Maternal Child Health Project
THE MATERNAL CHILD HEALTH PROJECT:
SUBSTANCE ABUSE AND MENTAL HEALTH SCREENING TOOLS FOR
PREGNANT WOMEN, CHILDREN, AND YOUTH

February 2014

Health Resources Services Administration
Maternal Child Health Fellowship Program

University of Texas School of Public Health

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FORWARD

The Maternal Child Health (MCH) Fellowship is funded by a U.S. Department of Health and Human Services Health Resources and Services Administration (HRSA) Maternal Child Health grant. The MCH Fellowship program is a collaboration between the University of Texas School of Public Health (UTSPH) and Grand Valley State University (GVSU) School of Social Work which was funded to integrate the knowledge of these two disciplines in the interest and care of mothers, children, and infants across six U.S. states including: Texas, Louisiana, New Mexico, Oklahoma, Arkansas, and Michigan.

As a requirement for participating in the fellowship program, MCH fellows are required to complete a technical assistance project based on Region 6 and Michigan’s Title V 5 Year Needs Assessment, 2010-2015. The Maternal Child Health Project: Substance Abuse and Mental Health Screening Tools for Pregnant Women, Children, and Youth (MCHP) has been created in response to the needs identified by Louisiana, New Mexico, and Texas in these areas.

We would like to thank HRSA, UTSPH, and GVSU for the opportunity to learn, engage, and collaborate on behalf of the nation’s women, children, and infants. We also would like to thank Joan M. Borst, Ph.D., LMSW, Associate Professor, School of Social Work, GVSU, and Margaret O’Brien Caughy, Sc.D., Associate Professor of Behavioral Sciences, and Director, Maternal and Child Health Training Program, UT School of Public Health, for their leadership and mentoring throughout the fellowship program.
EXECUTIVE SUMMARY

The Maternal Child Health Project: Substance Abuse and Mental Health Screening Tools for Pregnant Women, Children, and Youth identifies evidence-based screening tools that can be used to identify mental health and substance abuse problems in public health departments, primary care practices, community health clinics, and school settings that are:

- Low cost or free
- Easily and quickly administered
- Need little to no training to administer
- Have good psychometric properties
- Validated for the population being screened

Screening tools can be used as part of the decision-making process to determine if a more in depth assessment of a problem is needed.

The use of validated screening tools may be beneficial for agencies and clinics seeking to reduce unnecessary interventions and redirect limited resources. The tools recommended in this report have been selected based on the needs identified by Region 6 and Michigan’s Title V 5 Year Maternal Child Health Needs Assessment, 2010-2015. The three identified populations at risk include: pregnant women, youth ages 11 – 17, and children ages 3 – 10. This report includes screening tools that are appropriate for the identified populations and ages for:

- Substance Use Disorders
- Mental Health Disorders
- Suicidal Risk
INTRODUCTION

The Title V 5 Year Needs Assessment (2010-2015) for Louisiana, New Mexico, and Texas have identified improvement in quality and access to mental health services and resources as a priority for women, children, and youth. In particular, the three states have prioritized depression care for women of childbearing age, suicide prevention services for youth, substance abuse screening and treatment services for women and youth, and better access to behavioral healthcare for the entire MCH population.

The New Mexico Needs Assessment (2010 – 2015) specifically states that the priority need is to increase screening for mental illness and substance abuse. Texas’ focus is on improving the quality of behavioral health services and resources including treatment facilities, as well as promoting early intervention and screening starting as young as three. Texas also includes autism and Attention Deficit Disorder (ADD)/Attention Deficit Hyperactivity Disorder (ADHD) in its priorities. Louisiana specifies improving the behavioral health of the MCH population through prevention, early intervention, screening, referral, and treatment where appropriate.

The Needs Assessments (2010-2015) for all three states report the need for improved and additional mental health services for women of childbearing age. For example, Texas found that one in five women between 18 and 44 felt sad, blue, or depressed in the past 30 days and New Mexico had a similar percentage of women who experienced postpartum depression and hopelessness. Louisiana and Texas have high numbers of women who are pregnant and are using tobacco, alcohol, and/or illegal drugs.

For youth and adolescents, Texas and New Mexico report as an urgent priority suicide prevention for youth and adolescents. All three states have significant numbers of youth engaged in smoking, drinking, and using illegal drugs. In addition, New Mexico reports that a high number of this population either use and/or purchase these substances on school property.

Based on the needs assessment discussed above, each state has a number of programs in place that need additional funding to expand and improve behavioral health delivery and to fund additional services to include a wider cohort than is currently being served. As an example, among states participating in the Youth Risk Behavior Survey (YRBS), New Mexico has the highest rate of youth who have considered suicide and its Native American youth population has a suicide rate of 20.4%, twice the rate of its White youth. New Mexico has a number of programs for youth suicide prevention, including Native HOPE that incorporates Native American culture and traditions for the American Nation; however, Title V MCH Block Grant funding for youth suicide prevention and adolescent health continues to decline.

Louisiana, New Mexico, and Texas identify pregnant women 18+, children 3 to 10, and adolescents 11 to 17 as the primary populations for whom screening is necessary and the specific behavioral health issues that are of greatest concern are mental health for children; mental health, suicide, and substance abuse for adolescents; and mental health, substance abuse, and domestic or sexual abuse for pregnant women.

Screening for mental health and substance abuse problems among maternal child health populations should be a national priority. According to the National Academies and Institute of Medicine (IOM) Preventing Mental, Emotional, and Behavioral Disorders among Young People (2009), screening should be initiated in order to increase early recognition of mental, emotional, and behavioral problems. Additionally, screening efforts can be individual, targeted at risk groups, or universal; however, prior to
implementing an individual or targeted screening strategy, the National Academies/IOM recommends that its impact be compared to that of a universal screening strategy. Racial and Ethnic minority children in particular are likely to benefit from school screening efforts. Husky et al. (2010) confirmed in a study that school-based mental health screening in a predominantly African American community is effective in identifying youth at risk for mental, emotional, and behavioral problems. Barriers to school-based screening include teacher’s concerns about loss of discretion (Elliot et al., 2007), the extra work involved, potential stigmatization of students identified (Levitt et al., 2007), and the validity of instruments (IOM, 2009). To address these barriers, the National Academies and IOM recommends that universal screening efforts be brief, technically adequate, and valid across racial, ethnic, and socioeconomic groups, and produce acceptable outcomes. The National Academies and IOM (2009) also recommends that children who test positive to a screen be referred to a more detailed psychological assessment to verify the screening results and to determine the nature and severity of the risk identified.

**METHODS**

**Literature Review**

Information for this project was collected from academic literature, as well as through both general and targeted searches on the World Wide Web. Search engines for academic literature included Medline and Psych Info. The general Internet search utilized Google as the search engine. Key words for both the academic literature and the general Internet search included the following: (“mental health” or “substance abuse” or “suicide”) AND (“screening” or “validated” or “measure” or “tool” or “scale” or “rating” or “instrument”).

**Inclusion and Exclusion Criteria**

There are many screening tools from which to choose for substance abuse and mental health issues. The MCHP evaluated screening tools for primary care practices, community health clinics, and school settings that are brief, low cost, and validated among other criteria; however, different health care settings can adjust the criteria as needed to modify the inclusion/exclusion matrix to fit their specific needs. Included are screening tools that fit the MCHP criteria, as well as links to screening tools that just miss the cut.

The selection criteria used for the process of identifying screening tools for the MCHP are:

- What the screening tool measures
- Number of questions
- Administration (who can administer it)
- Time burden
- Cost of the instrument
- Cost of training for administration (if known)
- Is it validated for the target population?
• Is it translated into the language of the targeted population
• A cut score (threshold value) to determine when the individual being screened is at risk for having a condition
• Sensitivity (ability to accurately identify individuals at risk)
• Specificity (ability to accurately identify those not at risk)

Criteria for including instruments in the matrices include the tools’ reliability, validity, sensitivity, and specificity. Reliability is the ability of a measure to produce consistent results. The validity of a screening test is its ability to discriminate between individuals having a problem and individuals without such a problem. Sensitivity is the accuracy of the test in identifying a problem, also known as the true positive rate. Specificity is the accuracy of the test in identifying individuals who do not have a problem, also known as the true negative rate. Sensitivity and specificity levels of 70% to 80% have been deemed acceptable for developmental screening tests (Academy of Pediatrics, 2006). Table 1 shows the inclusion and exclusion matrix used to qualify screening tools for each cohort.

**Screening versus Assessment**

There can be some confusion about the terms “screening” versus “assessment.” According to Grisso, Vincent, & Seagrave (2005), screening is a universal, economical, and quick way to identify an issue that may warrant additional action; whereas assessment is the process of providing additional services selectively to those that have been identified as having a specific concern. For example, if a mental or behavioral health condition is identified through screening, such as adolescent suicidal ideas or thoughts, the person administering the screen should then take the necessary steps to ensure the safety of the person being screened. If a less immediate concern is identified through screening, i.e., weekend binge drinking, the patient can be referred to a substance use professional for focused assessment. The National Academies and IOM (2009) recommends that all children and youth who test positive on a screen for mental, emotional, or behavioral health concerns be referred for a more detailed psychological assessment to verify the screening results and to determine the nature and severity of the risk identified.

**Using this Toolkit**

As mentioned previously screening tools are brief measures that help determine risk. This toolkit can be a resource for public health professionals in all different maternal and child health clinical settings because it provides a way to compare and contrast some of the best available methods for screening depending on your clinic needs and setting. There are three primary ways you can apply this toolkit for your personal use:

1. Decide which population is most relevant for your screening purposes (e.g. pregnant women, youth ages 11-17, or children ages 3-10)
2. Determine which focus area is most relevant for your population (e.g. substance abuse in pregnant women, mental health in pregnant women, substance abuse/alcohol use in youth, mental health in youth, suicidal risk in youth, or mental health for children)

3. Review the screening tools relevant to your specific area of focus and population (e.g. mental health in pregnant women) to determine which screening tool best meets your needs.

This toolkit is designed so that you will be able to easily determine which validated screening methods are most relevant for your clinical setting without having to do extensive research. Please review Table 1 to know how the screening tools were selected.

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence of ability to detect a substance abuse or mental health problem</td>
<td>Lack of Evidence</td>
</tr>
<tr>
<td>Validated Instrument</td>
<td>Instrument not Validated</td>
</tr>
<tr>
<td>Good Psychometric Properties</td>
<td>Weak Psychometric Properties</td>
</tr>
<tr>
<td>Good Sensitivity and Specificity</td>
<td>Weak Sensitivity and Specificity</td>
</tr>
<tr>
<td>Time Burden Low</td>
<td>Time Burden High</td>
</tr>
<tr>
<td>Administrative Burden Low</td>
<td>Administrative Burden High</td>
</tr>
<tr>
<td>Number of Questions Low</td>
<td>Number of Questions High</td>
</tr>
<tr>
<td>Self-administered or Low-level of Training Required</td>
<td>High Level of Training/Education Required to Administer</td>
</tr>
<tr>
<td>Cost of the Instrument Low</td>
<td>Cost of the Instrument High</td>
</tr>
</tbody>
</table>
Screening Tools for Pregnant Women

**Substance Abuse**

Pregnancy is commonly thought to be a time of happiness and joy; however, a number of psychosocial issues can adversely affect the health and well-being of the woman, the fetus, and the birth process. To protect the health of the mother and fetus, health providers should screen for domestic violence, sexual abuse, maternal mental health conditions, and substance use. There are a number of evidence-based brief screening tools that are available in the public domain to help health care providers identify potential psychosocial concerns.

Approximately 15 percent of pregnant women who are screened for substances during pregnancy show positive results; these women are likely to be poly-substance users, deny use, and refrain from seeking treatment due to stigma attached to substance use during pregnancy (Jain & Parniainen, 2012). There is, as yet, no threshold level for safe alcohol use for pregnancy and the U.S. Surgeon General recommends total abstinence from alcohol use during pregnancy (National Institute on Alcohol Abuse and Alcoholism, 2004). Fetal Alcohol Syndrome (FAS) typically results from alcohol consumption of 21 or more drinks per week; however, partial FAS syndromes and effects can affect the fetus at lower levels of consumption. Alcohol consumption during the first trimester can cause physical defects; during the second and third trimester, growth and neurological effects occur. Curtailing heavy alcohol consumption during the last two trimesters can reduce the effects of neurological damage (Jain & Parniainen, 2012).

Smoking during pregnancy adversely affects the growth and health of the fetus and infant and can lead to an increased risk of miscarriage and preterm birth.

**Findings**

Table 2 shows the MCHP selection of affordable, easy-to administer, evidence-based screening tools for pregnant women that can be introduced into a health care setting with little to no training involved for the administrators. A description of the tools, including advantages and disadvantages, follows the table.
<table>
<thead>
<tr>
<th>NAME OF SCREEN</th>
<th>IDENTIFICATION</th>
<th>QUES.</th>
<th>CUT SCORE</th>
<th>SENS.</th>
<th>SPECIF.</th>
<th>ADMINISTRATION</th>
<th>COST</th>
<th>AVAILABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>4P’s Plus</td>
<td>Light alcohol use and illicit drug use</td>
<td>5</td>
<td>&gt;=1</td>
<td>87%</td>
<td>76%</td>
<td>Medical and Non-medical providers</td>
<td>Free</td>
<td>Copyrighted by Dr. Ira Chasnoff. For use, contact at <a href="mailto:ichasnoff@aol.com">ichasnoff@aol.com</a></td>
</tr>
<tr>
<td>Institute for Health and Recovery 5P’s Plus</td>
<td>For pregnant women; identifies light drinking</td>
<td>8</td>
<td>&gt;=2</td>
<td>N/A</td>
<td>N/A</td>
<td>Medical and Non-medical providers. About 2 to 3 minutes and 1 minute to score</td>
<td>Free</td>
<td><a href="http://www.daodas.state.sc.us/documents/SBIRT%20Integrated%20Screening%20Tool.pdf">http://www.daodas.state.sc.us/documents/SBIRT%20Integrated%20Screening%20Tool.pdf</a></td>
</tr>
<tr>
<td>TWEAK (Tolerance, Worried, Eye-opener, Amnesia, Kut down)</td>
<td>Developed for pregnant women to identify drinking, but no drug use</td>
<td>4</td>
<td>&gt;=2</td>
<td>71-91%</td>
<td>73 – 83%</td>
<td>Can be administered by anyone. Takes 1 minute to complete</td>
<td>Free</td>
<td><a href="http://www.projectcork.org/clinical_tools/html/TWEAK.html">http://www.projectcork.org/clinical_tools/html/TWEAK.html</a></td>
</tr>
<tr>
<td>T-ACE (Take (number of drinks), Annoyed, Cut-down, Eye-Opener)</td>
<td>Developed for pregnant women; focuses on heavy drinking</td>
<td>5</td>
<td>&gt;=2</td>
<td>69-88%</td>
<td>71-89%</td>
<td>Can be administered by anyone. Takes 1 minute to complete however should not be preceded by questions on the frequency of alcohol consumption but as a part of general health history</td>
<td>Free</td>
<td><a href="http://www.projectcork.org/clinical_tools/html/T-ACE.html">http://www.projectcork.org/clinical_tools/html/T-ACE.html</a></td>
</tr>
<tr>
<td>Audit-C</td>
<td>Identifies heavy drinkers, but no drug use</td>
<td>3</td>
<td>&gt;=3</td>
<td>95%</td>
<td>85%</td>
<td>Less than 1 minute to complete. Administered in clinical settings. Brief - 3 questions only</td>
<td>Free</td>
<td><a href="http://www.talkingalcohol.com/files/pdfs/WHO_audit.pdf">www.talkingalcohol.com/files/pdfs/WHO_audit.pdf</a></td>
</tr>
</tbody>
</table>

**Key:**
- Ques.: Number of questions
- Sens.: Sensitivity
- Specif.: Specificity
4P’s Plus
Advantages:
- Specifically developed for pregnant women
- Well validated
- Validated in English and Spanish.
- Brief
- Screens for alcohol and drugs

Disadvantages:
- Not in the public domain
- Contains an area for referrals for smoking and domestic violence, but does not provide a validated interview question.

Institute for Health and Recovery Integrated Screening Tool 5P’s Plus
Based on validated 4P’s Plus, 5P’s Plus includes substance use screening for family of origin, and partner, as well as past and present use by patient, and includes questions specific to emotional health, intimate partner violence, and smoking.

5P’s Plus
Advantages:
- Brief
- 8 Questions
- Cut score: 2 or more positive answers
- Screens for:
  - Family of origin, peers, and partner for alcohol and drugs
  - Intimate partner violence
  - Emotional Health
  - Past and present alcohol and drugs
  - Smoking

Disadvantages:
- No validation for sensitivity or specificity
T-ACE
Advantages:
   - Quick
   - Easily administered
   - High sensitivity and specificity

Audit-C
Advantages:
   - Quick
   - Easily administered
   - High sensitivity and specificity
   - Developed by the World Health Organization and has been validated in six countries

Disadvantages of TWEAK, AUDIT, and AUDIT-C Screens
   - TWEAK does not identify light drinkers or drugs.
   - Audit and Audit-C are not validated for pregnant population; developed for very heavy drinkers; may miss light to moderate drinkers; does not identify drugs (Chasnoff, Wells, McGourty, & Bailey, 2007).
Mental Health
Women have twice the rate of depression than men and women are at their highest risk during the reproductive years. Postpartum depression is a common mental health concern that affects 10-15 percent of women and risk factors include having depression or anxiety prior to and/or during pregnancy. Other mood disorders, such as bi-polar, eating disorders, and posttraumatic stress disorder, also can have an adverse effect on the healthy outcome of pregnancy and birth for the infant and mother. Universal screening for mental health concerns before, during, and after pregnancy allow the health provider to refer women who are at risk or who have a history of mental illness for additional services (Toohey, 2012).

Violence
Pregnancy can be a time of escalation of intimate partner violence (IPV), with an estimated 1 in 4 women affected by IPV (CDC, 2013). IPV causes physical harm that can result in preterm labor and may end in death of fetus and/or mother. IPV can cause or exacerbate anxiety, fear, depression, grief, and posttraumatic stress disorder. IPV frequently falls into one of four themes: Jealousy towards the fetus, stress caused by pregnancy, anger about an undesired pregnancy, or violence from a partner that continues into pregnancy. Due to an escalation of violence during postpartum, consistent screening throughout the pregnancy and postpartum period is recommended by the American College of Obstetricians and Gynecologists, the American Medical Association, the American Academy of Family Physicians, the American College of Emergency Medicine, and the American Academy of Pediatrics. See Appendix B Mandated Reporter for information on responsibilities of reporting IPV (Jain & Parviainen, 2012; Rabin, Jennings, Campbell, & Bair-Merritt, 2009).

Findings
Table 3 shows the MCHP selection of affordable, easy-to-administer, evidence-based screening tools for pregnant women that can be introduced into a health care setting with little to no training involved for the administrators. A description of the tools, including advantages and disadvantages, follows the table.
Table 3: Mental Health Screening Tools for Pregnant Women

<table>
<thead>
<tr>
<th>INSTRUMENT</th>
<th>DOMAINS</th>
<th>QUES.</th>
<th>CUT SCORE</th>
<th>SENS.</th>
<th>SPECIF.</th>
<th>ADMINISTRATION</th>
<th>COST</th>
<th>AVAILABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edinburgh Depression Scale</td>
<td>Depression and Anxiety</td>
<td>10</td>
<td>11-12</td>
<td>79%</td>
<td>92%</td>
<td>Self-Administered</td>
<td>Free</td>
<td>In the public domain <a href="http://www.beyondtheblues.info/Docs/edinburgh%20english.pdf">http://www.beyondtheblues.info/Docs/edinburgh%20english.pdf</a></td>
</tr>
<tr>
<td>Beck Depression Scale</td>
<td>Depression</td>
<td>21</td>
<td>5</td>
<td>87%</td>
<td>78%</td>
<td>Self-Administered</td>
<td>$121.50 (includes manual and 25 record forms)</td>
<td>Not in public domain, copyrighted, no photocopying allowed, must be purchased. <a href="http://www.beckinstitute.org/beck-inventory-and-scales/">http://www.beckinstitute.org/beck-inventory-and-scales/</a></td>
</tr>
<tr>
<td>Postpartum Depression Inventory-Revised</td>
<td>Prenatal and Postpartum Depression</td>
<td>13</td>
<td>3.5 Prenatal; 5.5 Postpartum</td>
<td>74% Prenatal; 76% Postpartum</td>
<td>73-83%</td>
<td>Self-Administered Version and Clinician Administered Version</td>
<td>Availability in public domain cannot be verified. <a href="http://www.hawaii.edu/hivandaids/Revision%20of%20the%20Postpartum%20Depression%20Predictors%20Inventory.pdf">http://www.hawaii.edu/hivandaids/Revision%20of%20the%20Postpartum%20Depression%20Predictors%20Inventory.pdf</a></td>
<td></td>
</tr>
</tbody>
</table>

Key:
Ques.: Number of questions
Sens.: Sensitivity
Specif.: Specificity
**Edinburgh Depression Scale (EDS)**
Developed in 1987, EDS is a brief, self-rating scale that was originally developed to detect postpartum depression. Over the years, it has been validated to identify depression in women in their reproductive years, menopausal women, children, men, and the elderly; it has been translated in 50 languages. For pregnant women, the sensitivity changes in each trimester, with the highest sensitivity and specificity at 12 weeks gestation; the cut score also changes, with a cut score of 12 and higher in the first trimester and at 11 and higher in the second and third trimesters (Bunevicius, Kusminskas, Pop, Pedersen, & Bunevicius, 2009). The EDS includes two questions to help identify anxiety.

Advantages:
- Well validated for many cultures and languages
- Easily administered
- High sensitivity and specificity
- Screens for depression and anxiety
- Validated to screen for depression and anxiety for pregnancy and postpartum

Disadvantage:
- Different cut score for early pregnancy versus last two trimesters

**Abuse Assessment Screening**
Developed for the Nursing Research Consortium on Violence and Abuse by McFarlane & Parker (1994) specifically for pregnant women.

Advantages:
- Brief
- Administered by professionals and non-professionals
- Tested with ob/gyn patients
- Only screen asking about abuse during pregnancy
- Tested on range of ethnic populations
- International validity in Brazil, Sri Lanka, China
- Positive response to any question indicates abuse

Disadvantages:
- Small number of studies
- Most studies were on low-income women
**Beck Depression Inventory**
Widely used measure of depression severity developed by Dr. Aaron Beck in 1961.

Advantages:
- Well validated
- Easily administered
- High sensitivity and specificity

Disadvantages:
- Not in public domain

**Postpartum Depression Predictor Inventory-Revised**
Advantages:
- Brief
- Validated
- High sensitivity and specificity

Disadvantage:
- Availability in public domain cannot be verified.
Screening Tools for Youth Ages 11-17

The American Academy of Pediatrics, American Academy of Child and Adolescent Psychiatry, and the US Preventive Services Task Force now recommend screening for behavioral health issues and universal screening for depression by primary health care providers for children and youth. The Joint Commission requires suicide screening for all youth diagnosed with a psychiatric disorder and recommends screening for substance use and trauma is this group (Diamond et al., 2010).

In a recent study of depression screening in a primary care setting, it was found that specific screening tools used for people who appeared depressed or suicidal had a higher positive response than universal screening; however, universal screening is recommended as opposed to a subjective decision that may miss people because they do not appear to have a behavioral health issue (Wintersteen, 2011). Research also reveals that adolescents with a substance abuse issue go to their primary care physician as often as those without a substance abuse issue; parents and children are open to being screened in medical offices, and there are fewer stigmas involved in going to the doctor than a behavioral health professional (Sterling, Valkanoff, Hinaman, & Weisner, 2012).

Alcohol and Substance Use

Table 4 shows screening tools for alcohol and substance abuse validated for youth, ages 11-17.
Table 4: Alcohol and Substance Abuse Screening Tools for Youth (11 – 17)

<table>
<thead>
<tr>
<th>INSTRUMENT</th>
<th>DOMAINS</th>
<th>QUES.</th>
<th>ADMINISTRATION</th>
<th>TIME TO ADMINISTER</th>
<th>VALIDATED</th>
<th>CUT</th>
<th>SENS.</th>
<th>SPECIF.</th>
<th>COST</th>
<th>AVAILABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRAFFT</td>
<td>Substance and Alcohol Use</td>
<td>6</td>
<td>Self, non-professional, professional</td>
<td>5 minutes</td>
<td>Yes</td>
<td>≥2</td>
<td>76-92%</td>
<td>76-94%</td>
<td>Free</td>
<td><a href="http://www.ceasar-boston.org/CRAFFT/index.php">http://www.ceasar-boston.org/CRAFFT/index.php</a></td>
</tr>
<tr>
<td>CAGE</td>
<td>Problem Drinking</td>
<td>4</td>
<td>Patient Interview or Self-Report. Should not be preceded by questions on the frequency of alcohol consumption but as a part of general health history</td>
<td>1 minute</td>
<td>Validated for adolescents ages 12-17</td>
<td>≥2</td>
<td>74%</td>
<td>91%</td>
<td>Free</td>
<td><a href="http://psychology-tools.com/cage-alcohol-questionnaire/">http://psychology-tools.com/cage-alcohol-questionnaire/</a></td>
</tr>
<tr>
<td>CAGE-AID</td>
<td>Substance and Alcohol Use</td>
<td>4</td>
<td>Patient Interview or Self-Report.</td>
<td>1 minute</td>
<td>For Low Income &amp; Minority Populations</td>
<td>≥1</td>
<td>79%</td>
<td>77%</td>
<td>Free</td>
<td><a href="http://www.integration.samhsa.gov/clinical-practice/screening-tools">http://www.integration.samhsa.gov/clinical-practice/screening-tools</a></td>
</tr>
</tbody>
</table>

Key:
Ques.: Number of questions
Sens.: Sensitivity
Specif.: Specificity
CRAFFT

Advantages
- Brief, only six questions
- Free

Disadvantages
- No cross-cultural validity data
Mental Health

Findings:
Table 5 contains screening tools for mental health symptoms validated for youth, ages 11-17.

Table 5: Mental Health Screening Tools for Youth (11 – 17)

<table>
<thead>
<tr>
<th>INSTRUMENT</th>
<th>DOMAINS</th>
<th>QUES.</th>
<th>ADMIN</th>
<th>TIME</th>
<th>VALIDATED</th>
<th>CUT</th>
<th>SENS.</th>
<th>SPECIF.</th>
<th>COST</th>
<th>AVAILABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengths and Difficulties</td>
<td>Emotional Symptoms; Conduct Problems; Hyperactivity Peer Relationships</td>
<td>25</td>
<td>Multi-informant (parents,</td>
<td>5 minutes</td>
<td>Yes</td>
<td>&gt;=17</td>
<td>59.7-66.9%</td>
<td>94.1-95.1%</td>
<td>Free</td>
<td><a href="http://www.sdqinfo.com/">http://www.sdqinfo.com/</a></td>
</tr>
<tr>
<td>Difficulties Questionnaire (SDQ)</td>
<td>Pro-Social Behavior</td>
<td></td>
<td>(teachers, older children)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioral Health Screen (BHS)</td>
<td>Substance use, sexuality, anxiety, depression, suicidal risk, psychosis,</td>
<td>54</td>
<td>Self-administered Internet-based</td>
<td>8 to 15 minutes (mean: 12.4 minutes)</td>
<td>Yes</td>
<td></td>
<td>78-85%</td>
<td>78-85%</td>
<td>Contact the BH-Works team to discuss pricing</td>
<td><a href="http://www.research.chop.edu/programs/cfis/bhs.php">http://www.research.chop.edu/programs/cfis/bhs.php</a></td>
</tr>
<tr>
<td></td>
<td>trauma and abuse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="http://www.bh-works.com">www.bh-works.com</a></td>
</tr>
</tbody>
</table>

Contact mbriner@mdlogix.com for pricing details.
<table>
<thead>
<tr>
<th>Test Description</th>
<th>Questions / Items</th>
<th>Administration Type</th>
<th>Time (minutes)</th>
<th>Score Cut-off</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
<th>Free?</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediatric Symptom Checklist for Youth (PSC-Y)</td>
<td>35 + 2 Suicide Questions</td>
<td>Self-Administered</td>
<td>&lt;5</td>
<td>Yes</td>
<td>94%</td>
<td>88%</td>
<td>Free</td>
<td><a href="http://www.masgeneral.org/psychiatry/services/psc_home.asp">link</a></td>
</tr>
<tr>
<td>Patient Health Questionnaire Modified for Teens (PHQ-9 Modified)</td>
<td>13</td>
<td>Self-Administered</td>
<td>&lt;5</td>
<td>Yes</td>
<td>89.5%</td>
<td>78.8%</td>
<td>Free</td>
<td><a href="http://www.teenscreen.org/images/stories/PDF/Screening%20Questionnaire%20Overview%202017%201.pdf">link</a></td>
</tr>
<tr>
<td>Reynolds Adolescent Adjustment Screening Inventory (RAASI)</td>
<td>32</td>
<td>Self-Administered,</td>
<td>5</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>$180</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Reynolds Adolescent Depression Scale</td>
<td>30 items, 10 item short form is avail.</td>
<td>Self-Report</td>
<td>2-3</td>
<td>N/A</td>
<td>92%</td>
<td>84%</td>
<td>$160</td>
<td>[link](<a href="http://portal.wpspublish.com/portal/page?_pag">http://portal.wpspublish.com/portal/page?_pag</a> pid=53,69588&amp;_dad=portal&amp;_schema=PORTAL)</td>
</tr>
</tbody>
</table>
The Strengths and Difficulties Questionnaire (SDQ)

This is a self-administered behavioral screening questionnaire and impact supplement developed for use in clinical assessment and outcomes evaluation in clinical practice. This 25-item tool contains the following five sub-scales: emotional symptoms; conduct problems; hyperactivity/inattention; peer relationships; and pro-social behavior. In addition, the SDQ assesses the impact of symptoms in terms of how distressing or interfering with child everyday life leading to a measure of ‘‘overall difficulties.’’ The SDQ takes approximately five minutes to complete. It has been shown to have good specificity and moderate sensitivity for predicting a psychiatric disorder. The SDQ is free and can be downloaded at http://www.sdqinfo.org/

Advantages
- Available in >75 languages
- Self-administered of general mental health Parent, teacher, or youth 11 to 17 y
- Reliable and valid in populations and for a general mental health conditions

Reynolds Adolescent Adjustment Screening Inventory (RAASI)
Designed to quickly identify adolescents who exhibit significant adjustment problems in the areas of antisocial behaviors, anger problems, and emotional distress, who may be at risk for psychological adjustment problems and in need of psychological evaluation and services. It is a self-report measure and can be completed in approximately 5 minutes.

Advantages
- Relates directly to DSM-IV diagnostic categories.
- Includes validity subscales to examine reporting biases.
- Includes both screening and assessment.

Disadvantages
- Narrow age range.
- Limited reporters (youth only)
- High cost compared to other available tools
Behavioral Health Screen (BHS)
The Behavioral Health Screening tool (BHS) is the centerpiece of The Behavioral Health Works (“BH-Works™”) Program. This is a proven web-based system for integrating behavioral health screening, triage, and prevention services into medical, school, and mental health services settings. This web-based screen targets suicide, depression, anxiety, substance use, and trauma. Typically, a patient or student will complete this screen before an in-person meeting with a medical provider. The system will score the report instantaneously and generate a report that the provider reviews before meeting with the patient or student. The BHS can be administered by clinical or school staff in primary care, emergency departments, hospital units, mental health clinic, health departments, colleges/universities, and school settings. Screening can be done as part of regular universal screening for all patient/students or when a patient/student is identified as “at-risk”.

Comprehensive and Efficient:
- 100% web-based screening and results
- Covers **13 Domains** in **7 minutes**
- Instantly generates a report for review by provider
- Identifies Critical Issues: Suicide, Violence, Gun Access
- Automatically Scores: Depression, Anxiety, Suicide, Traumatic Distress, Substance Abuse, Eating Disorders
- Identifies Risk Behaviors: Substance Abuse, Safety Risks, Bullying
- Identifies Patient Strengths: Grades, Exercise

Cost Effective: BH-Works is a highly cost effective program built on the latest web technology. Each facility or organization pays an initial setup fee and then recurring payments to use BH-Works. Although there is a pricing framework in place, each site often has its own unique characteristics. Therefore interested parties are encouraged to contact the BH-Works team to discuss pricing.

Proven: The BH-Works Program has been in use at the Children’s Hospital of Philadelphia Emergency Department since 2007. It is currently in use at over 30 primary care offices, crisis centers, clinics, and student health centers across the state of Pennsylvania.
Findings: Table 6 shows a screening tool for suicidal risks validated for youth, ages 11-17.

Table 6: Screening Tools for Suicidal Risk for Youth (11 – 17)

<table>
<thead>
<tr>
<th>INSTRUMENT</th>
<th>DOMAINS</th>
<th>QUES.</th>
<th>ADMINISTRATION</th>
<th>TIME</th>
<th>VALIDATED</th>
<th>CUT</th>
<th>SENS.</th>
<th>SPECIF.</th>
<th>COST</th>
<th>AVAILABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia Suicide Severity Rating Screen C-SSRS</td>
<td>Assess occurrences, types and severity of suicidal ideation and suicidal behavior</td>
<td>18</td>
<td>Clinician administered interview</td>
<td>5-10 minutes</td>
<td>Yes</td>
<td>Available in 103 languages</td>
<td>100% for both interrupted and actual attempts</td>
<td>100% for both interrupted and actual attempts</td>
<td>Free</td>
<td><a href="http://www.cssrs.columbia.edu/">http://www.cssrs.columbia.edu/</a></td>
</tr>
</tbody>
</table>

Key:
Ques.: Number of questions   Sens.: Sensitivity   Specif.: Specificity

Columbia Suicide Severity Rating Screen (C-SSRS)
The C-SSRS is used extensively across primary care, clinical practice, surveillance, research, and institutional settings. It is available in 103 languages, and is part of a national and international public health initiative involving the assessment of suicidality. The C-SSRS has been administered several million times and has exhibited excellent feasibility – no mental health training is required to administer it. The C-SSRS has been associated with decreased burden by reducing unnecessary interventions and redirecting limited resources.

Advantages:
- Brief (18 questions)
- High sensitivity and specificity (100%)
- Validated for Adolescents
- Widely used
- Free

Disadvantages:
- Only used for suicide assessment
Mental Health Screening Tools for Children Ages 3-10

For smaller children (3 to 10), it can be hard for them to talk about what is wrong or bothering them because they don’t know how to verbalize it (Massachusetts General Hospital, 2013).

For mental health screening with children ages 3-10, there are two screens that also are referenced in Table 5: Mental Health Screening Tools for Youth (11 – 17) that have validated forms for different age groups and in different languages: The Pediatric Symptom Checklist and the Strengths and Difficulties Questionnaire. When screening for children, it is important to use the tool that has been specifically validated for the age group screened.

Findings
Table 7 shows different screens for mental health validated for children ages 3-10.
<table>
<thead>
<tr>
<th>Instrument</th>
<th>Domains</th>
<th>Number of Questions</th>
<th>Admin</th>
<th>Time</th>
<th>Validated</th>
<th>Translation</th>
<th>Cut</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediatric Symptom Checklist (PCS, PCS-Y, PCS-17), Pictorial PSC</td>
<td>Mental Health Symptoms</td>
<td>35, 17</td>
<td>Self-Reported</td>
<td>5 minutes</td>
<td>Yes</td>
<td>Several translations and pictorials</td>
<td>Ages 3-5: 24 Ages 6-18: 28</td>
<td>N/A</td>
<td>N/A</td>
<td>Free</td>
</tr>
<tr>
<td>Strengths and Difficulties Questionnaire (SDQ)</td>
<td>Emotional; Conduct Problems; Hyperactivity Peer Relationships Pro-Social Behavior</td>
<td>25</td>
<td>Self-Reported</td>
<td>5 minutes</td>
<td>Yes</td>
<td>75 different languages</td>
<td>&gt; 17</td>
<td>63.3%</td>
<td>95%</td>
<td>Free</td>
</tr>
<tr>
<td>Child Behavior Checklist (ages 6-18)</td>
<td>Adaptive and maladaptive functioning</td>
<td>113</td>
<td>Self-Administered</td>
<td>15 minutes</td>
<td>Yes</td>
<td>Over 90 languages</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Free</td>
</tr>
<tr>
<td>Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS)</td>
<td>ADHD Symptoms</td>
<td>43 items</td>
<td>Teacher Completed</td>
<td>10 minutes</td>
<td>Yes</td>
<td>English/Spanish</td>
<td>N/A</td>
<td>69%</td>
<td></td>
<td>Free</td>
</tr>
</tbody>
</table>
Pediatric Symptom Checklist
Massachusetts General Hospital adapted a pictorial chart for children and for adults who can’t read to tell clinicians how they feel. The chart helps to measure emotional and physical health by using a series of pictures to tell how bad or good their ailment is. This screening tool comes in English, Spanish, Japanese, German, Dutch, and Chilean. The screening also comes as a standard screening without pictures and in various languages.

Scoring is based on “Never,” “Sometimes,” and “Often” numbering 0, 1, and 2. The screening is invalid if four or more questions are left unanswered. For children three to five, questions 5, 6, 17, and 18 are not included in the scoring. The cut-off score to be considered “impaired” is 24. Under 24 the child is “not impaired.” “Impaired,” means having a psychosocial impairment. Children who are six to eighteen, the cut-off score is 28. Those who are above the cut-off score should be recommended for further treatment.

Conners 3rd Edition™
According to the New Zealand Council for Educational Research (NZER), Conners 3™ offers a thorough assessment of ADHD and comorbid disorders such as Oppositional Defiant Disorder and Conduct Disorder. A parent, teacher, and self-report form are available both in a full-length and a short version.

Advantages
- Self-administered
- Can be administered in multiple formats including hand scored, software, and online versions
- Assesses both ADHD and Comorbid Conditions

Disadvantages
- Proprietary (costs several hundred dollars per kit)
REFERENCES


Massachusetts General Hospital. (2013). *Pediatric Symptom Checklist* - Massachusetts General Hospital, Boston, MA. Retrieved February 23, 2013, from Massachusetts General Hospital: http://www.massgeneral.org/psychiatry/services/psc_forms.aspx


Wintersteen, 2011