Substance Use and Mental Health Screening Tools in Practice
2018 VCHIP CHAMP Learning Session

Michelle Shepard, MD, PhD
Stanley Weinberger, MD, MS
Disclosures

• We have no relevant financial relationships to disclose or conflicts of interest to resolve

• We will discuss no unapproved or off-label pharmaceuticals
Objectives

• Understand recommendations for adolescent substance use and depression screening

• Review validated screening tools

• Compare and contrast screening tool use for adolescents in primary care setting

• Understand difference between screening and assessment tools
Why screen for substance use?

- Common health risk behavior among adolescents
- Impacts current and future health
- Universal screening of can identify SU early
- Screening itself may have some therapeutic effect
- Brief screening tools are available
Bright Futures Recommendations

• Depression screening annually starting age 12yr
  – Recommend PHQ-2 or GLAD-PC toolkit (PHQ-9, PHQ-9 modified for teen, Beck depression scale).
  – Consistent with USPSTF recommendations

• Tobacco, alcohol and drug use assessment annually starting age 11yr
  – CRAFFT recommended
Case Example

Adolescent story #1 – John
• John is a junior at CVU. He lives at home with parents and younger sister. He’s involved in basketball and planning to go to college. He has a history of asthma, but no other chronic disease. John’s mother has a history of depression.

Adolescent story #2 – Elena
• Elena is a 9th grader at BHS. She is a middle child with 4 siblings. Parents are separated and she lives with her mother and grandmother; Only occasional contact with father. Elena has a history of depression. Family history of substance abuse in father and history of domestic violence prior to separation.
Screening vs. Assessment Tools

**Screening**
- Evaluates the possible presence of a particular problem
- Can be simple yes/no
- Determines whether a more thorough evaluation is warranted.
- Many require little or no special training

**Assessment**
- Defines the nature of the problem
- Determines diagnosis (DSM-5 criteria)
- Used to develop specific treatment recommendations
- Many require special training to administer and interpret
Properties of Screening Tools

- **Sensitivity**: ability of a test to correctly identify those with the disease (true positive rate)

- **Specificity**: ability of the test to correctly identify those without the disease (true negative rate)

- **Reliability**: ability to produce consistent results

- **Validity**: ability to discriminate between individuals with and without a problem
### Substance Use Screening Tools

<table>
<thead>
<tr>
<th>Tool</th>
<th>Focus</th>
<th>Validated in adolescents</th>
<th>Psychometric Properties</th>
<th>Other Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRAFFT</td>
<td>Alcohol, marijuana and drug use</td>
<td>Yes (age 14+)</td>
<td>Sen: 76-92% Spec: 76-94% NPV: 91-98%</td>
<td>No tobacco questions</td>
</tr>
<tr>
<td>BSTAD</td>
<td>Tobacco, alcohol, and drug use</td>
<td>Yes (ages 12-17)</td>
<td>Sen: 80-96% Spec: 85-97% *substance specific</td>
<td>Available online</td>
</tr>
<tr>
<td>S2BI</td>
<td>Tobacco, alcohol, and drug use</td>
<td>Yes (ages 12-17)</td>
<td></td>
<td>Available online</td>
</tr>
<tr>
<td>NIAAA toolkit</td>
<td>Alcohol abuse</td>
<td>Yes</td>
<td>Sen: 85% Spec: 87%</td>
<td>Pocket guide with algorithm</td>
</tr>
<tr>
<td>AUDIT-10</td>
<td>Alcohol abuse</td>
<td>Yes</td>
<td>Sen: 88% Spec: 81%</td>
<td>Positive screen cutoff depends on gender</td>
</tr>
<tr>
<td>Tool</td>
<td>Focus</td>
<td>Validated in adolescents</td>
<td>Psychometric Properties</td>
<td>Other Notes</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------</td>
<td>--------------------------</td>
<td>-------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>SASQ</td>
<td>Alcohol use</td>
<td>?</td>
<td></td>
<td>Follow-up with longer screen if positive</td>
</tr>
<tr>
<td>SSSQ</td>
<td>Substance use</td>
<td>?</td>
<td>Sen: 100% Spec: 73%</td>
<td>Follow-up with longer screen if positive</td>
</tr>
<tr>
<td>DAST-10</td>
<td>Drug use</td>
<td>No</td>
<td>Sen: 80-85% Spec: 78-88%</td>
<td>Not free</td>
</tr>
<tr>
<td>DAST-20 Adolescent</td>
<td>Substance use</td>
<td>Yes</td>
<td>Sen: 79% Spec: 85%</td>
<td>Not free</td>
</tr>
<tr>
<td>CAGE</td>
<td>Alcohol abuse</td>
<td>No</td>
<td>Sen: 37% Spec: 96%</td>
<td>Tested and poor performance in adolescents</td>
</tr>
</tbody>
</table>
CRAFFT 2.0:
Car, relax, alone, forget, friends, trouble

During the PAST 12 MONTHS, on how many days did you:

1. Drink more than a few sips of beer, wine or any drink containing alcohol?

2. Use any marijuana (pot, weed, hash, or in foods) or “synthetic marijuana” (like “K2” or “Spice”)?

3. Use anything else to get high (like other illegal drugs, prescription or over-the-counter medications, and things that you sniff or “huff”)?

4. Have you ever ridden in a CAR driven by someone (including yourself) who was “high” or had been using alcohol or drugs?
CRAFFT 2.0

Follow-up questions (if more than 0 days)

1. Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?

2. Do you ever use alcohol or drugs while you are by yourself, or ALONE?

3. Do you ever FORGET things you did while using alcohol or drugs?

4. Do your FAMILY or FRIENDS ever tell you that you should cut down on your drinking or drug use?

5. Have you ever gotten into TROUBLE while you were using alcohol or drugs?
BSTAD:
Brief Screener for Tobacco, Alcohol and Other Drugs

In the past year, on how many days ...

1. Did you smoke cigarettes or use other tobacco products?

2. Did you have more than a few sips of beer, wine, or any drink containing alcohol?

3. Did you use marijuana (weed, blunts)?
Follow-up questions (positive answers only)

1. Which of the following substances have you used? (cocaine, heroin, amphetamines, hallucinogens, Inhalants)

2. Were not prescribed for you; or Which you took more of than you were supposed to take? (prescription pain meds, sedatives, simulants, OTC medications)
S2BI: Screening to Brief Intervention

In the past year, how many times have you used...

1. Tobacco?

2. Alcohol?

3. Marijuana?

Answer Choices: Never  Once or Twice  Monthly  Weekly
Follow-up questions (if any more than never)
1. Prescription drugs that were not prescribed for you (such as pain medication or Adderall)?

2. Illegal Drugs (such as cocaine or ecstasy)?

3. Inhalants (such as nitrous oxide)?

4. Herbs or synthetic drugs (such as salvia, K2, or bath salts)?

Answer Choices: Never Once or Twice Monthly Weekly
*If monthly, give CRAFFT tool and brief intervention/referral
### STEP 1: Ask the Two Screening Questions

For elementary and middle school patients, start with the friends’ question. Choose the questions that align with the patient’s school level, as opposed to age, for patients ages 11 or 14. Exclude alcohol use for religious purposes.

#### Elementary School (ages 9–11)

**Friends:** Any drinking?
“Do you have any friends who drank beer, wine, or any drink containing alcohol in the past year?”
ANY drinking by friends heightens concern.

**Patient:** Any drinking?
“How about you—have you ever had more than a few sips of any drink containing alcohol?”
**ANY drinking:**
**Highest Risk**

#### Middle School (ages 11–14)

**Friends:** Any drinking?
“Do you have any friends who drank beer, wine, or any drink containing alcohol in the past year?”
ANY drinking by friends heightens concern.

**Patient:** How many days?
“How about you—in the past year, on how many days have you had more than a few sips of any drink containing alcohol?”
**ANY drinking:**
**Moderate or Highest Risk**
*(depending on age and frequency)*

#### High School (ages 14–18)

**Patient:** How many days?
“In the past year, on how many days have you had more than a few sips of beer, wine, or any drink containing alcohol?”

**Friends:** How much?
“If your friends drink, how many drinks do they usually drink on an occasion?”
**Binge drinking by friends heightens concern.**
*(See “What counts as a drink? A Binge? on reverse)*

**Lowest, Moderate, or Highest Risk**
*(depending on age and frequency)*
Follow-up of positive screens

- **Assess** substance use further - assessment tool or interview

- Conduct a **brief intervention** using motivational interviewing

- **Provide feedback** and advice regarding cutting back or abstinence and facilitate goal setting by the patient

- Ask if parents are aware, **ask permission** to discuss with them

- **Follow-up**!!!!!
How should we screen?

On-line before visit vs. Paper screening vs. tablet/e-screening at the visit?

Data: Pretty limited and primarily in adults; seems to be acceptable

Questions:
• Does the patient have a preference?
• Do we have tablets? Or an online portal? Do they integrate with our EHR?
• What about positive screens? Do the online tools automatically move to assessment?
Screening Method: Has access to online patient portal and fills out questionnaire and does the S2BI.

– Mom also has proxy access to portal? How does that affect compliance?

https://www.drugabuse.gov/ast/s2bi/#/
S2BI: In the past year, how many times have you used...

1. Tobacco?  Never
2. Alcohol?  Monthly
3. Marijuana?  Once or twice  \( \rightarrow \) if more than “never,” continue
4. Prescription drugs that were not prescribed for you (such as pain medication or Adderall)?  Once or twice
5. Illegal Drugs (such as cocaine or ecstasy)?  Never
6. Inhalants (such as nitrous oxide)?  Never
7. Herbs or synthetic drugs (such as salvia, K2, or bath salts)?  Never
Back to our clinical cases … John

**S2BI:** In the past year, how many times have you used…

1. Tobacco? *Never*
2. Alcohol? *Monthly*
3. Marijuana? *Once or twice → if more than “never,” continue*
4. Prescription drugs that were not prescribed for you (such as pain medications)? *Once or twice*
5. Illegal Drugs (such as cocaine or ecstasy)? *Never*
6. Inhalants (such as nitrous oxide)? *Never*
7. Herbs or synthetic drugs (such as salvia, K2, or bath salts)? *Never*

**Assessment:** Higher Risk (for meeting SUD criteria)

**What Next:** Conduct assessment (CRAFFT), brief intervention, and referral to treatment
Back to our clinical cases … Elena

**Screening Method:** paper version of the CRAFFT (as part of her pre-visit paperwork) at check-in. She fills it out in the waiting room and gives it to the MA or nurse bringing her back to the room.

**CRAFFT:** During the PAST 12 MONTHS, on how many days did you:

1. Drink more than a few sips of beer, wine or any drink containing alcohol? **10**
2. Use any marijuana (pot, weed, hash, or in foods) or “synthetic marijuana” (like “K2” or “Spice”)? **15 – I don’t know**
3. Use anything else to get high (like other illegal drugs, prescription or over-the-counter medications, and things that you sniff or “huff”)? **3**
4. Have you ever ridden in a CAR driven by someone (including yourself) who was “high” or had been using alcohol or drugs? **Yes**

**Positive** (more than “0”) → followup questions on the paper form
Back to our clinical cases … Elena

CRAFFT Follow-up questions:

1. Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in? Yes
2. Do you ever use alcohol or drugs while you are by yourself, or ALONE? No
3. Do you ever FORGET things you did while using alcohol or drugs? Yes
4. Do your FAMILY or FRIENDS ever tell you that you should cut down on your drinking or drug use? No
5. Have you ever gotten into TROUBLE while you were using alcohol or drugs? Yes

CRAFFT score: 4
Back to our clinical cases … Elena

CRAFFT Follow-up questions:

1. Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in? **Yes**
2. Do you ever use alcohol or drugs while you are by yourself, or ALONE? **No**
3. Do you ever FORGET things you did while using alcohol or drugs? **Yes**
4. Do your FAMILY or FRIENDS ever tell you that you should cut down on your drinking or drug use? **No**
5. Have you ever gotten into TROUBLE while you were using alcohol or drugs? **Yes**

CRAFFT score: **4**

**Assessment:** High Risk (92% of people with CRAFFT score =4 have SUD)

**What Next:** Conduct brief intervention, and referral to treatment

**What about mood?**
# Mental Health Screening Tools

<table>
<thead>
<tr>
<th>Tool</th>
<th>Focus</th>
<th>Psychometric Properties</th>
<th>Other Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHQ-2</td>
<td>Depression in adults and adolescents</td>
<td>Sen 74% Spec 75%</td>
<td>Many more false positives and negatives than in adults No suicide screening</td>
</tr>
<tr>
<td>Modified PHQ-9 for teens</td>
<td>Depression, suicide in adolescents</td>
<td>Sen 75% Spec 92%</td>
<td>Includes severity questions</td>
</tr>
<tr>
<td>PHQ-9</td>
<td>Depression in adults</td>
<td>Sen 88% Spec 88%</td>
<td></td>
</tr>
<tr>
<td>BDI-FS</td>
<td>Depression-age 13yr+</td>
<td>Sen 84% Spec 81%</td>
<td>Not free Acceptable USPSTF adolescent dep screen</td>
</tr>
</tbody>
</table>
## Mental Health Screening Tools

<table>
<thead>
<tr>
<th>Tool</th>
<th>Focus</th>
<th>Psychometric Properties</th>
<th>Other Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARS</td>
<td>Anxiety</td>
<td>Sen: 92% Spec: 84%</td>
<td></td>
</tr>
<tr>
<td>GAD-7</td>
<td>Anxiety</td>
<td>Sen: 83% Spec: 84%</td>
<td>Can use to monitor severity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Also detects OCD, PTSD</td>
</tr>
<tr>
<td>SCARED</td>
<td>Anxiety- age 8yr+</td>
<td>Sen: 79% Spec: 60%</td>
<td>41 items long</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not specifically for OCD or PTSD</td>
</tr>
</tbody>
</table>
PHQ-2

• Pros
  – Short, easy to administer
  – Validated in many adult studies
  – Widely available
  – Free

• Cons
  – Less sensitive and specific in adolescents
  – Validated in 1 adolescent study
  – No suicide questions
  – May need to adjust cutoffs in certain adolescent populations (2 instead of 3)
PHQ-9

• Pros
  – Well validated in many adult studies
  – Consistent with DSM-5 MDD criteria
  – Can use to follow treatment progress
  – Widely available
  – Free

• Cons
  – Validated in 1 adolescent study
  – Missing adolescent DSM-5 “irritability” wording
  – May need to adjust cutoff points in some adolescent populations
  – No suicide questions
PHQ-9 Modified for Teens

• Pros
  – Same format and scoring as PHQ-9
  – Adolescent specific language (irritability) for DSM-5 MDD criteria
  – Validated suicide questions included
  – Can follow progress over time
  – Free

• Cons
  – Screen not actually validated although includes some validated questions
  – Often confused with PHQ-A (much longer screen that was validated in phone interviews)
# GAD-7

Over the last 2 weeks, how often have you been bothered by the following problems?

*Use "✓" to indicate your answer*

<table>
<thead>
<tr>
<th>Problem</th>
<th>Not at all</th>
<th>Several days</th>
<th>More than half the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feeling nervous, anxious or on edge</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Not being able to stop or control worrying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Worrying too much about different things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Trouble relaxing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Being so restless that it is hard to sit still</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Becoming easily annoyed or irritable</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Feeling afraid as if something awful might happen</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Back to John – took the PHQ-2 Online

“Over the past 2 weeks, how often have you been bothered by..”
1. Little interest or pleasure in doing things? Several days (1)
2. Feeling down, depressed or hopeless? Several days (1)
   *Typical cut-off to get the full PHQ-9 Teen is 3*

If he were to do more screening, he would answer:
PHQ-9 Teen = 7, but answer positive on the final question around SI.
   *Up to 20% of adolescents who had a negative PHQ-2, also had suicidal ideology.

GAD-7 = 11 (moderate anxiety)
He does report significant anxiety around school and his future.
Back to Elena – took the PHQ-9 Teen via paper

“Over the past 2 weeks, how often have you been bothered by...”

1. Little interest in doing things? Several days (1)
2. Feeling down, depressed or hopeless? Several days (1)
3. Trouble with sleep? More than half the days (2)
4. Poor appetite/overeating? Not at all (0)
5. Tired/little energy? More than half the days (2)
6. Feeling bad about self/failure? More than half the days (2)
7. Trouble concentrating? Nearly every day (3)
8. Moving slowly/fidgety or restless? Not at all (0)
9. Suicidal ideation? Several days (1)
10. In the past year have you felt depressed/sad most days? Yes
11. How difficult have these problems been? Very difficult
12. Has there been a time in the past month when you have had serious thoughts about suicide? No
13. Have you ever, in your whole life, had a suicide attempt? No

Total Score = 12 (positive for depression)

GAD-7 = 4 (minimal anxiety)
What Next? Follow-up of positive screens

- **Assess** substance use further - assessment tool or interview

- Conduct a **brief intervention** using motivational interviewing

- **Provide feedback** and advice regarding cutting back or abstinence and facilitate goal setting by the patient

- Ask if parents are aware, **ask permission** to discuss with them

- **Follow-up!!!!!**
Questions?

• Is this realistic?

• What tools are people using in their clinics?
  – Substance use screening
  – Depression or anxiety screening

• What have been some benefits? Challenges?

• What have been some lessons learned?
Screening vs. Assessment

SBIRT VT

• Universal Screening – Screen everyone who walks in the door annually for substance use and mental health disorders.

• Screening: brief process that indicates whether the individual is likely to have a substance use disorder and/or mental health disorder.

• Assessment: Occurs after screening and consists of gathering key information to collaboratively conceptualize the problem and develop a treatment plan.

• The goals are to:
  – Establish (or rule out) the presence or absence of a co-occurring disorder
  – Determine the individual’s readiness for change
  – Identify the individual’s strengths or problem areas that may affect the processes of treatment and recovery
  – Begin the development of an appropriate treatment relationship
Some more thoughts around Substance Use Assessment Tools

Assessment: defines the nature of the problem and help to suggest at treatment option

• CRAFFT

• NIAAA toolkit (alcohol screening and brief intervention for youth)

• DAST-20 adolescent
Risk Assessment - CRAFFT

• Low risk
  – NO use in the past 12 months AND answers “NO” to the CAR question (CRAFFT score of 0).

• Medium risk:
  – NO use in the past 12 months and YES to the CAR question, OR
  – ANY use in the past 12 months and CRAFFT score of 0 or 1

• High risk:
  – any use in the past 12 months and have a CRAFFT total score of 2+
Risk Assessment - CRAFFT

Percent with a DSM-5 Substance Use Disorder by CRAFFT score*

Risk Assessment - NIAAA

**STEP 2: Assess Risk**

On how many DAYS in the *past year* did your patient drink?
- 1–5 days
- 6–11 days
- 12–23 days
- 24–51 days
- 52+ days

**Estimated risk levels by age and frequency in the past year**

- **Age ≤11**: Highest risk
  - *Tx: Brief motivational interviewing + possible referral*

- **Age 12–15**: Lower risk
  - *Tx: Brief advice*

- **Age 16**: Moderate risk
  - *Tx: Brief advice or motivational interviewing*

- **Age 17**:

- **Age 18**:
**Risk Assessment**

**NIAAA**

**STEP 3: Advise and Assist**

**Lower Risk:**
- Provide brief advice to stop drinking.
- Notice the good: Reinforce strengths and healthy decisions.
- Explore and troubleshoot influence of friends who drink.

**Moderate Risk:**
- Does patient have alcohol-related problems?
  - If no, provide beefed-up brief advice.
  - If yes, conduct brief motivational interviewing.
- Ask if parents know (see Highest Risk, below, for suggestions).
- Arrange for followup, ideally within a month.

**Highest Risk:**
- Conduct brief motivational interviewing.
- Ask if parents know ...
  - If no, consider breaking confidentiality to engage parent.
  - If yes, ask patient permission to speak with parent.
- Consider referral for further evaluation or treatment.
- If you observe signs of acute danger (e.g., drinking and driving, binge drinking, or using alcohol with other drugs) take immediate steps to ensure safety.
- Arrange for followup within a month.

FOR ALL PATIENTS WHO DRINK
- Collaborate on a personal goal and action plan for your patient. Refer to page 31 in the full Guide for sample abstinence, cutting back, and contingency plans. For some patients, the goal will be accepting a referral to specialized treatment.
- Advise your patient not to drink and drive or ride in a car with an impaired driver.
- Plan a full psychosocial interview for the next visit if needed.
Diagnosing a Substance Use Disorder (SUD)

• DSM-5 symptom areas:
  – Impaired control
  – Social impairment
  – Risky use
  – Pharmacological criteria (associated but not required)

• Severity:
  – Mild SUD: 2-3 symptoms
  – Moderate SUD: 4-5 symptoms
  – Severe SUD: 6+ symptoms
Office Flow

• Screening can be done on paper, electronically, or asked verbally
  – Complete prior to provider coming in

• Screening should be recorded/entered in the medical record
  – Tool used, score/result, interpretation

• Bill for it!!
  – 96160- patient focused health risk assessment
  – 96127- brief emotional behavioral assessment
Questions??
References

• https://www.oregon.gov/oha/HSD/AMH/SBIRT%20Resources/Combined%20S2BI%20and%20CRAFFT.pdf
• https://sbirt.webs.com/S2BI%20Algorithm_2015_FINAL.pdf
References

- http://pediatrics.aappublications.org/content/early/2011/10/26/peds.2011-1754.abstract?rss=1