RAPID EVIDENCE REVIEW December 2016

AcademyHealth

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What tools are effective in screening for adverse childhood experiences among children?

Answer: We found nine measures (e.g., surveys administered by health professionals) that can be used to screen children enrolled in Medicaid for adverse childhood experiences (ACEs). Several of these are established measures currently in use in clinical and non-clinical settings, while other measures are new and require additional studies to test whether or not they are accurate and reliable for use with specific populations (e.g., foster children).

Policy context

AcademyHealth undertook this review from the perspective of a Medicaid policymaker seeking to identify tools, such as surveys administered by health professionals, that are effective in screening for adverse childhood experiences (ACEs) among children enrolled in Medicaid. ACEs are stressful or traumatic events, including abuse, neglect, and household disfunction.[2] An ongoing study conducted by the Centers for Disease Control and Prevention and Kaiser Permanente has identified 10 ACEs: physical abuse, sexual abuse, emotional abuse, physical neglect, emotional neglect, mother treated violently, household substance abuse, household mental illness, parental separation or divorce, and having an incarcerated household member.[2]

Supporting evidence

The four relevant systematic reviews identified in our search [3-6] included nine measures that are shown to be effective in screening children for one or more ACE. Appendix 3 includes basic descriptive information about each measure (columns 1-3), possible ACEs that could be screened for using the tool (column 4), information about validity (the ability of a tool to accurately represent what it is trying to measure)[7] and reliability (the idea that a measure should demonstrate consistent interpretation in a variety of settings)[8] (columns 5-6), and other practical considerations (column 7).

Limitations

- The systematic reviews identified in this review include only one direct measure[10] of an ACE as defined by an early study on the topic.[2] The remaining screening tools included in the systematic reviews are based on proxy measures that are only associated with having one or more ACE. For example, a measure could screen for depression, which could be associated with a prior or ongoing ACE such as emotional abuse.
- Only one systematic review specifically evaluated measures for use with a Medicaid population.[3] The remaining evidence is based on a broader population.
- Some tools listed in the systematic reviews do not provide information on reliability or validity.
- This review does not include primary research studies published since the most recent systematic review.

*AcademyHealth conducted this rapid review over a **three-day** period using an established protocol that emphasizes timeliness, efficiency, and responsiveness to policymakers' needs. It synthesizes peer-reviewed systematic reviews published within the last 10 years. A primary analyst undertook and revised the review. Two additional AcademyHealth analysts and an external expert provided input on the initial findings and draft report. Appendix 2 lists the search terms and databases used in this rapid review.*

Appendix 1: Definition of Terms

Adverse childhood experiences (ACEs)—are potentially traumatic events that can have negative, lasting effects on health and well-being. These experiences can include physical, emotional, or sexual abuse, parental divorce or the incarceration of a family member.[2]

Composite measure—A composite measure is a tool that combines more than one item (e.g., a question or group of questions) to measure complex concepts, like self-esteem, that cannot be measured by one question alone.[22]

Scale—A scale is a type of composite measure that may use questions that ask individuals to rank the intensity of their response (e.g., responses might include, "strongly agree," "agree," "disagree," and "strongly disagree").[22]

Appendix 2: Search Terms and Databases

The following list shows the basic Boolean search term strategy used for the review. Searches were modified based on search functions within each database used.

Terms: (screen* OR tool OR assessment OR instrument) AND ("adverse childhood experience*" OR "child* trauma" OR "complex trauma" OR "child* maltreatment")

Databases: Health Systems Evidence, the Cochrane Library, EPPI-Centre Reviews, PubMed, Web of Science Core Collection, ProQuest Social Science Database, and EBSCO Social Sciences Full Text.

Appendix 3: Selected measures of adverse childhood experiences

Possible ACEs that can be screened for using this tool (column 4) have been selected by the AcademyHealth reviewer after examining more detailed information about the measure in the systematic review. While most measures did not specifically screen for ACEs, most screen for indicators or markers of ACEs among children, and thus have been matched appropriately.

(1) Measure Name	(2) Measure Type	(3) Audience	(4) ACEs	(5) Strengths	(6) Limitations	(7) Other Considerations
Childhood Trauma Questionnaire[10]	Self-reported survey	12 years +	-emotional abuse -physical abuse -sexual abuse -emotional neglect -physical neglect	Satisfactory validity and reliability when compared with other methods such as staff observations.	Multiple primary studies report differing results for the appropriate structuring/sequencing of the questions.	Time: 5 minutes Fee: None Qualifications: Master's degree or equivalent
Juvenile Victimization Questionnaire-second revision (JVQ-R2)[11]	Structured interview and child self-reported survey	8-17 years	-emotional abuse -physical abuse -sexual abuse -emotional neglect -physical neglect -mother treated violently -household substance abuse	Demonstrated reliability with community and child welfare samples in the U.S. and wider populations.	None reported.	Time: 20-30 minutes Fee: None Qualifications: Experienced test examiner, qualified professional for interpretation
Trauma Symptom Checklist for Children (TSCC-C; TSCC-A)[12]	Self-reported survey	8-16 years	-emotional abuse -physical abuse -sexual abuse -emotional neglect -physical neglect -mother treated violently	Several studies report that TSCC-C is a statistically reliable and valid tool that has been studied for large samples of racially and socio-economically diverse populations.	TSCC-C requires additional studies on reliability and validity in children under age 7. Studies evaluating TSCC-A may not be representative of the nationwide population due to their small and geographically limited sample population.	Time: 10 minutes Fee: $178 for introductory kit Qualifications: Undergraduate degree with clinical training or license/certification in use of psychological tests
Adolescent Dissociative Experiences Scale (A-DES)[13]	Self-reported survey	11-16 years	-emotional abuse -physical abuse -sexual abuse -emotional neglect -physical neglect	Strong reliability and validity as reported by several studies.	Mean scores of the results have varied greatly and no validated cut-off score has been established.	Time: Unknown Fee: Minimal Qualifications: Undergraduate degree, clinical training

(1) Measure Name	(2) Measure Type	(3) Audience	(4) ACEs	(5) Strengths	(6) Limitations	(7) Other Considerations
Behavior Assessment System for Children-Self-Report of Personality (BASC-2 SRP-A) [15]	Self-reported survey	12-21 years	-emotional abuse -physical abuse -sexual abuse -emotional neglect -physical neglect -mother treated violently -household substance abuse -household mental illness -parental separation or divorce -incarcerated household member	Measure authors report high reliability scores for composite measures and individual clinical scales. Content validity (the extent to which a measure represents all aspects of a social construct) is high. There are a wide range of well-established normal values for a variety of general, clinical, and gender-specific populations.	Milne & Collin-Vézina (2015)[3] noted that based on an analysis of reliability and validity found in one study, composite measures can be used with confidence, but individual scales should be used with caution.	Time: 30 minutes Fee: Single use fee ~ $300 Qualifications: Training on how to rate responses and report results
Strengths & Difficulties Questionnaire-Child Report (SDQ)[16]	Self-reported survey	11-16 years	-emotional abuse -physical abuse -sexual abuse -emotional neglect -physical neglect	Due to wide-use, measure has been extensively reviewed and validated in a variety of settings and populations.	Does not contain trauma specific scales, so should be used in conjunction with a trauma symptom measure.	Time: 5 minutes Fee: None Qualifications: Educator, researcher, clinician
Child Behavior Checklist for Children-Youth Self-Report (YSR)[17]	Self-reported survey	12-18 years	-emotional abuse -physical abuse -sexual abuse -emotional neglect -physical neglect	Reliability and validity are strong for this long-established measure; validity has been extensively tested in numerous settings and populations worldwide.	None reported.	Time: 10 minutes Fee: Unknown Qualifications: Master's degree or equivalent Available in a variety of languages.
Brief Assessment Checklist for Children and Adolescents (BAC-C;-A)[18]	Caregiver report	4-12 years	-emotional abuse -physical abuse -sexual abuse -emotional neglect -physical neglect	Measure is relatively new (2013), so evaluations of validity and reliability are limited. Initial studies report that validity and reliability are comparable to the Strengths & Difficulties Questionnaire-Child Report listed above.	Measure is new so more research on validity and reliability is needed.	Time: Unknown Fee: None Qualifications: Health or social work professional

(1) Measure Name	(2) Measure Type	(3) Audience	(4) ACEs	(5) Strengths	(6) Limitations	(7) Other Considerations
Child and Adolescent Needs and Strengths (CANS-MH)[19]	Multi-rater assessment	0-18 years	-emotional abuse -physical abuse -sexual abuse -emotional neglect -physical neglect -mother treated violently -household substance abuse -household mental illness -parental separation or divorce -incarcerated household member	A study comparing CANS to other similar measures found it to be a concurrently valid measure of youth treatment outcomes.	More research is needed to retest reliability and validity.	Time: 10 minutes Fee: None Qualifications: Training on assessment; mental health expertise for mental disorders section

Appendix 4: Systematic reviews included in the evidence review

Author and date	Focus of review	Methods	Relevant findings	Limitations and quality of the evidence as reported by the author	AMSTAR Quality Rating[21]
Milne, Collin-Vézina, 2015 [3]	This review presents a compendium of measures to be used in assessing trauma among children and adolescents in out-of-home care through child protective services (CPS).	Consultation of trauma-focused websites listing trauma-specific measures. Literature search for measures for children/youth and trauma-specific measures. Review of empirical studies assessing trauma in children since 2000. In order to select measures relevant to the CPS environment, a separate literature review on CPS-related literature was conducted.	12 measures were identified. • All take between 5-30 minutes to complete and are primarily self-report. • Primarily focused on school-age children and adolescents (e.g., ages 7-8 and older). • Authors report that all measures selected demonstrate adequate reliability and validity. Relevant discussion points: • This compendium will be useful in helping CPS and other stakeholders make decisions about the applicability and usefulness of existing measures for children in out-of-home care.	Although several measures demonstrate strong reliability and validity, there is a need to further establish these properties, especially for measures that are relatively new. Not all measures have established socioeconomic, race, and age norms (e.g., what scores to expect), which may limit their applicability.	**7/11**
Bailhache, Leroy, Pillet, & Salmi, 2013[4]	This review examines the evidence on the accuracy of tools proposed to identify abused children before their death and assess if any were adapted to screening.	Search of relevant databases for studies estimating diagnostic accuracy of tools identifying neglect or physical, psychological, or sexual abuse of children, published from 1961 to April 2012. Extraction of selected information about study design, patient populations, assessment methods, and the accuracy parameters. Study quality was assessed using QUADAS criteria.[23]	Thirteen studies of measures were selected, of which seven dealt with physical abuse, four with sexual abuse, one with emotional abuse, and one with any abuse and physical neglect. Relevant discussion points: • Many of the measures included for diagnosing child maltreatment were not designed for implementation as a screening tool and though may accurately identify an abused child, the diagnosis happens too late as the child may already be experiencing abuse or have suffered fatal injuries. • The quality of selected studies was low according to the authors. Available information was often insufficient to make a judgment for many criteria. • Many tools had low sensitivity (correctly identifying abused children) and when the sensitivity was high, specificity (correctly identifying non-abused children) was low.	Review only included studies which clearly aimed to estimate diagnostic accuracy, which could have limited the results. The review did not evaluate the practical or logistical concerns of utilizing the tools in different settings (e.g., emergency departments vs. clinics). The review did not comment on any side effects to the children or families, cost burden, or time required.	**9/11**

Author and date	Focus of review	Methods	Relevant findings	Limitations and quality of the evidence as reported by the author	AMSTAR Quality Rating[21]
Tonmyr, Draca, Crain, & Macmillan, 2011[5]	This review identified measures of emotional/psychological child maltreatment (ECM), reported on their reliability and validity, and made overall assessments of their quality.	Search of relevant databases from 2000-2010 in addition to hand-searching of cited references.	Thirty-three measures were included. The majority of measures demonstrated acceptable reliability; fewer measures evaluated one or more types of validity. Relevant discussion points: • There is a lack of a gold standard for measuring emotional/psychological child maltreatment (ECM), which makes it hard to compare across measures. • Many ECM measures are dependent on self-report and there is no consensus among clinicians as to what constitutes ECM. • The Childhood Trauma Questionnaire (CTQ)[10] seems to be the closest to a 'gold standard' and thus could be recommended for use.	The distinction between abuse and neglect was not outlined in the review, often because study authors did not make this distinction themselves. The study did not include other assessments of quality such as factor analysis, which are often seen as useful when selecting a measure.	**7/11**
Strand, Sarmiento, & Pasquale, 2005[6]	This review provides clinicians and researchers with an overview of the instruments available for screening and assessment of trauma in children and adolescents.	The review searched for measures in three categories: 1. those that both measure a history of exposure and assess impact (symptoms); 2. those instruments that only measure a history of exposure to trauma; and 3. those instruments that assess the impact of or symptom distress related to exposure to a traumatic event.	This article reviews 35 measures, 25 in depth and 10 in brief. For the 25 measures, authors report target population, purpose, a brief description, measure validity and reliability, the author's own assessment of the measure as whole, and contact information for using the measure. Relevant discussion points: • Context is important when selecting a measure. Consideration of the desired population, rigor of the measure, and practical considerations such as cost and time to administer is needed. • Quality of many measures is still emerging, and more research is needed. • Many tools are not yet age-specific, with wide ranges. • The growing number of self-report measures will be useful, as often children (versus their parents) are best at reflecting on their own experiences.	None listed.	**6/11**
Note: One systematic review[20] that evaluated measures related to children's exposure to violence was not included in this table as it did not present information assessing the quality of measures. This review may still be helpful as it presents measures that may be useful for both clinicians and researchers.					

Endnotes

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21. Systematic reviews were assessed for their quality using the AMSTAR quality appraisal tool, which rates overall quality on a scale of 0-11, with 8-11 being high quality, 4-7 being medium quality, and 0-3 low quality: http://amstar.ca/Amstar_Checklist.php
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