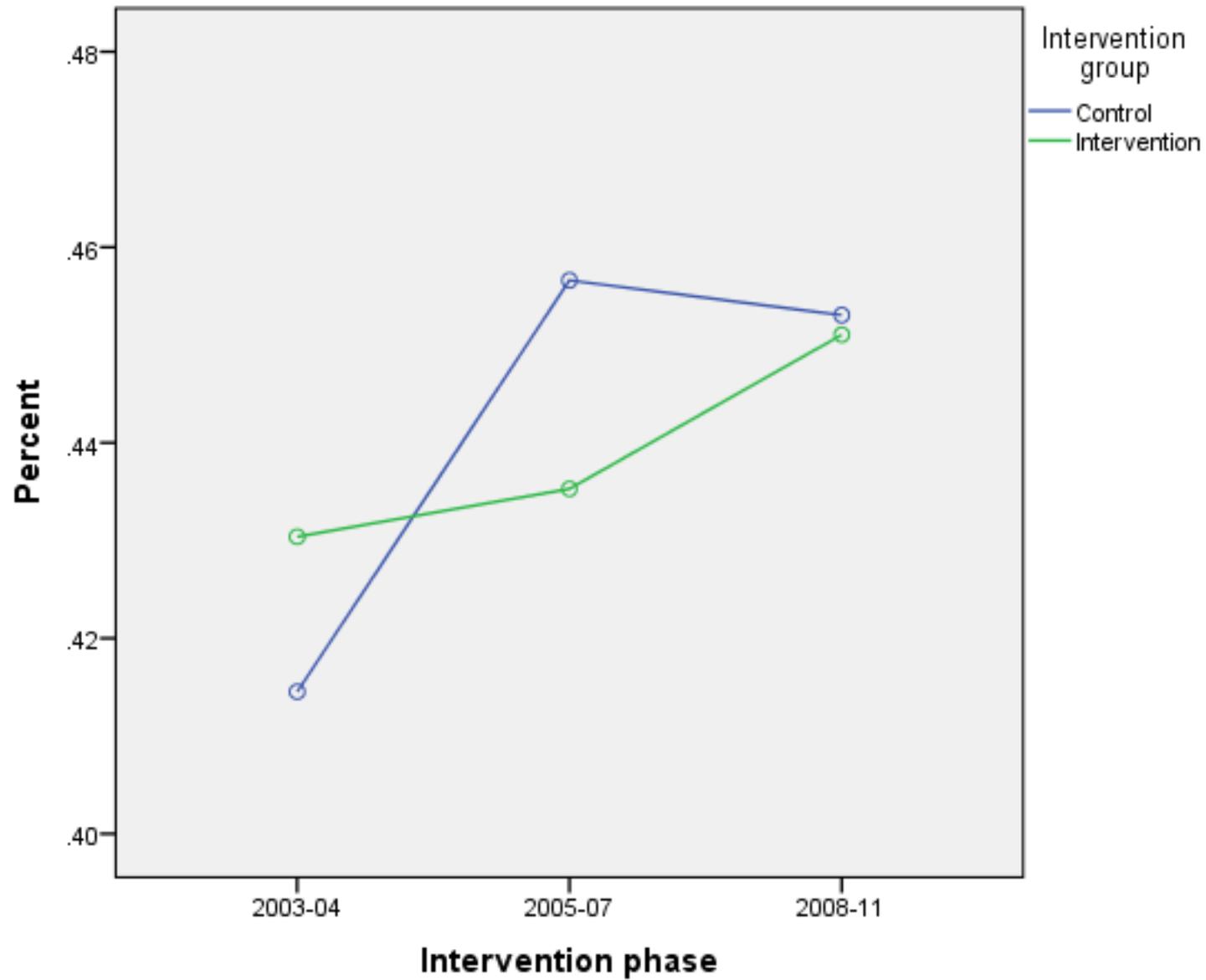
### Results of multi level analyses

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### Got drunk at last off-campus party



More Evidence for  
Community-Level Prevention  
Interventions in College  
Settings

# A Matter of Degree (AMOD)

Weitzman et al. American Journal of Preventive Medicine. 2004

- College/ Community Partnerships
- Environmental strategies to reduce drinking problems:
  - Keg registration
  - Mandatory responsible beverage service
  - Police wild party enforcement
  - Substance free residence halls
  - Advertising bans

# A Matter of Degree (AMOD)

Weitzman et al. American Journal of Preventive Medicine. 2004

- AMOD achieved reductions among college students in
  - Binge drinking
  - Driving after drinking
  - Alcohol related injuries
  - Being assaulted by other drinking college students

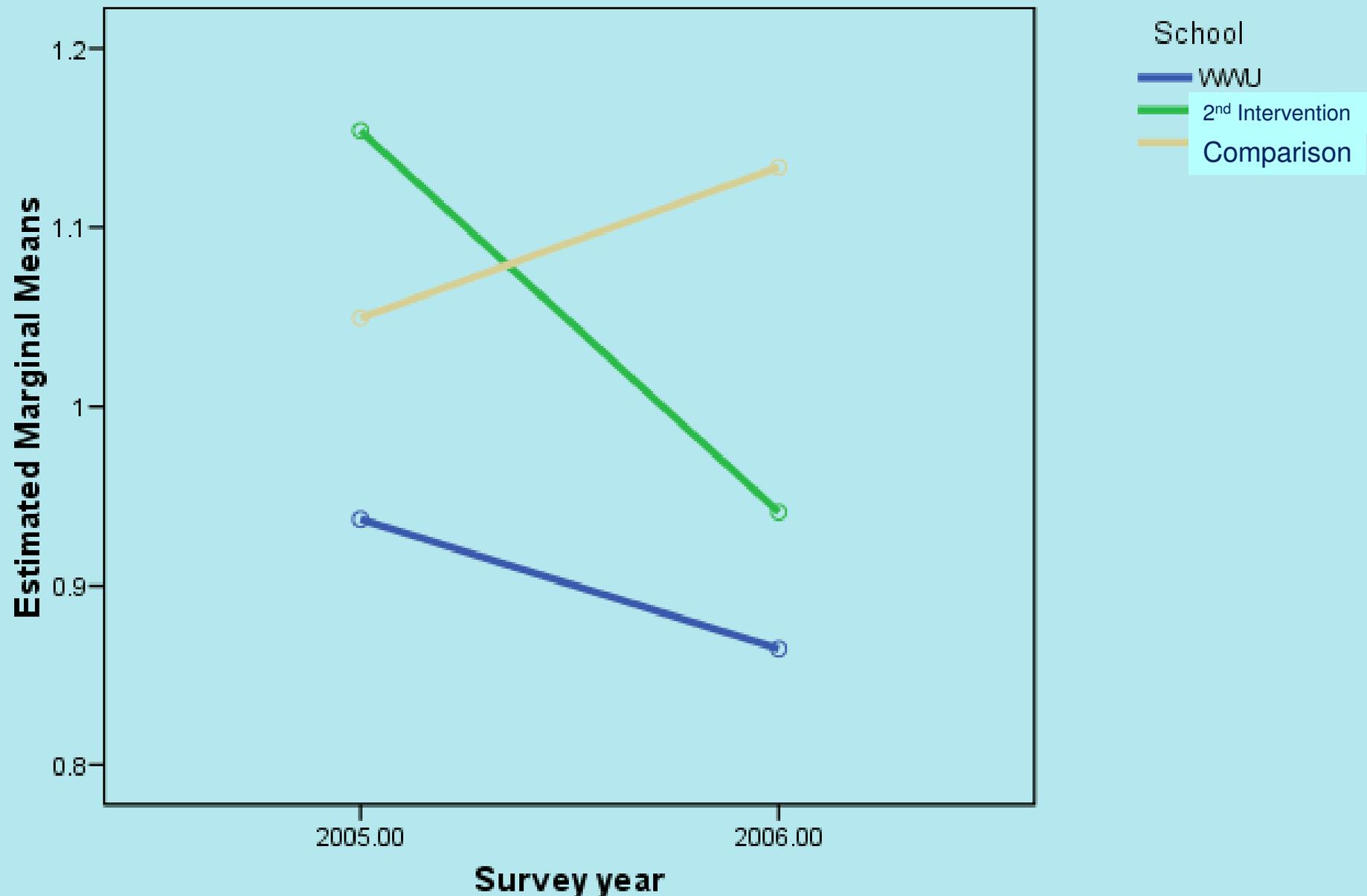
# **Campus Community Strategy to Change the Drinking Culture**

Western Washington University  
Bellingham, Washington

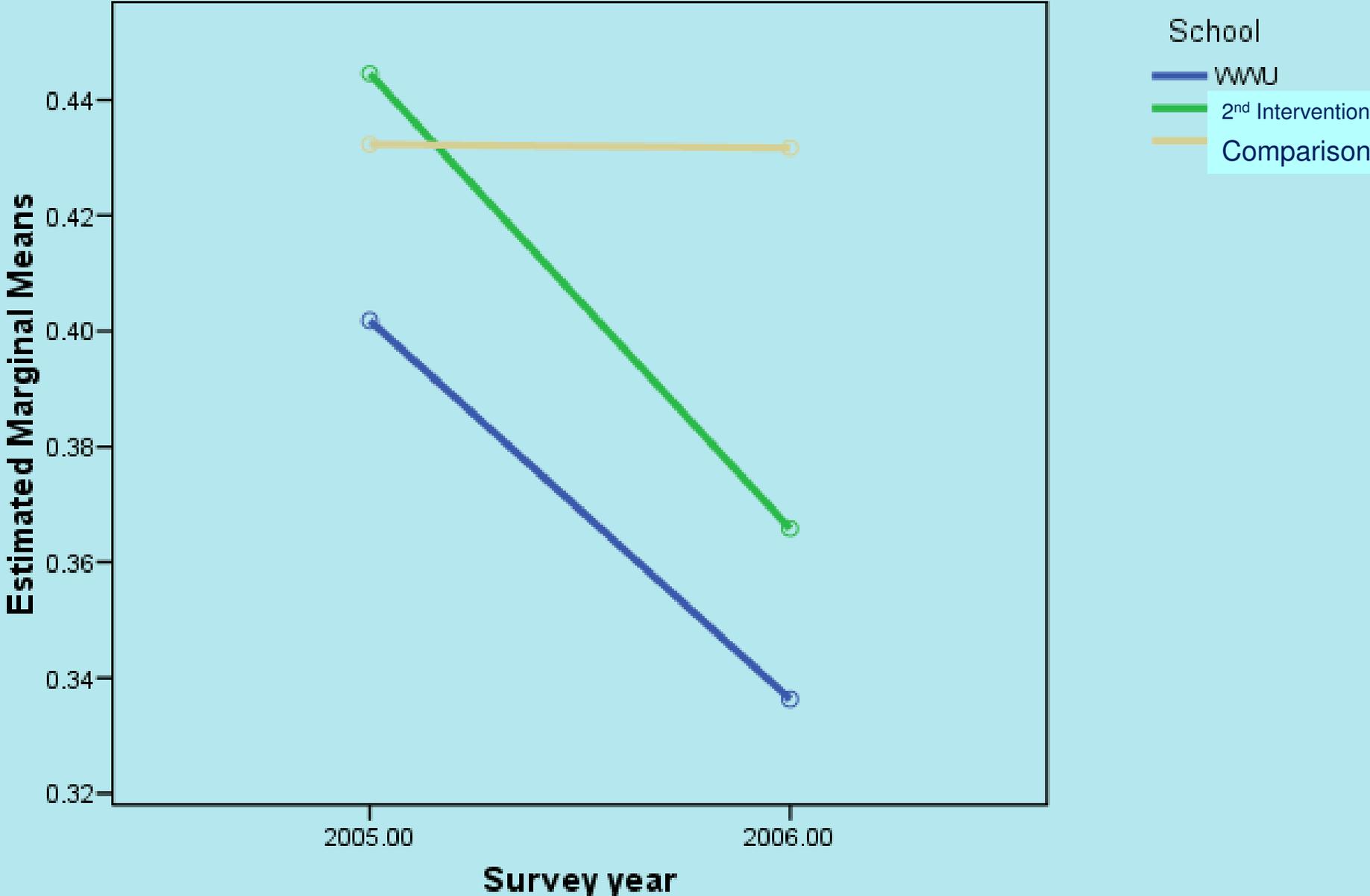
# Project Components

- Neighborhoods Engaging with Students (NEST)
- Enforcement
- LateNight@WWU
- Campus Community Coalition work groups were involved in planning, implementation, and process evaluation.

**Estimated Marginal Means of Think back over the last two weeks. How many times, if any, have you had five or more alcoholic drinks at a sitting?**



# Estimated Marginal Means of Any binge drinking in the past 2 weeks



# SPARC

Study to **P**revent **A**lcohol **R**elated  
**C**onsequences:

Using a Community Organizing Approach to  
Implement Environmental Strategies in and  
around the College Campus

Mark Wolfson, et al  
Wake Forrest University

# Environmental Strategies

1. Reduce Alcohol Availability
2. Address Price/Marketing
3. Improve Social Norms
4. Minimize Harm

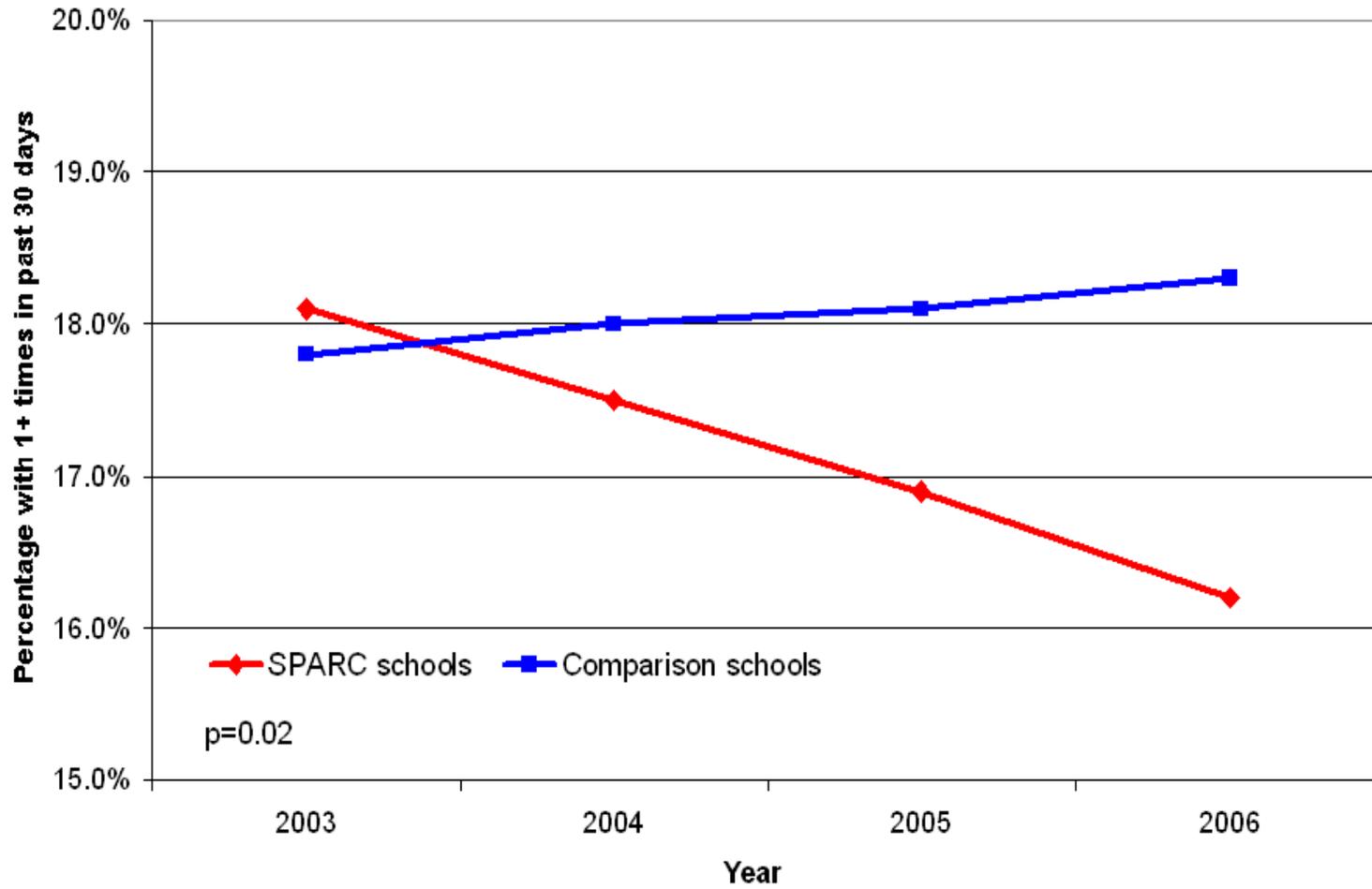
## *Expectations of each Intervention School:*

- Include 3 of the 4 areas in strategic plan
- Most strategies should be comprehensive – i.e., include Policy, Awareness, and Enforcement elements

# Environmental Strategies in Plans

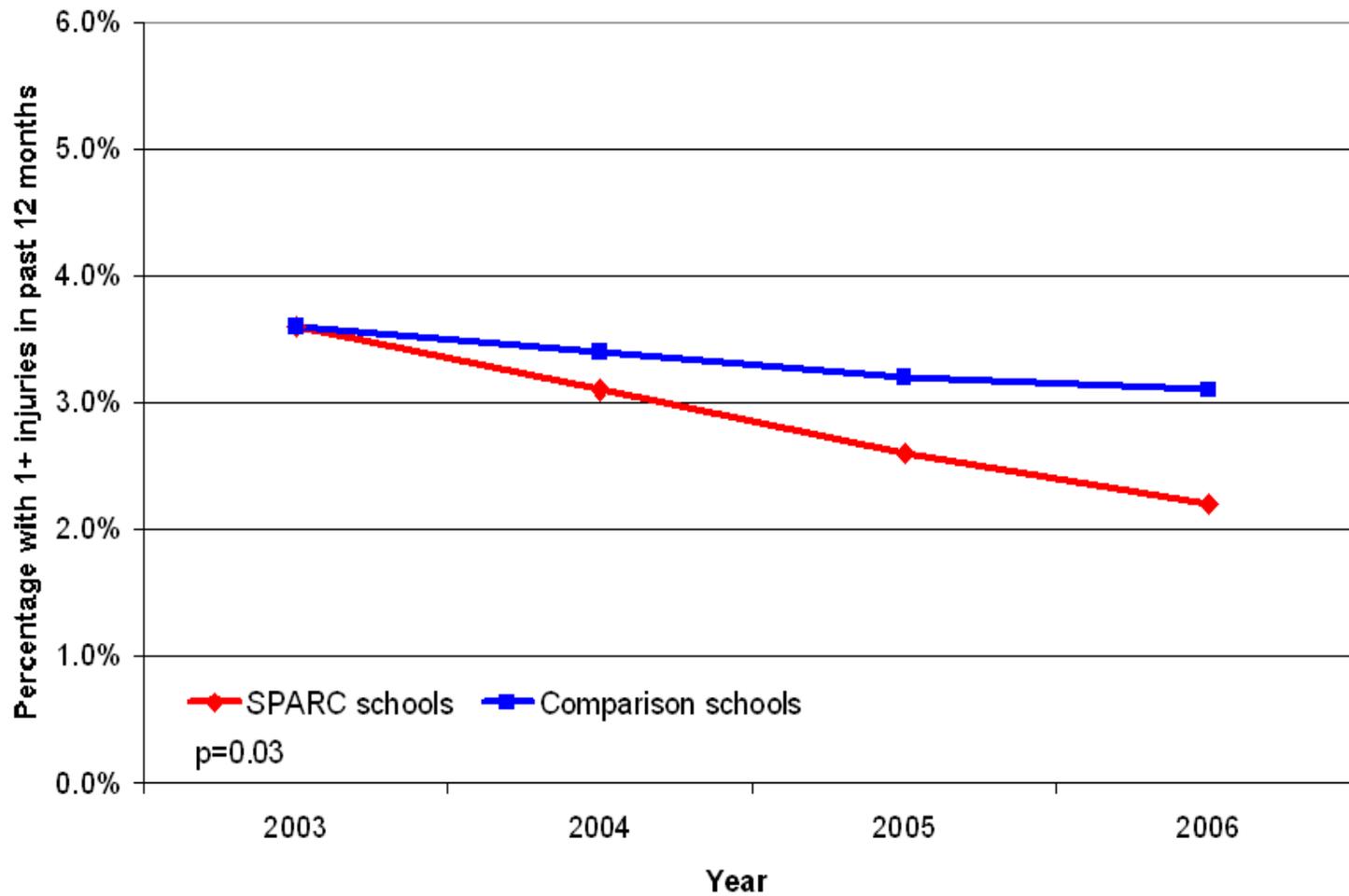
of the domain, strategy	using strategy
<b>Availability</b>	# of sites
Restrict provision of alcohol to underage or intoxicated students	5
Increase/improve coordination between campus & community police	5
Restrict alcohol purchases, possession	4
Restrict alcohol use at campus events	3
Increase responsible beverage service policies & practices	2
Conduct compliance checks	2
Educate landlords about their responsibilities and liabilities	2
<b>Price/Marketing</b>	
Limit amount, type & placement of pro-drinking messages seen on campus	2
<b>Social Norms</b>	
Establish consistent disciplinary actions associated with policy violations	5
Create campaign to correct misperceptions about alcohol use	4
Enhance awareness of personal liability	4
Provide notifications to new students, parents of alcohol policies, penalties	4
Provide alternative late night programs	2
Provide alcohol-free activities	2
Provide parental notification of student alcohol violations	1
Create policy to provide brief motivational module for all freshmen	1
<b>Harm Minimization</b>	
Enact party monitoring program	3
Create and utilize safe ride program	2
Increase harm reduction presence at large-scale campus events	1

### Severe Consequences due to Own Drinking



Source: Wolfson et al., in press

### Alcohol-related Injuries Caused to Others Requiring Medical Treatment



Source: Wolfson et al., in press

# Evidence of Impact: Summary

## College Drinking Survey

- Severe Consequences, due to own drinking ( $p=.02$ )
- Alcohol-related Injuries, caused to others ( $p=.03$ )

## RA Survey

- Consequences:  $p=.04$
- Environment:  $p=.01$
- Aggregate:  $p=.03$

## Incident & Injury Reports

- Police reports of *alcohol citations* ( $p=0.04$ )
- Police reports of total # of citations for underage alcohol use ( $p=.008$ )

# So What?

- Strong evidence that a comprehensive environmental approach that includes a focus on off-campus parties can be effective
- Level of Impact
  - Public health significance:
    - 228 fewer students per school experiencing 1 or more severe consequences due to their own drinking in the past 30 days
    - 107 fewer students per school causing alcohol-related injuries to others in past 12 months
  - But: Impact on marginal rates: not a panacea

# Future Research: Where are we heading?

- Replications  
Including Alternative Mix of Strategies
- Full-Spectrum Comprehensive Interventions
- Translational Research:  
Implementation research lags far behind  
efficacy studies

# Thank you!

Contact: [saltz@prev.org](mailto:saltz@prev.org)