

DC-Approved Child Mental Health Screening Tools

The DC Collaborative for Mental Health in Pediatric Primary Care

July 2021

BACKGROUND: As of July 1, 2013, DC Medicaid Managed Care Organizations are required to ensure annual mental health screenings by the beneficiaries' Primary Care Provider, using an approved screening tool. The DC Collaborative for Mental Health in Pediatric Primary Care, a partnership among several governmental and non-governmental organizations in DC, was tasked with the job of selecting the screening tools for children and youths (up to age 21 years).

METHOD: A comprehensive literature review was completed to identify a range of possible mental health screening tools. Information was compiled about the tools, including the age ranges covered, domains assessed, administration issues (e.g., time to complete and score), costs, psychometric properties, reading level required to complete, and the languages in which the tool is available. Tools were sent to a subset of pediatricians in the District for review. Pediatricians were also asked to identify tools that they were currently using in their practice and to identify issues of importance to them in selecting and implementing a screening tool. Tools were administered to a subset of families at a Children's National pediatric clinic to solicit further feedback from parents and from a paraprofessional with no prior experience implementing mental health screening.

Thorough review and discussion of the abovementioned information, the DC Collaborative Working Group yielded the selection of the following tools, which are described in more detail below:

- The Edinburgh Postnatal Depression Scale (for parents of children less than 1 year)
- The Ages and Stages Questionnaires: Social-Emotional 2 (for children from 3 to 66 months)
- The Survey of Wellbeing of Young Children (for children less than 5.5 years)
- The Strengths and Difficulties Questionnaire (for youths ages 2 to 21 years)
- The Patient Health Questionnaire-9 (for individuals ages 18 to 21 years)
- The Patient Health Questionnaire-9 Modified for Teens (for youth 12-18 years)
- Ask Suicide- Screening Questions (ASQ) Toolkit (for ages 10-24 years)
- Columbia-Suicide Severity Rating Scale (C-SSRS) (for ages 6-12 years old and 13+ years)
- Car, Relax, Alone, Forget, Friends, Trouble (CRAFT), Version 2.1+N (for ages 12-21)
- Screening to Brief Intervention (S2BI) and Brief Screener for Tobacco, Alcohol, and other Drugs (BSTAD) (for ages 12 – 17)
- Alcohol Use Disorders Identification Test (AUDIT) (for adults and some adolescents)

NOTE: The list of screening tools listed above is not exhaustive. Many other screening tools are also available and may be covered by insurance. See the “Domain Specific Screening Tools” guide for details about additional domain-specific screening measures. The DC Collaborative for Mental Health in Pediatric Primary Care will meet regularly to discuss screening and to consider the addition of new tools. If you have questions or would like to suggest a screening tool be added to the list, please contact Lee Beers at lbeers@childrensnational.org, or Leandra Godoy at lgodoy@childrensnational.org.

Edinburgh Postnatal Depression Scale (EPDS)

The EPDS assesses the likelihood a woman has postpartum depression or anxiety.

Administration and Scoring:

- Mothers in the first year postpartum (with children 0-12 months) complete 10-item questionnaire. Validated for use with fathers; also studied in research settings for use with grandmothers.
- Forms are available in English and Spanish as well as in over 30 other languages.
- Forms take less than 5 minutes to complete and can be scored by paraprofessionals in less than 2 minutes by hand.
- The mother is asked to mark 1 of 4 possible responses that comes the closest to how she has been feeling the previous 7 days. All 10 items must be completed. Care should be taken to avoid the possibility of the mother discussing her answers with others. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.
- Cut-off score denoting a positive screen can vary; the DC Collaborative Working Group has established a score of 13 and above a positive screen that should elicit a referral.

Psychometric Properties:

The EPDS has been validated in over 30 languages with target populations around the world. The following information is based on the original study in the UK, and Test-Retest Reliability from research conducted in Australia.

- Sensitivity: 86%
- Specificity: 78%
- Positive Predictive Value: 74%
- Test-Retest Reliability (two-day interval): .92

Ordering Information:

Questionnaires and scoring guidelines are free and available in multiple places on the internet. The English and Spanish versions can also be accessed through the DC Collaborative's Perinatal Mental Health Toolkit for Pediatric Primary Care Providers available at:

<http://www.dchealthcheck.net./resources/healthcheck/mental-health-tools.html>

Ages and Stages Questionnaires: Social-Emotional (ASQ:SE-2)

The ASQ:SE-2, a caregiver-completed screening tool, assesses self-regulation, compliance, communication, adaptive behaviors, autonomy, affect, interaction with people, and parent concerns.

Administration and Scoring:

- Caregivers of children 1 month to 72 months complete one of 9 forms depending on the child's age (2, 6, 12, 18, 24, 30, 36, 48, and 60 months of age).
- Forms are available in English and Spanish and require a 4th-6th grade reading level to complete.
- Each questionnaire contains approximately 30 items and takes 10–15 minutes to complete.
- Scoring can be completed by paraprofessionals in less than 3 minutes.
- The total score can be compared to an age-normed cutoff score to determine if follow-up is warranted.

Psychometric Properties:

The ASQ: SE-2 was validated and normed with more than 14,000 children across the age intervals and their families. Only English-speaking families were included in this sample.

- Internal Consistency: .84 (range: .67 - .91)
- Test-Retest Reliability (1- to 3-week interval) = .89
- Concurrent Validity: .83 (range: .81 - .95)
- Sensitivity = 78% (range: 71% - 85%)
- Specificity = 95% (range: 90% - 98%)

Ordering Information:

- \$275 for a starter kit [includes color-coded, reproducible questionnaires and scoring sheets (also on a CD-ROM) and a User's Guide].
- Must purchase English and Spanish kits separately.
- Can photocopy/print from the starter kit so there are no ongoing costs.
- Brooks Publishing Co (www.brookespublishing.com; 1-800-638-3775)
<http://www.brookespublishing.com/resource-center/screening-and-assessment/asq/asq-se-2/>

For financial assistance with ordering kits, please contact Leandra Godoy at lgodoy@childrensnational.org.

Survey of Wellbeing of Young Children (SWYC)/SWYC/MA

The SWYC is a free comprehensive screening tool for children under the age of 5 ½ that assesses developmental milestones, emotional/behavioral growth, and family risk factors. Providers should complete the emotional/behavioral domain to meet the mental health screening requirement.

Administration and Scoring:

- SWYC consists of 12 age specific forms that coincide with the standard periodicity of health supervision: 2, 4, 6, 9, 12, 15, 18, 24, 30, 36, 48, and 60 months.
- Specific domains include:
 - Developmental milestones (10 questions)
 - Child behavior (12-18 questions depending on child's age)
 - Baby Pediatric Symptoms Checklist (BPSC; 2-18 months): Assesses Irritability, inflexibility, and difficult with routines
 - Preschool Pediatric Symptoms Checklist (PPSC; 18-66 months): Assesses Externalizing, Internalizing, Attention Problems, and Parenting Challenges
 - Autism (Parents Observation of Social Interactions, POSI; 7 questions; 16-30 months)
 - Family risk (9 questions): Assess parent depression, DV, substance use, and hunger
 - Parent concerns about child behavior and development (2 questions)
 - SWYC-MA: Parent depression (10 questions of the EPDS; 2, 4, and 6 month forms)
- Forms are available in English and Spanish
- Forms take less than 15 minutes to complete and can be scored in five minutes
- A score outside of the expected range is a positive result and indicates that the child may be at risk for having a problem in that area of well-being

Psychometric Properties

Sections of the SWYC demonstrate acceptable psychometric properties, including reliability (test-retest, internal consistency) and validity:

- Developmental Milestones: Sensitivity = .78-.81; Specificity= .73-.76
- BPSC: Correlated with ASQ-SE and PSI Difficult Child Scale
- PPSC: Sensitivity and specificity > .80
- POSI: Two age-specific studies compared POSI and M-CHAT scores to assess reliability, validity
 - Study 1: Parents of 217 children (18–48 months) evaluated at a developmental clinic completed the intake questionnaires. POSI and M-CHAT scores were compared to clinical evaluation results. POSI sensitivity (89%) was higher than M-CHAT (71%; $p < .05$); specificities were not significantly different (POSI: 54%, M-CHAT: 62%).
 - Study 2: Parents of 232 children (16–36 months) from both primary care and subspecialty settings completed the POSI, the M-CHAT, and a report of their child's diagnoses. POSI and M-CHAT scores were compared to reported diagnoses. Sensitivity (83%) compared favorably to that for the M-CHAT (50%), though specificity was lower (75 vs. 84%).
 - In both studies, POSI demonstrated adequate internal reliability (Cronbach $\alpha = 0.83$ and 0.86, respectively)
- Family Questions: selected from previously validated tools

Ordering Information: The SWYC is freely available for download at

<https://www.floatinghospital.org/The-Survey-of-Wellbeing-of-Young-Children/Overview.aspx>.

Strengths and Difficulties Questionnaire (SDQ)

The SDQ is a behavioral screening tool that assesses emotional symptoms, conduct problems, hyperactivity/ inattention, peer problems, and prosocial behavior.

A separate scale assesses problem presence/severity and impairment level.

Administration and Scoring:

- There are 4 age groups for which separate forms are available:
 - 2-4 years: Parent-report and teacher-report forms available.
 - 4-10 years: Parent-report and teacher-report forms available.
 - 11-17 years: Parent-report, teacher-report, and self-report forms available.
 - 17-21 years: Self-report and informant-report forms available.
- Several forms are available for use:
 - Basic form: Consists of 25 items on child behavior (for all age groups)
 - Basic form plus impact supplement: Contains ~ 7 more questions that assess impact of difficulties if problem is identified (for all age groups)
 - Follow-up form: Includes the basic items and impact questions as well as 2 additional follow-up questions for use after intervention (whether the intervention reduced problems or helped in other ways) (for youth < 17 years)
 - *For the DC MCO requirement, only one parent or self-report basic form is required, though providers are encouraged to complete the basic form plus impact supplement and any additional forms that may be relevant.*
- Forms take less than 10 minutes to complete and can be scored in less than 2 minutes by hand or online
- Results yield 5 domain scores, a Total Difficulties score, and an Impact score (if completed), each of which can be compared with age-normed cutoff scores to determine scores in the *Normal, Borderline, or Abnormal* range. *For the DC MCO requirement, only total score needs to be interpreted* though interpreting subscale and impact scores can be useful.
- Forms are available in >40 languages. *For English-speaking patients, select the USA form.*

Psychometric Properties:

The SDQ has been widely used and investigated cross-culturally with normative data obtained in various countries including the USA. These investigations have provided evidence of the reliability, consistency, and validity of the SDQ.

- Sensitivity = 63% - 94% (for total SDQ scales and any DSM-IV diagnosis, sensitivity = 47%).
- Specificity = 88% - 98% (for total SDQ scales and any DSM-IV diagnosis, specificity = 94%).
- Multi-informant SDQs (parents, teachers, older children) identified individuals with a psychiatric diagnosis with a specificity of 80 % and a sensitivity of 85%.

The SDQ: 17+ has not undergone rigorous psychometric analysis, but anecdotal data and preliminary factor analysis indicates that it is acceptable for use with young adults over 17 years of age.

Ordering Information:

Questionnaires and scoring guidelines are freely available from the website: www.sdqinfo.com. The SDQ: 17+ is freely available in English from the website: <http://sdqinfo.org/Adult/>. Scoring guidelines from the 11-17 year old version can be used for the 17+ version.

Patient Health Questionnaire (PHQ-9)

The PHQ-9 is a brief tool to assess for depression symptoms over the previous two weeks.

Administration and Scoring:

- Individuals ages 18 years and older can complete this tool.
- 9 items plus 1 item, completed only if problems are endorsed, assessing level of impairment associated with symptoms.
- Forms are available in 48 languages and require a 3rd-5th grade reading level to complete.
- Scoring can be completed by paraprofessionals in less than 2 minutes.
- Cutoff scores indicate depression severity (*minimal, mild, moderate, moderately severe, severe*) and clinical significance.

Psychometric Properties:

The PHQ-9 was initially developed and validated on a sample of 6,000 English-Speaking patients. Since then, it has been used in numerous studies that have provided evidence of the reliability, consistency, and validity of the tool.

- Sensitivity = 88% for Major Depressive Disorder
- Specificity = 88% for Major Depressive Disorder
- Internal Consistency = .86 - .89

Ordering Information:

Questionnaires and scoring guidelines are freely available at: <http://www.phqscreeners.com/>.

Patient Health Questionnaire Modified for Teens (PHQ-9 Modified)

A modified version of the PHQ-9 is tool used for adolescents that assesses depression symptom over the previous two weeks. Questions about suicidality for the past year are also included.

Administration and Scoring:

- Individuals ages 12-18 can complete this questionnaire.
- 13 items assess current symptoms, history of depression, level of impairment, and number of lifetime suicide attempts
- Forms are available in English and Spanish and require a 3rd-5th grade reading level to complete
- Scoring can be completed by paraprofessionals in less than two minutes. Scoring is similar to PHQ-9 but higher thresholds are recommended
- Cutoff scores indicate depression severity (*minimal, mild, moderate, moderately severe, severe*) and clinical significance

Psychometric Properties:

- PHQ-9 for adults has been widely used and found to have good internal consistency (.86-.89), sensitivity (88% for MDD) and specificity (88% for MDD).
- Modified version with slightly higher cutoff (11) found to have good sensitivity (89.5%) and specificity (77.5%) for detecting youth meeting criteria for MDD

Ordering Information:

Questionnaires and scoring guidelines are freely available: <http://www.gladpc.org/> (in the toolkit section) and in the AAP mental health toolkit

Ask Suicide-Screening Questions (ASQ) Toolkit

Assesses youth's risk of suicide in order to increase suicide prevention.

Administration and scoring:

- Screens ages 10-24 years old but “patients with mental health chief complaints, consider screening below age 10”
- The screening contains 5 items consisting of yes or no questions and less than 2 minutes duration.
- Patients receive the questionnaire and if they respond “no” in question 1-4, they do not need to complete item number 5. If they respond “yes” to one of the items 1-4, they are a positive screen. If they also respond “yes” to item 5, they are an “acute positive screen” and needs to be attended by a health care provider. If a patient responds no to item 5, they are classified as “non-acute positive screen” and needs a suicide safety assessment for complete evaluation

Psychometric properties:

The study obtained data from 524 patients from 10 to 21 years of age who “presented with either medical/surgical or psychiatric chief concerns to the emergency department.”

- Sensitivity of 96.9%
- Specificity of 87.6%
- Negative predictive values of 99.7% for medical/surgical patients and 96.9% for psychiatric patients.

Link: <https://pubmed.ncbi.nlm.nih.gov/23027429/>

Ordering information:

- The ASQ is free of charge
- Available in multiple languages, including Spanish, Portuguese, French, Arabic, Dutch, Hebrew, Mandarin, and Korean.
- <https://www.nimh.nih.gov/research/research-conducted-at-nimh/asq-toolkit-materials/index.shtml>

Columbia-Suicide Severity Rating Scale (C-SSRS)

Measures the risk for suicide in order to reduce risk and increase the supportive network for the child.

Administration and scoring:

- Ages 6-12 years old and 13+ years old
- Items range from 13-18 items, which consist of Suicidal Ideation and Suicidal Behavior categories, which are yes/no questions. The Intensity of Ideation is another category that is rated from a scale of 1-5 and the Suicidal Behavior Lethality section is rated from a scale from 0-5.
- Scoring based on categories: 1) Suicidal Ideation: “Yes” to question 3= moderate level risk and “Yes” to question 4/5= high level risk. 2) Suicidal Behavior: Any risk behavior (within 3 months) of suicide= high level risk. 3) Intensity of Ideation: Add scores ranging from 2-25 and the higher the number, the more risk. 4) Suicidal Behavior Lethality: Asses lethality and the higher the number, the more risk.
- During administration, if the patient responds “no” for item 1 and 2 in Suicidal Ideation then move on to Suicidal Behavior category. If they answer “yes” to item 1 but not 2, move to intensity of ideation section. If they answer “no” to item 1 but “yes” 2, move to items 3, 4, 5 and intensity of ideation section. If they answer, “yes” to both item 1 and 2, move to items 3, 4, 5 and intensity of ideation section.
- Administration ranges from 15-30 min.

Psychometric properties:

Prior study validated instrument in a psychiatric outpatient clinic by comparing the utility of item 9 of the Patient Health Questionnaire (suicide screening) and Columbia Suicide Severity Rating Scale (C-SSRS) using “retrospective medical record review of clinical psychiatric assessments as the reference standard.”

- Positive suicidal risk screenings: C-SSRS, 6.0% (85/1416; 95% CI: 5.0%-7.4%)
- Sensitivity: C-SSRS was 95.0% (19/20; 95% CI: 75%-100%)
- Specificity was 95% (1330/1396; 95% CI: 94%-96%)

Link: <https://pubmed.ncbi.nlm.nih.gov/26278339/>

Ordering information:

- Free of charge and is available in different formats for families, friends, neighbors, healthcare providers, and research settings
- Available in over 100 languages
- Link: <https://cssrs.columbia.edu/the-columbia-scale-c-ssrs/about-the-scale/>
- Link: <https://suicidepreventionlifeline.org/wp-content/uploads/2016/09/Suicide-Risk-Assessment-C-SSRS-Lifeline-Version-2014.pdf>

Car, Relax, Alone, Forget, Friends, Trouble (CRAFTT), Version 2.1+N

The CRAFTT is an efficient and effective health screening tool designed to identify substance use, substance-related riding/driving risk, and substance use disorder among youth.

Administration and Scoring

- Screening for ages 12-21
- Recommended by AAP Bright Futures Guidelines and other groups
- CRAFTT 2.0 scoring: Part A: Frequency of use (vs. yes/no) is optimal for detecting for 12 month use of any substance. Marijuana use clarified to include synthetic marijuana/vaping and gives more examples. Score > 0 prompts Part B. Part B: score > 2 remains optimal cut point for DSM-5 SUD. Follow up: 1) Communicate risk, 2) tailor education based on risk with revised clinician talking points: Review, Recommend, Riding/Driving, Response, Reinforce, and 3) give Contract for Life
- CRAFTT 2.1: Includes **vaping** as a method of administration for marijuana use. Recent research suggests a **higher cut point (e.g., >3) may be used for young adults age 18+** compared to those < 18 years.
- CRAFTT 2.1+N: Added question about **tobacco and nicotine use** (e.g., cigarettes, e-cigarettes, hookah, smokeless)

Psychometric properties:

- CRAFTT 2.0:
 - Part A: (**sensitivity 79%; specificity 86% vs 62% and 72%**).
 - Part B: detecting any DSM-5 SUD: sensitivity 91%, specificity 93%; for detecting a moderate or severe SUD: 88% and 87%)
- CRAFTT 2.1: Evidence-based revisions were made to increase the sensitivity and specificity of the instrument.

Ordering Information:

- Measures and Manual: <https://craftt.org/get-the-craftt>

Screening to Brief Intervention (S2BI) and the
Brief Screener for Tobacco, Alcohol, and other Drugs (BSTAD)

Two screening measures developed by the National Institute on Drug Abuse (NIDA) for use with adolescents

Administration and Scoring:

- Screening for ages 12-17 and for adolescent patients in primary care settings.
- NIDA recommends choosing the one that best fits the provider’s practice: “While both tools are very similar and ask questions about frequency of use, the primary difference is in how the questions are posed and how the possible responses are formatted. It is recommended that you briefly familiarize yourself with each tool to choose the one that best suits your practice.”

Tool	Sample Question:	Response Options
S2BI	In the past year <u>how many times</u> have you used marijuana?	Never, once or twice, monthly, weekly or more
BSTAD	In the past year, <u>on how many days</u> did you use marijuana (weed; blunts)?	0 to 365 days

- **S2BI:** Uses one frequency question each for tobacco, alcohol, and marijuana. Positive responses prompt additional substances. Responses are categorized in risk levels (never = no reported use, once or twice = lower risk, monthly + = higher risk)
- **BSTAD:** Uses one frequency question each for tobacco, alcohol, and marijuana. Positive responses prompt additional substances. Responses are categorized in risk levels (0 days = no reported use, 1 day = lower risk, 2+ days for alcohol/other drugs OR 6+ days for tobacco = higher risk)
- **Instructions per developer:** Appropriate for patient self-administration online or clinician administration. Upon completion, the tool will automatically generate a risk level for substance use disorder based on the patient’s reported frequency of use during the past year. For higher risk patients, additional clinical interview using the CRAFFT or the DSM-5 SUD criteria as a guide and motivational interviewing is recommended.

Psychometric Properties:

- **S2BI:** In a study of outpatients ages 12-17: **Sensitivity and specificity were 100% and 84% for identifying nontobacco substance use, 90% and 94% for substance use disorders, 100% and 94% for severe substance use disorders, and 75% and 98% for nicotine dependence.** No significant differences were found in sensitivity or specificity between the full tool and the Screening to Brief Intervention. (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4270364/>)
- **BSTAD:** In a study of pediatric patients: **sensitivity = 0.95; specificity = 0.97; ≥2 days of alcohol use (sensitivity = 0.96; specificity = 0.85); and ≥2 days of marijuana use (sensitivity = 0.80; specificity = 0.93).**). iPad self-administration was preferred over interviewer administration ($z = 5.8; P < .001$) (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4006430/>)

Ordering Information:

S2BI: <https://www.drugabuse.gov/ast/s2bi/#/>

BSTAD: <https://www.drugabuse.gov/ast/bstad/#/>

Alcohol Use Disorders Identification Test (AUDIT)

The AUDIT, developed by the NIAAA in 2011, was designed to detect alcohol problem use and dependence in adults.

Administration and Scoring:

- 10-item screening measure that can be administered via interview or survey. The measure has 3 items related to alcohol consumption and 7 items related to problematic use. Items are scored from 0 to 4 with higher scores indicating more problematic use.
- The AUDIT has been applied to some adolescent samples. Per the NIAAA Practitioner's Guide for adolescents, research "supports use of the AUDIT for adolescents ages 14 to 18, with lower cut points of 2 for identifying any alcohol problem use and 3 for alcohol abuse or dependence." Recommended cut-points vary across studies and settings (see literature in ordering information).

Psychometric Properties:

"There are also studies on the psychometric properties and utility of the AUDIT and AUDIT-C in screening of alcohol problems in adolescent populations"

- **"The sensitivities vary from 0.65 to 0.96 and specificities from 0.63 to 0.85 on these studies in detecting problematic alcohol use."**
- **"The same studies report cut-off scores for hazardous or any problem use with the AUDIT that vary from 2 to 3 for binge drinking with AUDIT-4 (combination of AUDIT-C including the tenth question of the full AUDIT) and also with the AUDIT-3 (contains only question three). Suggested cut-off scores for the diagnosed AUDs vary from 3 to 10 for AUDIT and from 3 to 6 for AUDIT-C."** <https://pubmed.ncbi.nlm.nih.gov/29803033/>

Ordering Information:

- AUDIT form only from Youth Guide (NIAAA): <https://pubs.niaaa.nih.gov/publications/Practitioner/YouthGuide/AUDIT.pdf>
- AUDIT form and guide (WHO): <https://www.who.int/publications/i/item/audit-the-alcohol-use-disorders-identification-test-guidelines-for-use-in-primary-health-care>
- Adult AUDIT self-test: <https://auditscreen.org/check-your-drinking/>

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