Overview of today...

• A review of MI techniques and relevant principles in a student life setting
• Use of Motivational Interviewing strategies in conversations
• Brief interventions for marijuana use

Substance Use Data from Monitoring the Future Study

• Alcohol is still the primary drug of choice
  ◦ Past year
  • 77.4% report any alcohol use
  • 60.1% report having been drunk
  ◦ Past month
  • 63.5% report any alcohol use
  • 39.9% report having been drunk

Alcohol-Related Consequences

- Among students who drink, within the past 12 months as a consequence of drinking...
  - 34.6% did something they later regretted
  - 30.4% forgot where they were/what they did
  - 16.5% had unprotected sex
  - 14.9% physically injured themselves

n = 105,781 students from 129 campuses
American College Health Association, 2011

Substance Use Data from Monitoring the Future Study

- Any illicit drug
  - 36.3% report past year use
- Marijuana
  - 33.2% report past year use
- Any illicit drug other than marijuana
  - 16.8% report past year use
    - 9.8% Adderall
    - 9.3% Amphetamines
    - 8.5% Synthetic marijuana (e.g., K2 or spice)
    - 6.2% Narcotics other than heroin
    - 5.8% Vicodin

Relationship Between Alcohol Use and Academic Success

- Relationship between alcohol, sleepiness, and GPA exists in college (Singleton & Wolfson, 2009)
- Heavy drinking associated with lower GPA, and students at research universities who are heavy episodic drinkers are less likely to be engaged in interactions with faculty (Porter & Prior, 2007)
- Frequency of binge drinking associated with lower grades in college setting (Pascarella, et al., 2007)

Health and Mental Health

n = 105,781 students from 129 campuses

- Factors affecting academic performance:
  - 27.5% Stress
  - 19.4% Sleep difficulties
  - 19.1% Anxiety
  - 16.4% Cold/Flu/Sore throat
  - 13.3% Work
  - 12.4% Internet use/computer games
  - 11.9% Depression
  - 11.0% Concern for a troubled friend/family member
  - 10.5% Relationship difficulties

  American College Health Association, 2011

The field has, most definitely, identified efficacious strategies that result in significant reductions in alcohol use and related consequences.
Tier 1: Evidence of Effectiveness Among College Students

- Combining cognitive-behavioral skills with norms clarification and motivational enhancement interventions.
  - Reductions in drinking rates and associated problems (e.g., ASTP)
- Offering brief motivational enhancement interventions.
  - Reductions in drinking rates and associated problems (e.g., BASICS)
- Challenging alcohol expectancies.
  - Reductions in alcohol use

From: “A Call to Action: Changing the Culture of Drinking at U.S. Colleges,” NIAAA Task Force

The key, then, is how we might connect students to services if and when they need them...lots of different entry points exist!

Health Information: Student Impressions

- Believability of sources of health information (Top 5)
  - Health Center Medical Staff (89.9%)
  - Health Educators (89.8%)
  - Faculty/coursework (68.1%)
  - Parents (65.2%)
  - Leaflets, pamphlets, flyers (59.0%)
- Where students get their health information (Top 5)
  - Internet/World Wide Web (78.2%)
  - Parents (75.5%)
  - Friends (61.1%)
  - Health Center Medical Staff (60.6%)
  - Health Educators (53.3%)
  - 10th place: Faculty/coursework (40.2%)

American College Health Association, 2008
Mandated Students
1999-2010

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<tr>
<td># of interventions evidencing reductions in, or a protective effect against, drinking, consequences, and/or alcohol-psychopathology outcomes/ Total # of interventions</td>
<td>0/1</td>
<td>10/12</td>
<td>8/12</td>
<td>18/25</td>
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Rubington’s R.A. Research
Rubington (1993, 1996)

• Studied trends in sanction/violation data
  ▪ Suggested that if decrease in violations occur...
    ▪ Some new policy or program might be working
    ▪ Students might be “wising up” as to where and when to do their drinking
    ▪ Residents and R.A.s might negotiate what will and will not be sanctioned
    ▪ R.A.s might get less strict in their enforcement

Rubington’s R.A. Research
Rubington (1993, 1996)

• Different R.A. styles (“by the book,” “laid back,” or “in between”), and there is variability in styles of enforcement depending on the site of the offense
  ▪ Too laid back can cause loss of control on one’s floor
  ▪ Too strict can result in efforts to circumvent the policy
The Stages of Change Model

- Precontemplation
- Contemplation
- Preparation/Determination
- Action
- Maintenance

Stages of Change in Substance Abuse and Dependence: Intervention Strategies

- Precontemplation Stage
- Contemplation Stage
- Action Stage
- Maintenance of Recovery Stage
- Relapse Stage

MOTIVATIONAL ENHANCEMENT STRATEGIES
ASSESSMENT AND TREATMENT MATCHING
RELAPSE PREVENTION & MANAGEMENT
Essentials of a Motivational Enhancement Approach

- Non-judgmental and non-confrontational (“the spirit” of MI)
- Emphasizes meeting people where they are in terms of their level of readiness to change
- Utilize MI strategies to elicit personally relevant reasons to change
- Often can find the “hook” that prompts contemplation of or commitment to change
- When student is ambivalent, considers ways to explore and resolve ambivalence

Miller & Rollnick, 2002

What is resistance?

- Resistance is verbal behaviors
- It is expected and normal
- It is a function of interpersonal communication
- Continued resistance is predictive of (non) change
- Resistance is highly responsive to style of the professional

What Does All of This Mean?

- A conversation with a student can go a long way to impacting health
- Your ability to have a conversation that lowers resistance and keeps the student open to change sets that student up for success
- The conversation can be collaborative, without you solving the problem for the person you’re talking to
Motivational Interviewing
Basic Principles
(Miller and Rollnick, 1991, 2002)

1. Express Empathy
2. Develop Discrepancy
3. Roll with Resistance
4. Support Self-Efficacy

Four Principles of Motivational Interviewing

• Express Empathy
  ▫ Research indicating importance of empathy

• Develop Discrepancy
  ▫ Values and goals for future as potent contrast to status quo
  ▫ Student must present arguments for change: professional declines expert role

• Roll with Resistance
  ▫ Avoid argumentation
  ▫ Confrontation increases resistance to change
  ▫ Labeling is unnecessary
  ▫ Professional’s role is to reduce resistance, since this is correlated with poorer outcomes
  ▫ Resistance is a signal to respond differently
    ▪ If resistance increases, shift to different strategies
    ▪ Objections or minimization do not demand a response
Four Principles of Motivational Interviewing

• Support Self-Efficacy
  ◦ The student we’re working with is responsible for choosing and implementing change
  ◦ Confidence and optimism are predictors of good outcome in both the professional and the person he or she is working with

Building Blocks for a Foundation

Strategic goal:
• Elicit Self-Motivational Statements
  ◦ “Change talk”
  ◦ Self-motivational statements indicate an individual’s concern or recognition of need for change
  ◦ Types of self-motivational statements are:
    • Problem recognition
    • Concern
    • Intent to Change
    • Optimism
  ◦ Arrange the conversation so that students makes arguments for change

OARS:

Building Blocks for a Foundation

• Ask Open-Ended Questions
  ◦ Cannot be answered with yes or no
  ◦ Professional does not know where answer will lead
    • “What do you make of this?”
    • “Where do you want to go with this now?”
    • “What ideas do you have about things that might work for you?”
    • “How are you feeling about everything?”
    • “How’s the school year going for you?”
OARS: Building Blocks for a Foundation

- **Affirm**
  - Takes skill to find positives
  - Should be offered only when sincere
  - Has to do with characteristics/strengths
    - "It is important for you to be a good student"
    - "You're the kind of person that sticks to your word"

- **Listen Reflectively**
  - Effortful process: Involves Hypothesis Testing
    - A reflection is our "hypothesis" of what the other person means or is feeling
  - Reflections are statements
    - Student: "I've got so much to do and I don't know where to start."
    - Professional: "You're feeling really overwhelmed."
    - Student: "Yes, I really wish things weren't this way" or... "No, I'm just not really motivated to get things started."
  - "Either way, you get more information, and either way you're receiving feedback about the accuracy of your reflection." (p. 179, Rollnick, Miller, & Butler, 2008)

Reflective Listening: A Primary Skill

- "Hypothesis testing" approach to listening
- Statements, not questions
- Voice goes down
- Can amplify meaning or feeling
- Can be used strategically
- Takes hard work and practice
Hypothesis Testing Model

1. What speaker says
2. What speaker means
3. What listener hears
4. What listener thinks speaker means

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Motivational Interviewing Strategies

• Reflection
  My partner won’t stop criticizing me about my drinking.
  You’re feeling frustrated about that.
  -- or --
  It sounds like you wish that would stop.
  -- or --
  It feels to you like your partner is always on your case.

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OARS:
Building Blocks for a Foundation

• Summarize
  ▪ Periodically to...
  ▪ Demonstrate you are listening
  ▪ Provide opportunity for shifting
Finding the Hook...  
some examples

Absorption and Oxidation of Alcohol

- Factors affecting absorption
  - What one is drinking
  - Rate of consumption
  - Effervescence
  - Food in stomach

- Factors affecting oxidation
  - Time!
  - We oxidize .016% off of our blood alcohol content per hour
Time to get back to .000%

- .08%
  - 5 hours
    (.080%....064%....048%....032%....016%....000%)

- .16%
  - 10 hours
    (.160%....144%....128%....112%....096%....080%....064%....048%....032%....016%....000%)

- .24%
  - 15 hours
    (.240%....224%....208%....192%....176%....160%....144%....128%....112%....096%....080%....064%....048%....032%....016%....000%)

Impact on judgment and decision making

Blood Alcohol Level

- .02%  Relaxed
- .04%  Relaxation continues, Buzz develops
- .06%  Cognitive judgment is impaired
Alcohol Myopia

Impact on Sleep
Next day, increase in:
• Daytime sleepiness
• Anxiety
• Irritability
• Jumpiness

Next day, feel:
• Fatigue
Consider what “hooks” you might encounter depending on the context and the visit...

- Depression
- Anxiety
- Weight Issues
- Relationships
- Finances
- Overall Health
- Academics
- Athletics
- Sleep

Marijuana

Tier 1: Evidence of Effectiveness Among College Students

- Combining cognitive-behavioral skills with norms clarification and motivational enhancement interventions (ASTP only program mentioned by name as an example).
- Offering brief motivational enhancement interventions (BASICS only program mentioned by name as an example).
- Challenging alcohol expectancies.

From: “A Call to Action: Changing the Culture of Drinking at U.S. Colleges,” NIAAA Task Force
Elements of ASTP

• Uses motivational enhancement strategies to prompt contemplation of change and to elicit personally relevant reasons to change

• Includes information (including norms-based information), but does so within a motivational framework (i.e., information can be used to develop discrepancies or to be applied toward behavior change)

Elements of ASTP

• Acknowledges that the best way to avoid risks and harm is abstinence, yet also acknowledges that any steps toward reduced risk are steps in the right direction

• Elicits strategies for changing behavior from participants and provides additional behavior change strategies when indicated, including relapse prevention strategies

So, what about marijuana?
Similarities between marijuana and alcohol

- Illegal, but nevertheless used by a large group of students
- Illegal to drive while under the influence of marijuana
- Students may see several positive reasons for use
- Misperceptions of the prevalence of use exist
  - Most sizeable misperceptions come from heaviest users
- If target population is mandated students, these individuals did not choose to be in attendance at a class or workshop and may be resistant
- Brief motivational enhancement approaches seem promising for making an impact

What are the DIFFERENCES/challenges?

- Unlike alcohol, no clear guidelines for a point at which risks are minimized
- Unlike alcohol, hard to estimate standard amount, intoxication levels, potency, etc.
  - Established measures of use and consequences are much less available
  - Those that are tend to be adapted from alcohol measures
- Being "into" marijuana use may reflect much larger lifestyle/identity
- Perceived risk for future consequences, even if ones already experienced by the student, can be low

Interventions for marijuana use

- The limited number of studies involving college students nevertheless suggest that incorporating a motivational framework in an in-person intervention is promising (e.g., McCambridge & Strang, 2004; Miller, et al., 2001; White, et al., 2006)
  
- However, it is well established that motivational interviewing-based interventions work with a range of drugs other than alcohol within the general adult dependent population, including in groups (e.g., Stephens, Roffman, & Curtin, 2000; Budney, et al., 2000; Longshore & Grills, 2000; Baker, Boggs, & Lewin, 2001; Van Horn & Bus, 2001)
Interventions for marijuana use

- Need for group had been established.
- No “Tier I” type of interventions for marijuana use
- Motivational-enhancement based interventions have demonstrated success with mandated students for alcohol
- Motivational-enhancement based groups can impact drug use in the general adult population
- MOD was developed using ASTP as a model
- Pilot data collected to see if the workshop “performs” the way a motivational-enhancement based program should

MOD content

MOD Content

- Elicit the “good” things and the “not-so-good” things about marijuana use from students
- Where applicable, bring in what the science says about the consequences students have identified
- Where applicable, highlight ways in which these “not-so-good” things can be reduced or eliminated
- Explore what would make some of those “not-so-good” things happen less often
- Review other substances when relevant and/or of interest to the participants
Sample list of consequences offered by students in open-ended survey

<table>
<thead>
<tr>
<th>Top 10 Endorsed Marijuana Consequences: Study 1</th>
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<tbody>
<tr>
<td>1. Eating (e.g., eating too much)</td>
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<td>2. Sleep problems</td>
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<tr>
<td>3. Productivity, apathy, motivation issues, or boredom</td>
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<td>4. Cognitive abilities, attention, or concentration problems</td>
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<tr>
<td>5. Memory problems</td>
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<tr>
<td>6. Problems with lungs or coughing</td>
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<tr>
<td>7. Feeling antisocial or experiencing social awkwardness</td>
</tr>
<tr>
<td>8. Physical difficulties outside of lungs, cough, mouth, or throat (e.g., feeling dizzy, sick, uncoordinated, etc.)</td>
</tr>
<tr>
<td>9. Not getting things done</td>
</tr>
<tr>
<td>10. Spending too much money</td>
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</tbody>
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Notes: Preliminary analyses suggested that among the top ten types of consequences generated by participants, only two (not getting things done and financial impact) were reflected in items from the RWE, and these two were the ninth and tenth most mentioned consequences.

Explaining the “Top Ten”:

Impact on cognitive functions and sleep (#2, #3, #4, and #5)

Marijuana and cognitive abilities

- Effects on the brain
  - Hippocampus
    - Attention
    - Concentration
    - Memory
  - Research with college students shows impact on these even 24 hours after last use
  - After daily use, takes 28 days for impact on attention, concentration, and memory to go away
Marijuana’s impact on the body...

- Effects on the brain
  - Reaction time is impacted
  - DUI implications
  - Throws off sleep

Example:
Impact on sleep

With marijuana, two things happen...
Extension of Stage 4 or "deep" sleep and REM deprivation
Next day, just like with alcohol, increase in:
- Daytime sleepiness
- Anxiety (note that there is a Cannabis Induced Anxiety Disorder)
- Irritability
- Jumpiness

Explaining the “Top Ten”:
Cardiovascular effects
(#6 and #8)
Marijuana’s impact on the body...

- Effects on heart rate and blood pressure
  - Increases heart rate
    - On average, 29 beats per minute increase
  - Raises blood pressure
- Effects on lungs
  - Vital lung capacity
  - Carcinogen exposure
    - 70% more benzopyrene in mj smoke than tobacco smoke
    - 50% more polyaromatic hydrocarbons in mj smoke than tobacco smoke

Explaining the “Top Ten”:

Motivation and “the munchies” (#1 and #9)

Marijuana’s impact on the body...

- A word about impact on motivation
  - Definitely hard to measure but...
  - Hippocampus impacts motivation
  - Marijuana’s impact on sleep
  - Block passage of nutrients between cells
- “The munchies” (Mahler et al., 2007)
  - Stimulation of anandamide
  - Makes sweet things taste even sweeter
**NORM PERCEPTION**

- In survey of 5990 participants, 67.4% of students said they hadn’t used MJ in the past year
  - Thus, “most” students don’t use marijuana
- Only 2% of students got this right!
  - 98% of students perceived the typical student to use at least once per year
- Misperceptions were related to use and consequences

Kilmer, et al. (2006)

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**Tolerance**


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**Drug Interactions**

- Potentiation
- Antagonistic
Surveys from 54 completers during the 2011-2012 academic year

Experience in the MOD is positive:

• 100% strongly agree or agree that...
  ◦ The facilitator seemed well-organized.
  ◦ The facilitator seemed competent and well-trained.
  ◦ The facilitator seemed warm and understanding.
  ◦ The facilitator seemed well-informed about what goes on in the college setting.
• 93% strongly agree or agree that...
  ◦ They would recommend the program to a friend.
  ◦ The workshop was thorough and complete.

Experience in the MOD is not what they expected:

• The program was what I expected
  ◦ 32.7% strongly agree or agree
  ◦ 19.2% are undecided
  ◦ 48.1% strongly disagree or disagree
Contemplation of change:

- The information I received will cause me to think differently about my pattern of substance use
  - 88.7% strongly agree or agree
  - 7.5% are undecided
  - 3.8% disagree or strongly disagree

Intent to change:

- The information I received will cause me to change my pattern of substance use
  - 39.6% strongly agree or agree
  - 45.3% are undecided
  - 15.1% disagree or strongly disagree

- I left the presentation with a specific goal in mind about changing my substance use
  - 31.4% strongly agree or agree
  - 45.1% are undecided
  - 23.5% disagree or strongly disagree

Next steps:

- Now that two years of post-intervention surveys have been collected as pilot data, move toward follow-up with behavioral outcomes
- Continue to incorporate new scientific findings into conversations with students
- Examine elements/components contributing to intent to change and/or actual change
- Further identify strategies for reducing harm
Talking with someone you’re concerned about...

• Do what you can to meet people where they are in terms of readiness to change
• Talk to a student when he or she is free of distractions
• Ask open-ended questions
• Don’t make assumptions
• Don’t label behavior
• Don’t judge behavior
• Remain calm and empathic/understanding

Talking with someone you’re concerned about...

• Describe behavior or specific consequences
• Ask about their thoughts and concerns, and what they might want to do, if anything
• Be aware of resources on campus
• Be OK with a person not wanting to talk or accept your referral
• Consult with a supervisor or other staff when needed
• Be careful not to take on too much

Parting words...

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