
 **SAN DIEGO STATE UNIVERSITY**

Alcohol and Other Drug Initiatives

Understanding and Responding to Non-Medical Prescription Drug Use on College Campuses

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The behaviors of interest

- Use of a controlled medicine without a prescription
- Use of a medicine to “get high”, can include combining with alcohol or other drugs.
- Use of a medicine in a non-prescribed manner
- Use of medicines in risky settings

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Some Drug Types

- **Sedatives**
 - Barbiturates (Amytal, Nembutal, Sconal, Tuinal)
- **Anxiolytics**
 - Benzodiazepines (Xanax, Librium, Klonopin, Valium, Ativan)
- **Narcotics/ opiates/opioids**
 - Codeine, morphine, oxycodone, methadone, Vicodin
- **Stimulants**
 - Amphetamines (Adderall, Dexedrine)
 - ADHD medications (methylphenidate [Ritalin, Concerta], bupropion [Zyban, Wellbutrin])
 - Narcolepsy (Modafinil)
- **Insomnia/hypnotics (nonbenzodiazepines)**
 - Zolpidem (Ambien and others)
 - Eszopiclone (Lunesta)
 - Zaleplon (Sonata)
- **Steroids**
- **Others** (Erectile dysfunction, asthma inhalers, over the counter)

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Various Methods of Measurement


- General classes of assessment of campus AOD use:
 - Self Report
 - Biological markers and measures
 - Archival/Indicator/Community level sources

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Archival Sources

Examples: Police reports, EMS calls, judicial actions, FARS or other crash data sets


- **Advantages**
 - More directly relate to the harmful outcome of the behavior in question. Allow for so called harm-reduction investigations
- **Disadvantages**
 - Dependent on external factors
 - May be only short-term and severe harm
 - Population may be blurred

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Biological Markers/Measures

Examples: Drug testing, random breath-test surveys

- **Advantages**
 - Directly assess consumption
 - Less prone to recall, self-serving biases
- **Disadvantages**
 - Expensive
 - Intrusive
 - Requires expertise to administer
 - Time sensitive

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Self-report


Examples: Classroom, Web or telephone surveys

- Advantages:
 - Can be inexpensive
 - Highly flexible
 - Topics can cover wide ranges
 - Time frame can be manipulated
 - Can be easily standardized
 - Generalizable samples are more easily obtained
- Disadvantages
 - Relies on subject memory, attributional accuracy, observational accuracy, forthrightness

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Spotlight on Self Report

- Administration mode
- Item development
- Assumptions and solutions to interpretation

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Concurrent validity but... Is that enough?

- Much of the research and some of the field's theories are based solely on self-report surveys.
- Examples exist where self report has fallen short.
- Issues of gaming the system.

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Previous research


- Obvious biases
 - Sensitive topics: Rosenbaum (2006) "Reborn Virgins"
 - 28% of adolescents who had reported a sexual experience later reported no such experience (especially those who had taken a virginity pledge)
- Moving from correlations to accuracy
 - Dose measures almost completely lacking

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Common Items

- On how many occasions in the past 12 months have you used the following types of drugs, not prescribed to you?
 - Opioids such as Vicodin, OxyContin, Tylenol 3 with codeine, Percocet, Darvocet, morphine hydrocodone, oxycodone
 - Stimulant medication such as Ritalin, Dexedrine, Adderall, Concerta, methylphenidate
 - Sleeping medications such as Ambien, Halcion, Restoril, temazepam, triazolam
 - Sedative/anxiety medications such as Ativan, Xanax, Valium, Klonopin, diazepam, lorazepam
- Scaled as
 - No Occasions
 - 1-2 Occasions
 - 3-5 Occasions
 - 6-9 Occasions
 - 10-19 Occasions
 - 20-39 Occasions
 - 40 or more

(McCabe et al 2006)


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SDSU Items

On how many occasions in the past 12 months have you used the following prescription medications for NON-MEDICAL use:


Pain medication (e.g., Vicodin, OxyContin, Tylenol 3 with Codeine)
Muscle relaxant (e.g., Soma, Cyclobenzaprine, Flexeril)
Stimulant medication for ADHD (e.g., Ritalin, Dexedrine, Adderall, Concerta)
Erectile dysfunction medications (e.g., Viagra, Cialis, Levitra)
Sleeping medication (e.g., Ambien, Halcion, Restoril)
Sedative or anxiety medication (e.g., Ativan, Xanax, Valium, Klonopin)
Asthma inhaler (e.g., Albuterol)
Modafinil (Provigil/Alertec/Modavigil)

Scale for each: 0 = no occasion, 1 = 1-5 times, 2 = 6-10 times, 3 = 11-15 times, 4 = 16-20 times, 5 = 21-25 times, 6 = 26-30 times, 7 = between 30 and 50 times, 8 = more than 50 times

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Item Limitations


- Often do not permit contextual information, including:
 - Simultaneous use (co-ingestion)
 - Concurrent use (separate occasions)
 - See McCabe et al (2006) for an exception
- Often limited in cases of symptom feigning and non-medical use of leftovers.
- Drug specificity

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Poll

Do you have a survey of students' use of prescription medicines?

Select one of the following→

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National Statistics

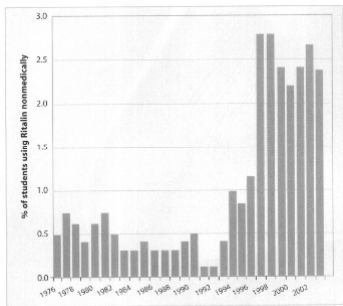




Figure 1. Trends in past-year prevalence of Ritalin use for all high-school seniors.^a

Arria, A. M., & Wish, E. D. (2005). Nonmedical Use of Prescription Stimulants Among Students. *Psychiatric Annals*, 35(3), 228-235. Data from Monitoring the Future, University of Michigan

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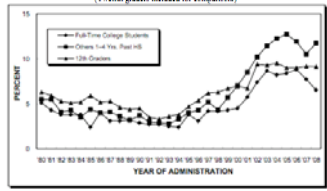
Recent Studies


- Monitoring the Future (2008)
 - Ritalin (3.2%), Sedatives (3.7%), Tranquilizers (5.0%), Oxycontin (3.6%), Vicodin (6.7%)
- Dupont et al, (2008)
 - Methylphenidate (5.3%)
- McCabe et al, (2006; University of Michigan students)
 - Stimulants (5.4%), Pain (9.3%)
- Shillington et al (2006; Southern CA University)
 - Ritalin (11.2%)

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Narcotics other than Heroin


- MTF (Johnston, et al, 2009)
- Items changed in 2001 to mean Vicodin, OxyContin, and Percocet



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Problems Measures

- Direct harm
- Dependence
 - Drug Abuse Screening Test (DAST). Scantly reported in the research, and even then typically does not distinguish by specific drugs.
- Drug Interactions
 - McCabe et al (2006) found that the most common co-ingested prescription drug class with alcohol was Opiods followed by stimulants then sedatives.
- Risky settings, such as driving

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Risk Factors


- Many of the same risk factors for other drugs:
 - White
 - Fraternity
 - On Campus
 - Use of other drugs
 - Heavy drinking


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Prevention Strategy Overview: Functional Approach

Unified Theory of Prevention: Physics of Prevention

- **Block**- create barriers between object and target
- **Deflect**- redirect the inertia of object away from the target
- **Repel**- counter or remove the attractive force of the target

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Block

Reduce AOD access to limit excessive consumption and limit harmful behaviors

Examples:

- Coordinated MIP enforcement
- RBS training

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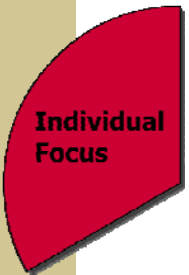
Deflect

Increase opportunities to act responsibly while fulfilling developmental and social needs

Examples:

- Safe-Ride programs
- Substance-free housing
- Substance-free parties and social events
- Athletic, recreational and other facilities

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Repel

Changing attitudes, knowledge and ultimately motivation to use or abuse AODs

Examples:

- Peer or school-based education Programs
- Counseling programs
- Counter advertising campaigns
- Awareness events
- Guest/inspirational speakers

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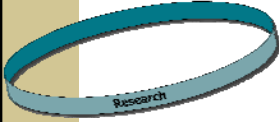
Supporting Structure

Community involvement to support core program objectives

Examples:

- Community Coalitions
 - County Prevention Collaboratives
 - Law Enforcement
 - Area Colleges and Universities
- Support for local laws

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Research and evaluation to measure improvements in individual and public health outcomes, cost-efficiencies, program sustainability, and guide program refinement

Examples:

- Web Surveys
- Program evaluation

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Comprehensive Strategy



- Individual Focus
- Enforcement and Access
- Behavioral Alternatives
- Community Action
- Research

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NIAAA Tiers by Function

www.collegedrinkingprevention.gov

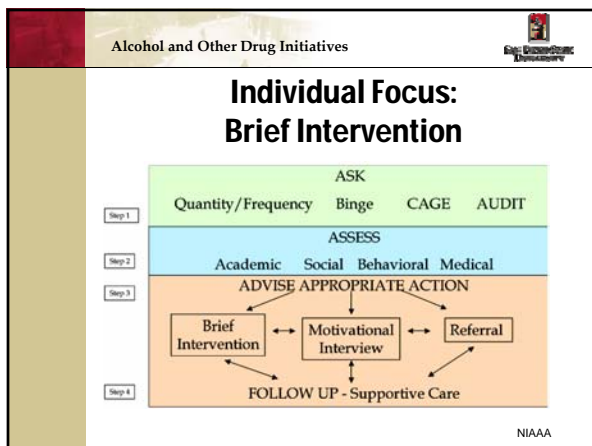
Program Functional Domain	1—Evidence of effectiveness among students	2—Evidence of success with general populations	3—Evidence of logical and theoretical promise	4—Evidence of ineffectiveness
Individual Focus	1. Cognitive behavioral skills training 2. Brief MI 3. Expectancy Challenge		1. Enforcement publicity Campaign 2. Norms Correction Campaign 3. Policy into campaigns	1. Informational knowledge-based programs 2. BAC Feedback
Behavioral Alternative			1. Alcohol free activities and dorms 2. Friday classes 3. Safe-ride program	
Access Control		1. MIP enforcement 2. DUI Enforcement 3. Restrict outlets 4. Increase prices 5. RBS	1. Keg bans 2. Older R.A.s 3. Control alcohol at sports events 4. Dry campuses 5. Enforcement at campus events 6. Consistent disciplinary actions 7. Regulate happy hours	
Community Action		1. Form coalition	1. Refuse alcohol sponsors	

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Chat

What strategies has your institution used to address non-medical prescription drug use?

Type your answer here →



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Advise: Brief Intervention/ Motivational Interviewing

- Built upon the idea that change takes a long time and requires motivation.
- Interventions that are tailored to motivation to change will be most effective.

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Behavioral Alternatives

- Starbucks?
- Actually Aztec Nights may provide a clue that correlates to drinking reductions help

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Results

Aztec Nights

- 17 events
- Attendance ranged from 4,500 to 150
- 16,000 attended at least one event
- Cost was approximately \$400,000
- 82% of reported they'd attend another event
- Attendees felt more connected to campus

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Results (Cont.)

Campus-wide alcohol violations and medical transports during the first 5 weeks of the semester. Decline is 57% and 50% respectively.

Year	Alcohol Violations	Medical Transports
2007	~480	~50
2008	~210	~25

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Concurrent Reductions in Non-Medical use of Medication

- Pain medications:
 - From 18.6% to 15.3%
- Stimulants:
 - From 9.9% to 8.8%

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Residential Learning Communities


- Enhance connections between formal learning opportunities and students' living environments (Brower & Dettinger, 1998)
- Typically focused around interest themes (e.g., research, service learning) and/or specific academic majors (e.g., science and engineering, health sciences)
- Offer a range of activities such as first-year seminars, special courses, faculty partnerships, and study groups
- Counteract estrangement of undergraduates at large schools by creating socially and academically supportive atmosphere and fostering student-faculty relationships

Change in Maximum Drinks as a Function of Time and RLC Status

Time: $F(2,1554)=90.4^{***}$
 RLC: $F(1,777)=13.9^{***}$
 Time * RLC: $F(2,1554)=4.1^*$

Interaction contrasts: increase from pre-college to 1st semester was larger among non-RLCs.

Source: McCabe et al., 2009

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Access/Enforcement

- Operation Sudden Fall
- SHS Policy Changes

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May 6, 2008 Operation Sudden Fall




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What Was Confiscated


Not shown is the Adderall and OxyContin



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Community Action

- Local law enforcement task forces
- Coalitions
- Policy change advocacy

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Research

- Surveillance
 - Better measures that focus on use-motivations in addition to specific medications
 - Problem measures that assess the impact of this drug use on the campus, community and individual level
- Program evaluation
 - Start a Tier system for prescription abuse prevention programs. Tier 3 may include alcohol-related programming that can be modified.

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Questions?

Please type questions into the long white box at the bottom of the Q&A box.



The “Pharming Phenomenon”

The Non-Medical Use of Prescription Drugs: Perception vs Reality

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Non-medical Use of Prescription Drugs

- “Pharming Phenomenon”
 - Recreational use
 - Work more efficiently with less sleep (Kadison, 2005)
 - Generation Rx
- Is there a difference between the perception and the reality of non-medical prescription drug use among our college students and are there significant differences among various demographic groups?

Non-Medical Use of Prescription and Non Prescription Drugs

- SL Research and Assessment; Student Wellness Center; College of Pharmacy; Counseling and Consultation Services
- Survey items based upon review of literature
 - Extent of use
 - Methods of obtainment
 - Reasons for use
 - Consequences of use

Chat

What partners within your institution, as well as external to the institution, have you partnered with regarding the non-medical use of prescription drugs?

Type your answer here →



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Background

- First administration
 - pilot
 - Autumn quarter 2008
 - 5,000 Ohio State students
 - 21.1% response rate (web)
 - Respondents skewed toward female
 - Reflected in higher education literature (Sax, 2006)



How often do you generally use the following types of prescription medications that weren't prescribed for you?

- **Pain medications**
 - Actual: 9.2% at least once per year
 - Perceived: 35.4%
- **Sedatives**
 - Actual: 5.1% at least once per year
 - Perceived: 32.2%
- **Stimulants**
 - Actual: 4.4% at least once per year
 - Perceived: 22.8%

Poll

If you have conducted research on the frequency of non-medical prescription drug use on your campus, how did your numbers compare to ours (in terms of percentage)?



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Fraternity/Sorority Participation

How often do you generally use the following types of prescription medications that weren't prescribed for you?

- Pain medications
 - Actual: 7.5% at least once per year
 - Perceived: 37.3%
- Sedatives
 - Actual: 3.9% at least once per year
 - Perceived: 37.3%
- Stimulants
 - Actual: 7.8% at least once per year
 - Perceived: 15.7%

Intramural Sports Participation

How often do you generally use the following types of prescription medications that weren't prescribed for you?

- Pain medications
 - Actual: 10.6% at least once per year
 - Perceived: 36.7%
- Sedatives
 - Actual: 4.6% at least once per year
 - Perceived: 30.6%
- Stimulants
 - Actual: 4.7% at least once per year
 - Perceived: 18.6%

Living Situation

How often do you generally use the following types of prescription medications that weren't prescribed for you?

- Pain medications
 - On campus: 8.5% at least once per year
 - Off campus: 9.1%
- Sedatives
 - On campus: 3.3% at least once per year
 - Off campus: 5.6%
- Stimulants
 - On campus: 3.8% at least once per year
 - Off campus: 4.5%

Our Research Question

- Is there a difference between the perception and the reality of non-medical prescription drug use among our college students?
 - Yes

Other questions to consider

- What is the graduate and professional experience with the misuse of prescription drugs?
- Why are these prescription drugs being used?
- Are there opportunities for qualitative studies of this phenomenon
- How can universities get ahead of this phenomenon?

Chat

Has anyone conducted **qualitative** research on the topic of non-medical prescription drug use on their campus? If so, what did you discover?

Type your answer here →



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Application to Practice

- Assess the problem
 - Survey
 - Focus Groups
 - Environmental scanning
 - Campus and local police
 - Student health services
 - Residence hall staff
 - Student leaders

What We Learned?

- “Students harm themselves by taking an overdose” -OSU Deputy Chief of Police
- “Oh, you mean, study aids. Yeah, everyone does that” -OSU student leader
- SHS providers do not prescribe ADHD medication. Pharmacy only fills preexisting prescriptions.

What We Learned?

- Students find their prescriptions missing/fewer pills -RAs
- It is so “acceptable” that it is never brought to our attention -Res Life staff

Where Do We Go From Here?

- Environmental approach
 - Education and awareness
 - Policy
 - Student Involvement and leadership
 - Social Norms Marketing Campaigns

Education and Awareness

- Partners
 - OSU College of Pharmacy
 - Generation Rx website
 - First Year Success Series Presentation
 - Wellness Workshops
 - Ohio's High Risk Drinking Initiative (Drug Free Action Alliance) presentation
 - Bulletin Boards
 - Science Cafe



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Education and Awareness

- Multiple layers of influence
 - Parents
 - Peers
 - Media
- Faculty
- Student Life Staff
- At-risk groups
 - Greeks
 - Veterans

Policy

- Misuse is:
 - Using drugs prescribed to others.
 - Using drugs in a way not directed by a doctor.
- Addressed in the institution's alcohol and other drug policy?
- How is this enforced?

ADDERALL

when abused, can be as **DANGEROUS** as **METH** or **COCAINE**



using without a prescription is a **FELONY**
(\$10,000 + 3 years in jail)

Social Norms Marketing Campaign Development

- Collect and analyze data
 - Identify at-risk groups
 - Residence hall students
 - Off campus students
 - Fraternity and sorority members
- Select preliminary campaign messages
- Format, placement and design
- Produce pilot ads
- Conduct market tests
- Implement the campaign



Student Involvement and Leadership

- Social Norms Marketing Campaign
 - Undergraduate Student Government
 - Allied Med student project
 - Focus group participation
- Education
 - Pharmacy students
 - First year students
 - Peers

Questions?

Please type questions into the long white box at the bottom of the Q&A box.

