Attacking the Opioid Crisis Through Drug Screening in Pharmacy Programs

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Conflict of Interest Disclosure

Patricia Darbishire and Patricia Devine have no conflict of interests or relevant financial relationships with a commercial interest pertaining to the content of this presentation.
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Objectives

By the end of this program, participants will be able to:

• Describe healthcare students’ risk for substance abuse

• Debate differing perspectives related to drug screening students

• Discuss drug screening and testing basics

• Highlight research findings on drug screen policies and procedures

• Discuss issues with marijuana
Motivation

• My role and research interests
• National crisis trickles down to healthcare programs
• Problems on experiential rotations
• Defining moment
• College Task Force and student perspectives
Is there a problem among pharmacy students?
National Survey of Drug Use and Health
Self-reported substance use in college-age adults (use in previous month)

Aged 21-25, legally use
• 68% ALCOHOL
• 32% TOBACCO

Aged 18-25, Illicit Drug Use (23%)
• 21% MARIJUANA
• 5% RX DRUGS FOR ILLICIT USE
  • e.g., stimulants, opioids, benzodiazepines
• 2% HALLUCINOGENS
• 2% COCAINE

https://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabs-2016/NSDUH-DetTabs-2016.htm#tab1-7B. Accessed 4.29.18
What’s different about pharmacy students? We asked them.....

<table>
<thead>
<tr>
<th>Factors leading to substance use</th>
<th>Intense competition - Acceptance to pharmacy school, grades, internships, employment, post graduate opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Professional Stressors - Rigorous curriculum, long study hours, expectation to be super-human: participation in pharmacy organizations, leadership positions, committees, community service</td>
</tr>
<tr>
<td></td>
<td>Family, Social Pressures – Financial “do or die” situation for the family; Expectations: “A” in high school ≠ “A” pharmacy school, financial stress /students supporting families; Frats/sororities, sports</td>
</tr>
<tr>
<td></td>
<td>Knowledge of and easy access to medications</td>
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</table>
How big is the problem?
Substance Use by Student Pharmacists

Hazardous and/or illicit use of:
- Alcohol (25-36%)
- Tobacco (5-58%)
- Marijuana (6-33%)
- Stimulants (3-19%)
- Cocaine (3-7%)
- Sedatives (3-9%)
- Opioids (8-15%)
- Heroin (<3%)
- Hallucinogens (3-14%)

• 2016 review of 16 articles published between 1985-2014 at University of Georgia
• Summarizes findings of student pharmacists’ use of illicit substances

*Ranges are indicative of study age and report of current or lifetime use

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5221842/. Accessed 5.1.18
h.govPMC5221842/. Accessed 5.1.18
Substance Use Behaviors/Consequences at Three Colleges of Pharmacy

2011 study by Baldwin et al in Substance Abuse

• 566 students completed surveys at 3 colleges of pharmacy
• Conclusion: A substantial number of pharmacy students engage in risky drug-use behaviors
• Past-year drug-associated events included:
  n=164 Heavy drinking; n=102 Blacked out
  n=45 Attended class or work under influence
  n=34 Grades or job evaluations harmed by drug use
  n=17 Legal charges from drug use
  n=8 Provided patient care under influence

Let’s Talk

With those sitting near you, take 3 minutes to determine:

• 2 reasons to drug screen, and
• 2 reasons not to drug screen pharmacy students
Task Force of 12 Faculty, Administrators and Students

Faculty/Administrators Reasons to Drug Screen

• Uphold reputation of our college and profession
• Protect health/welfare of students in our charge
• Protect the public from misuse/abuse/diversion
• Ensure optimal judgment, skills and safe practices
  • Learning, patient care, and mentoring other students
• Uphold affiliation agreements with practice sites
• Report illegal activities and comply with laws
• Pharmacists screened prior to employment
  • Clinical faculty screened at sites; so should students
Faculty and Administrators’ Reasons NOT to Screen

• “If you look for them, you will find them.”
• How do you differentiate the extent of the problem?
  • Recreational? Substance Use Disorder? Mental health issues?
• Whose responsibility to administratively manage/monitor?
  • Time and effort
• How do we use a general policy to address individual situations?
• How do we know when a student should be allowed to continue or return to:
  • Didactic coursework? Patient care? Pharmacy licensure?
• If we screen students, shouldn’t we do the same for faculty/staff?
  • Only those in patient care?
• Are we micromanaging students’ personal lives?
Students’ Perspectives

Reasons to Drug Screen
- Want an even playing field
- Need peers sober for group work; ensures accountability
- Protects integrity of their pharmacy degree
- Method to anonymously protect their peers from SUD
- Tells them the school thinks this is important
- Conclusion: Cost is justifiable

Concerns about Screening
- Unexpected costs (random)
- Inconvenience (time, interruptions)
- Legitimate use would result in disclosure of personal information
- Fear of repercussions from false positives
- Fear of detecting insignificant recreational use
- Cloud of suspicion; undermined their professionalism

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Definitions: Drug Screens and Tests

Drug screen
Initial, cost effective, quick method to detect use of a drug class
Not highly selective for specific drugs
Results should be confirmed through use of a drug test

Drug test (Confirmation)
Precise, more costly and time intensive measure used to confirm a positive drug screen and identify specific drugs used

Drug screening program
Officially accepted, written policy with procedures requiring drug screening for some or all students
Preferred Screening Methods

Urine
• **Gold standard**, most commonly used for drug screens
• Easy to collect; can be tampered (perform specimen validity)
• Doesn’t detect immediate use, but detection period 5X longer than saliva, blood
• Comparable results with saliva (results in agreement)

Saliva (Oral fluids)
• **Alternative** to urine screen for shy bladder, renal impairment, suspected urine tampering/substitution
• Easy to collect and observe collection
• Better positivity rate than urine for heroin, cocaine, but drugs in some dosage forms may not appear (transdermal, intrathecally)
• Limited to detection of current drug use (only)
Additional Screening Methods
(less utility for student screening)

Blood (Plasma)
• Invasive and costly
• As with saliva, limited to detection of current drug use only
• Meds with short half life, e.g., opiates, only detectable a few hours

Hair
• Substances may not be detectable until weeks after exposure
• Longest detection method (weeks to years, depending on hair length)
• Hair tampering limits utility: Cutting, bleaching, dyeing alters results
Examples of Urine Drug Screen Panels

• Smorgasbord of companies offer drug screening services
• Quality varies; cost increases with additional drugs
• Monthly list of Substance Abuse and Mental Health Services Administration (SAMHSA)-certified labs that meet standards for Federal Workplace Drug Testing Programs

Examples:

➤ 5-panel: amphetamines/methamphetamine, cocaine, marijuana, natural opiates, phencyclidine
➤ 9-panel: above + barbiturates, benzodiazepines, methadone, propoxyphene
➤ 14 panel: above + buprenorphine, ecstasy, oxycodone, tricyclic antidepressants

Periods of Detection in Urine

Detection period for any drug varies greatly, depending on several factors, including the person’s and the drug’s individual characteristics, as well as the quality of the detection method.

### Examples

<table>
<thead>
<tr>
<th>Drug</th>
<th>Up to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana</td>
<td>10 days</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>10 days</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>7 days</td>
</tr>
<tr>
<td>Most opioids</td>
<td>5 days</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>5 days</td>
</tr>
<tr>
<td>Cocaine</td>
<td>5 days</td>
</tr>
<tr>
<td>Heroin</td>
<td>1 day</td>
</tr>
</tbody>
</table>
Point of Care Urine Screening

Presumptive use only, not confirmation

Many prescription and nonprescription drugs cause false positives

Many drug omissions; false negatives are common

• Opiates/Opioids
  ◦ Detect natural opiates, but often miss semi-synthetics (hydrocodone, oxycodone, oxymorphone) and synthetics (fentanyl)

• Benzodiazepines
  ◦ 50% false negatives occur for alprazolam, clonazepam, lorazepam
Loss of Lives: Lives Affected
Survey of U.S. Colleges of Pharmacy

**Purpose**
Gather data on drug screening policies/procedures, drug-related incidents, and substances abused by pharmacy students

**Participants**
135 U.S. colleges and schools of pharmacy

**Method**
Sent to deans, who forwarded it to the most appropriate person (e.g., experiential education, student services/affairs)
Substance Use Incident

• Positive drug screen and/or test, or any occurrence where student behavior is sufficient to cause reasonable suspicion, a problematic event, or criminal charges.

• In our study, we reported Substance Use Incidents as the number of reported drug or alcohol occurrences the respondent was aware of in their professional program.
Pharmacy School Respondents

- Southeast = 30%
- Midwest = 27%
- Northeast = 17%
- West = 16%
- Southwest = 10%

73% response rate (98/135 programs)
Survey Results

Demographic Trends

- Average pharmacy class enrollment size = 123
- Private and faith-based pharmacy schools almost twice as likely to have a drug screen program than public schools
- Substance use among pharmacy students in colleges located in rural areas tends to be higher than urban areas/inner city
Number of Incidents

On average, how many substance use incidents is your college/school aware of per year?

Total Known Incidents = 2.7
Drugs = 0.9  Alcohol = 1.8

Most are UNKNOWN
Drugs Involved with Substance Use Incidents

- Alcohol: 80%
- Marijuana: 61%
- Amphetamines/Methamphetamines: 42%
- Opiates (Excluding Heroin): 27%
- Benzodiazepines: 14%
- Other, Unknown: 12%
- Heroin: 8%
- Cocaine: 8%
- Ecstasy: 3%
- Barbiturates: 3%
Colleges that Screen

Drug Screening Program

- **Our Definition**: Having an official policy/procedure requiring regular screening for some or all students, such as prior to admission or randomly throughout curriculum.
Initial Motivation(s) for Screening

- Experiential site requirement: 90%
- PharmD admission requirement: 37%
- Protect integrity of profession: 27%
- Deter drug abuse/addiction: 21%
- Specific substance-related event: 8%
- University requirement: 7%
- State requirement: 4%
- Other: 4%
Drug Screen Procedures

- Urine is the primary specimen used (100%)
- Schools commonly use 10-panel drug screen (72%)
- No schools breathalyze students
- Primarily paid for by students, yearly or on occurrence (94%)
- Average cost is $42
Who is Notified of Positive Results?

<table>
<thead>
<tr>
<th>Department</th>
<th>Percent of Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of Experiential Education</td>
<td>82%</td>
</tr>
<tr>
<td>Office of Student Services/Academics</td>
<td>73%</td>
</tr>
<tr>
<td>Dean's Office</td>
<td>60%</td>
</tr>
<tr>
<td>State Board of Pharmacy</td>
<td>38%</td>
</tr>
<tr>
<td>States's Pharmacist Recovery...</td>
<td>30%</td>
</tr>
<tr>
<td>Assigned Experiential Preceptors</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>12%</td>
</tr>
<tr>
<td>Collegiate Counseling/Support...</td>
<td>6%</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>2%</td>
</tr>
</tbody>
</table>

Respondents selected all that applied.
Discussion

Who needs to know?
Administrator Perceptions on Screening

Most (75%) administrators felt that random drug screening would deter pharmacy students from substance abuse.

**Yes:** Students need a reason to say "no" and this gives them that reason. It also tells students that this issue is important to us.

**Yes:** Recreational users are likely to abstain if drug screened. **But:** Students who have a substance use disorder will find it difficult to abstain in spite of potential consequences.

**No:** Non-random screens are highly ineffective in detecting use. **But:** Students will be less likely to use if they know they can be screened at any time.
Schools that don’t drug screen are aware of twice as many drug and alcohol-related incidents than those that do screen students.

<table>
<thead>
<tr>
<th>Average total alcohol and drug-related incidents per year</th>
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</thead>
<tbody>
<tr>
<td><strong>Schools that DO drug screen</strong></td>
<td><strong>Schools that do NOT drug screen</strong></td>
</tr>
<tr>
<td>Mean = 1.9 (SD = 2.1)</td>
<td>Mean = 4 (SD = 3.8)</td>
</tr>
</tbody>
</table>
Marijuana: Legally Gray

State breakdown of marijuana laws

Why is it gray?

• Federal law supersedes State law
• Currently the Federal Government isn't "enforcing"
• Each state has its own laws regarding recreational marijuana and/or medical marijuana
• Board of Pharmacy employees are State employees not Federal, each with their own laws and philosophy towards enforcing them
• University, college, and program policies and attitudes towards enforcing laws can vary
• Experiential education sites policies (many large systems have institutions in more than one state)
What do you do with all this gray?
Next Steps

• Present findings and review advantages, disadvantages and concerns of all involved parties, including:
  • Administrative leadership, faculty and staff
  • Experiential advisory counsel (preceptors, faculty, and student representatives)
  • Student focus groups (e.g., pharmacy student leadership organizations)
• Modify survey for use in other healthcare disciplines and compare results
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