NATIONAL QUALITY FORUM

Measure Evaluation 4.1 January 2010

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The sub-criteria and most of the footnotes from the evaluation criteria are provided in Word comments and will appear if your cursor is over the highlighted area (or in the margin if your Word program is set to show revisions in balloons). Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized): Complete all yellow highlighted areas of the form. Evaluate the extent to which each sub-criterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: If there is no TAP or workgroup, the SC also evaluates the sub-criteria (yellow highlighted areas).

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the sub-criterion, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met

- C = Completely (unquestionably demonstrated to meet the criterion)
- P = Partially (demonstrated to partially meet the criterion)
- M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
- N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
- NA = Not applicable (only an option for a few sub-criteria as indicated)

(for NQF staff use) NQF Review #: OT3-043-10 NQF Project: Patient Outcomes Measures: Child Health and Mental Health (Phase III)

MEASURE DESCRIPTIVE INFORMATION

De.1 Measure Title: Pediatric Symptom Checklist (PSC)

De.2 Brief description of measure: The Pediatric Symptom Checklist (PSC) is a brief parent report questionnaire that is used to measure overall psychosocial functioning in children from 4 to 16 years of age. Originally developed to be a screen that would allow pediatricians and other health professionals to identify children with poor overall functioning who were in need of further evaluation or referral, the PSC has seen such wide use in large systems that it has been used as an outcome measure to assess changes in functioning over time. In addition to the original 35 item parent report form of the PSC in English, there are now many other validated forms including translations of the original form into more than a dozen other languages, a youth self report, a pictorial version, and a briefer 17 item version for both the parent and youth forms.

1.1-2 Type of Measure: outcome

De.3 If included in a composite or paired with another measure, please identify composite or paired measure N/A

De.4 National Priority Partners Priority Area: population health, patient and family engagement

De.5 IOM Quality Domain: patient-centered, effectiveness

De.6 Consumer Care Need: Getting Better

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. Public domain only applies to governmental organizations. All non-government organizations must sign a	A Y□

measure steward agreement even if measures are made publicly and freely available. A.1 Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)? Yes A.2 Indicate if Proprietary Measure (as defined in measure steward agreement): A.3 Measure Steward Agreement: agreement signed and submitted A.4 Measure Steward Agreement attached: txNQFMeasureStewardAgreement.pdf	N
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	B Y□ N□
C. The intended use of the measure includes <u>both</u> public reporting <u>and</u> quality improvement. Purpose: public reporting, quality improvement Payment Incentive, Accountability	C Y□ N□
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 24 months of endorsement.	
D.1Testing: Yes, fully developed and testedD.2 Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?	D Y N
(for NQF staff use) Have all conditions for consideration been met? Staff Notes to Steward (if submission returned):	Met Y_ N_
Staff Notes to Reviewers (issues or questions regarding any criteria):	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. <i>Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.</i> (evaluation criteria) 1a. High Impact	Eval Rating
(for NQF staff use) Specific NPP goal:	
1a.1 Demonstrated High Impact Aspect of Healthcare: affects large numbers, a leading cause of morbidity/mortality, patient/societal consequences of poor quality, frequently performed procedure, high resource use 1a.2	
1a.3 Summary of Evidence of High Impact: Psychosocial problems are among the most common and debilitating concerns of child and adults (1,2, 3). Depending on t AHRQ has recently estimated that depression is the single most costly disease of childhood, more expensive than the next most costly areas of asthma, trauma, bronchitis, and infectious diseases(4), an estimate that is congruent with World Health Organization reports that depression is the leading cause of disability worldwide and the fourth leading cause of global disease burden5) .The US Preventive Services Task Force has endorsed screening for depression as a component of routine healthcare for adolescents and the American Academy of Pediatrics Task Force on Mental Health has recently recommended routine screening for younger and older children as well(6). In a recent special issue of <i>Pediatrics</i> that strongly recommends 'Enhancing pediatric mental health care', the American Academy of Pediatrics Task Force on Mental Health bases these	1a C

recommendations on a series of nested findings including A) the high prevalence rate of psychosocial problems (10-21% of all US children), B) the fact that only a fraction (20-50%) of children with such problems receive needed care, C) evidence that if untreated such problems are associated with poorer health, academic, social and economic outcomes, and D) finally evidence that enhanced interventions in pediatric settings are feasible (7,8).	
 1a.4 Citations for Evidence of High Impact: 1.) Costello EJ, Costello AJ, Edelbrock C et al. (1988a), Psychiatric disorders in pediatric primary care: prevalence and risk factors. Arch Gen Psychiatry 45:1107Y1116 2.) Kelleher KJ, McInerny TK, Gardner W, Childs GE, Wasserman R (2000), Increasing identification of psychosocial problems: 1979-1996. Pediatrics 105:1313-1321 3.) O'Connell, et al. Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities. National Research Council, 2009. 4.) AHRQ website 2006: Cost Data 5.) Steve Hyman et al., "Mental Disorders," in Disease Control Priorities in Developing Countries, 2d ed., ed. Dean T. Jamison et al. (New York: Oxford University Press, 2006 6.) Pediatrics 2010; 125: S133-S139 Appendix S4: The case for routine mental health screening. 7.) Pediatrics 2010; 125: Supplement: Enhancing pediatric mental health care; Report from the American Academy of Pediatrics Task Force on Mental Health. 8) Foy, et al. (2010) Introduction. Pediatrics 125: S69-S74. 	
1b. 1 Benefits (improvements in quality) envisioned by use of this measure: Use of the PSC to screen and identify children with psychosocial problems and provide intervention sooner could result in better health and behavior, fewer mental, emotional and behavioral disorders in childhood, adolescence, and adulthood, which in turn could lead to better academic achievement and better life outcomes. Use of the PSC to measure outcomes could help to pinpoint which interventions work for which children under which circumstances. In a recent special issue devoted to 'enhancing pediatric mental health care', the American Academy of Pediatrics Task Force on Mental Health provides nearly two dozen articles and appendices focused on achieving this enhancement in actual practice (7). One of the appendices lays out the case for routine mental health screening as one of the most important methods for achieving this goal, arguing that a growing body of evidence now supports the conclusion that use of validated measures is feasible for routine practice, improves identification of children with psychosocial problems, and that identifying such children and linking them to services improves outcomes (6). As probably the most frequently used mental health screen for children aged 4-16 in the US and internationally, the Pediatric Symptom Checklist is featured prominently throughout the special issue, and studies using the PSC make up a significant portion of the evidence base cited in it. Several dozen studies over the past two decades have demonstrated the feasibility of routine screening with the PSC, the association between risk as identified by the PSC and psychosocial impairments like psychiatric diagnosis (9), positive screenings on other measures of psychosocial problems (10), problems with educational functioning and health (11, 12, 13) and risk factors like poverty, hunger, and chronic health problems (14). Studies have also shown that children who receive needed interventions (15, 16, 17, 18) have significantly improved sc	
Citations for 1b1. Opportunity for Improvement 6.) Pediatrics 2010; 125: S133-S139 Appendix S4: The case for routine mental health screening.	
7.) Pediatrics 2010; 125: Supplement: Enhancing pediatric mental health care; Report from the American Academy of Pediatrics Task Force on Mental Health.	
9.) Jellinek, M. S., J. M. Murphy, J. Robinson, A. Feins, S. Lamb and T. Fenton (1988). "The Pediatric Symptom Checklist: Screening school-age children for psychosocial dysfunction." J Pediatr 112: 201-209. 10.) Gardner, W., A. Lucas, D. Kolko and J. Campo (2007). "Comparison of the PSC-17 and alternative mental health screens in an at-risk primary care sample." J Am Acad Child Adolesc Psychiatry 46(5): 611-8 11.) Gall, G., M. E. Pagano, M. S. Desmond, J. M. Perrin and J. M. Murphy (2000). "Utility of psychosocial screening at a school-based health center." J Sch Health 70(7): 292-8. 12.) Pagano, M. E., L. J. Cassidy, M. Little, J. M. Murphy and M. S. Jellinek (2000). "Identifying psychosocial	1b C P M N

- dysfunction in school-age children: The Pediatric Symptom Checklist as a self-report measure." Psychology in the Schools 37(2): 91-106.
- 13.) Murphy, J. M., M. Jellinek and S. Milinsky (1989). "The Pediatric Symptom Checklist: Validation in the real world of middle school." Journal of Pediatric Psychology 14(4): 629-39.
- 14.) Jellinek, M. S., J. M. Murphy, M. Little, M. E. Pagano, D. M. Comer and K. J. Kelleher (1999). "Use of the Pediatric Symptom Checklist to screen for psychosocial problems in pediatric primary care: a national feasibility study." Archives of Pediatrics & Adolescent Medicine 153(3): 254-60.
- 15.) Stein, B. D., L. H. Jaycox, S. H. Kataoka, M. Wong, W. Tu, M. N. Elliott and A. Fink (2003). "A mental health intervention for schoolchildren exposed to violence: a randomized controlled trial." JAMA 290(5): 603-11.
- 16.) Murphy, J., C. Wehler, M. Pagano, M. Little, R. Kleinman and M. Jellinek (1998). "Relationship between hunger and psychosocial functioning in low-income American children." J Am Acad Child Adolesc Psychiatry 37: 163-170
- 17.) Murphy, J. M., M. Pagano, J. Nachmani, S. Kane, M. Little and R. Kleinman (1998). "The Relationship Between School Breakfast and Psychosocial and Academic Functioning: Results From an Inner City Sample." Archives of Pediatric & Adolescent Medicine 152: 899-907.
- 18.) Murphy, J. M., B. Masek, R. Babcock, M. Jellinek, J. Gold, S. Drubner, K. Sklar and K. Hacker (2010). "Measuring Outcomes in a Child Psychiatry System of Care: The contribution of electronic technologies and parent report." Accepted for publication Clinical Child Psychology and Psychiatry.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:

As reaffirmed in the recent supplement to Pediatrics (7), studies over several decades (19, 20) have repeatedly found that only about 20-50% of the children with psychosocial problems are identified and that once identified, only a fraction of these children receive appropriate mental health treatment (5,6).

1b.3 Citations for data on performance gap:

- 5.) Steve Hyman et al., "Mental Disorders," in Disease Control Priorities in Developing Countries, 2d ed., ed. Dean T. Jamison et al. (New York: Oxford University Press, 2006
- 6.) Pediatrics 2010; 125: \$133-\$139 Appendix \$4: The case for routine mental health screening.
- 7.) Pediatrics 2010; 125: Supplement: Enhancing pediatric mental health care; Report from the American Academy of Pediatrics Task Force on Mental Health.
- 19.) Costello, E. J., C. Edelbrock, A. J. Costello, M. Dulcan, B. J. Burns and D. Brent (1988). "Psychopathology in Pediatric Primary Care: The New Hidden Morbidity." Pediatrics 82: 415-424.
- 20.) Kelleher KJ, Childs GE, Wasserman RC, McInerney TK, Nutting PA, Gardner W (1997), Insurance status and recognition of psychosocial problems: a report from PROS and ASPN. Arch Pediatr Adolesc Med 151:1109Y1115

1b.4 Summary of Data on disparities by population group:

The rates of psychosocial impairment are higher in risk groups such as low income and/or single parent households (14, 21, 22).

1b.5 Citations for data on Disparities:

- 14.) Jellinek, M. S., J. M. Murphy, M. Little, M. E. Pagano, D. M. Comer and K. J. Kelleher (1999). "Use of the Pediatric Symptom Checklist to screen for psychosocial problems in pediatric primary care: a national feasibility study." Archives of Pediatrics & Adolescent Medicine 153(3): 254-60.
- 21.) Murphy, J. M. and M. Jellinek (1988). "Screening for psychosocial dysfunction in economically disadvantaged and minority group children: further validation of the Pediatric Symptom Checklist." American Journal of Orthopsychiatry 58(3): 450-6.
- 22.) Murphy, J. M., H. Arnett, M. S. Jellinek, J. Y. Reede and S. J. Bishop (1992). "Routine Psychosocial Screening in Pediatric Practice: A Naturalistic Study with the Pediatric Symptom Checklist." Clinical Pediatrics 31: 660-667.

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population):

Requiring pediatricians to use a standardized measure to screen for psychosocial problems can be used as a quality assurance tool to insure that psychosocial issues are explored as a part of routine healthcare. Using the cutoff score on the PSC to trigger further evaluation, treatment or referral is a way to prioritize and encourage increased attempts to promote mental health. Use of the PSC to track outcomes provides a way to measure the impacts of aspects of care in such a way that treatment approaches could be evaluated and ultimately made more effective.

Recent studies have demonstrated that routine psychosocial screening in pediatrics is associated with increased rates of pediatrician counseling and referral to specialty mental health and that increased referral to specialty mental health is associated with significant improvements in psychosocial functioning (significantly greater decreases in PSC scores for PSC positive children who are referred to specialty mental health than for those who are not) (23).

Unpublished data from the Commonwealth of Massachusetts shows that by mandating routine psychosocial screening in pediatrics and reimbursing providers for the use of standardized screens has led to a tripling of the number of children screened. Data also show that referrals to specialty mental health have increased about 20% over the same period of time (24).

- 23.)_Hacker, K., S. Williams, E. Myagmarjav, H. Cabral and M. Murphy (2009). "Persistence and change in pediatric symptom checklist scores over 10 to 18 months." Acad Pediatr 9(4): 270-7.
- 24.) Steven Schwartz, personal communication, 2010
- 1c.2-3. Type of Evidence: cohort study, observational study
- **1c.4** Summary of Evidence (as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome):

Routine screening for psychosocial problems in pediatric practice using the PSC has been found to be associated with higher rates of recognition and referral. As noted above, in the Cambridge Health Alliance pediatric system of care, children whose pediatricians referred them to specialty mental health showed significantly improved scores on the PSC about one year later (23). Unpublished data on the PSC in Chile's school based mental health program also show significantly improved PSC scores for children who are referred to specialists and/or treated at school. Published data from the Massachusetts General Hospital child psychiatry clinic show that PSC scores improve significantly over the first three months of outpatient treatment and improvements documented on the parent reported PSC show significant associations with clinician rated improvements on the Children's Global Assessment Scale and the Brief Psychiatric Rating Scale for Children (18). Unpublished data from MGH show that the PSC also registers significant improvement over outpatient treatment intervals of six, nine and even twelve months. The PSC has also been used successfully to assess pre/post changes in overall functioning over time in school based interventions targeting PTSD(15), child hunger(16), and improving school breakfast participation(17).

- 15.) Stein, B. D., L. H. Jaycox, S. H. Kataoka, M. Wong, W. Tu, M. N. Elliott and A. Fink (2003). "A mental health intervention for schoolchildren exposed to violence: a randomized controlled trial." JAMA 290(5): 603-11.
- 16.) Murphy, J., C. Wehler, M. Pagano, M. Little, R. Kleinman and M. Jellinek (1998). "Relationship between hunger and psychosocial functioning in low-income American children." J Am Acad Child Adolesc Psychiatry 37: 163-170
- 17.) Murphy, J. M., M. Pagano, J. Nachmani, S. Kane, M. Little and R. Kleinman (1998). "The Relationship Between School Breakfast and Psychosocial and Academic Functioning: Results From an Inner City Sample." Archives of Pediatric & Adolescent Medicine 152: 899-907.

18.) N	Murphy,	. J. M., B.	. Masek, R	R. Babcock, M	. Jellinek, J	l. Gold, S. Drubner,	, K. Sklar and K. Hacker ((2010)
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"Measuring Outcomes in a Child Psychiatry System of Care: The contribution of electronic technologies and parent report." Accepted for publication Clinical Child Psychology and Psychiatry

- 23.)_Hacker, K., S. Williams, E. Myagmarjav, H. Cabral and M. Murphy (2009). "Persistence and change in pediatric symptom checklist scores over 10 to 18 months." Acad Pediatr 9(4): 270-7.
- **1c.5** Rating of strength/quality of evidence (also provide narrative description of the rating and by whom):

Strong for teens, moderate for school aged children. The US Preventive Services Task Force and the American Academy of Pediatrics have recently concluded that the evidence is strong enough to recommend screening for depression for teens and possibly for younger children as well.

- 1c.6 Method for rating evidence: Expert task force from American Academy of Pediatrics
- **1c.7** Summary of Controversy/Contradictory Evidence: The degree to which screening is associated with improved outcomes has not been well demonstrated, nor have the benefits of charting changes in standardized measures as a part of treatment. The number of studies documenting improved outcomes following screening and intervention with school aged children is relatively small at this time and none have used experimental designs.
- **1c.8 Citations for Evidence (***other than guidelines***):** Committee on Health Care Access and Economics. Task Force on Mental Health, American Academy of Child and Adolescent Psychiatry Improving Mental Health Services in Primary Care: Reducing Administrative and Financial Barriers to Access and Collaboration. Pediatrics 2009;123;1248-1251 The US National Health Goals, Healthy People 2010, recommend routine screening for psychosocial problems as a part of both pediatric and adult primary care and increased treatment of children with emotional and behavioral problems.
- 1c.9 Quote the Specific guideline recommendation (including guideline number and/or page number):

Healthy People 2010

Objective 18-6: "Increase the number of persons seen in primary care who receive mental health screening and assessment"

Objective 18-7: "Increase the proportion of children with mental health problems who receive treatment" (24, 25, 26)

- 24.) USDHHS (2000a). Healthy People 2010. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC, U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion.
- 25.) USDHHS (2000b). Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda. US. Department of Health and Human Services Washington, D.C., Department of Health and Human Services: U.S. Public Health Service.
- 26.) USDHHS (2003). Achieving the Promise: Transforming Mental Health Care in America. Final Report. Rockville, Department of Health and Human Services: New Freedom Commission on Mental Health.

US Preventive Services Task Force

"Screen adolescents (12-18 years of age) for major depressive disorder when systems are in place to ensure accurate diagnosis, psychotherapy (cognitive-behavioral or interpersonal), and follow-up (B recommendation). Evidence is insufficient to warrant a recommendation to screen children (7-11 years of age) for major depressive disorder (I statement)." *Pediatrics* 2009;123:1223.

American Academy of Pediatrics Mental Health Task Force

"Use validated instruments to screen all school aged children (5 years through adolescence) for symptoms

of mental illness and impaired psychosocial functioning at health maintenance visits" <i>Pediatrics</i> 2010; 125: S133.	
1c.10 Clinical Practice Guideline Citation: Unknown 1c.11 National Guideline Clearinghouse or other URL: N/A	
1c.12 Rating of strength of recommendation (also provide narrative description of the rating and by whom):	
B for AHRQ recommendation of screening for depression in adolescents and I for screening for depression in school age children.	
1c.13 Method for rating strength of recommendation (If different from USPSTF system, also describe rating and how it relates to USPSTF): Unknown	
1c.14 Rationale for using this guideline over others: N/A	
TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria for <i>Importance</i> to Measure and Report?	1
Steering Committee: Was the threshold criterion, <i>Importance to Measure and Report</i> , met? Rationale:	1 Y□ N□
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, <u>as specified</u> , produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	Eval Rating
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2a. MEASURE SPECIFICATIONS	
2a. MEASURE SPECIFICATIONS S.1 Do you have a web page where current detailed measure specifications can be obtained? S.2 If yes, provide web page URL:	
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 S.1 Do you have a web page where current detailed measure specifications can be obtained? S.2 If yes, provide web page URL: 2a. Precisely Specified http://www2.massgeneral.org/allpsych/psc/psc_home.htm 2a.1 Numerator Statement (<i>Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome</i>): The numerator is the percentage of patients who had a decrease in total score of at least one point within six months of the first assessment with the Pediatric Symptom Checklist. Total score on the PSC is the weighted score (0, 1, or 2) for each item's response (never, sometimes, or often), summed over all 35 items, with a possible total score range of 0-70. This continuous total score can be recoded to provide a categorical rating of whether the child is a probable 'case' or 'non case'. A probable case is a child who has a PSC total score above an empirically determined cut-off point. For school aged children in a normative US pediatric sample, scores of 28 or higher are considered to indicate the presence of a 	2a- specs C P

The weighted item score (0,1,2) is calculated for each of the 35 items and the weighted total score is then calculated by summing the weighted scores for all items. Total score is compared to standards validated in a national sample. For school aged children, scores of 28 or higher are considered to indicate the presence of a psychosocial problem and a positive screen, with lower scores indicating the absence of such problems and a negative screen. CPT modifier U2 is coded for positive screens and *modifier* U1 for negative screens.

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*):

Patients 4-16 years of age who had the PSC given as a Physician-Administered Developmental, Behavioral and Emotional Screening (CPT code 96110) as part of a pediatric visit or children in this age range whose overall psychosocial functioning is being assessed in other venues.

2a.5 Target population gender: Female, Male **2a.6** Target population age range: 4-16

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator*):

Children can be assessed at a single point to obtain a measure of the prevalence of psychosocial problems or repeatedly in order to assess change over time. For repeat administrations, time frames as small as six weeks or as long as six years have been used.

2a.8 Denominator Details (All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions):

Populations of normal elementary school children, all pediatric outpatients seen for well child care or specialty populations like children in outpatient mental health care have been assessed. Screens can be administered during well- or sick-child outpatient pediatric visits, annual or other routine assessments at school, or as a part of pre/post evaluations of pediatric or mental health interventions.

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*): Virtually no exclusions. Children too far out of the validated range because too young (< 3) or too old (> 18) should be excluded. Patient is not eligible if one or more of the following conditions exist: patient's parent or patient refuses to participate; patient is in an urgent or emergent situation where time is of the essence and to delay treatment would jeopardize the patient's health status or severe mental and/or physical incapacity where the parent or patient is unable to express himself/ herself in a manner understood by others. For example: cases such as delirium or severe cognitive impairment, where psychosocial problems cannot be accurately assessed through use of standardized assessment tools.

2a.10 Denominator Exclusion Details (All information required to collect exclusions to the denominator, including all codes, logic, and definitions):

N/A

2a.11 Stratification Details/Variables (All information required to stratify the measure including the stratification variables, all codes, logic, and definitions):

N/A

2a.12-13 Risk Adjustment Type: no risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method):

N/A

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: weighted score/composite/scale. Categorical (positive screen vs negative screen) and/or continuous score 0-70.

2a.20 Interpretation of Score: better quality = lower score. For both categorical and total scores, lower scores indicate better quality of life and higher functioning.

2a.21 Calculation Algorithm (Describe the calculation of the measure as a flowchart or series of steps): Score answers of never sometimes or often present for each item as 0,1, or 2.

Add weighted scores for all 35 items.

Use total score to calculate pre/post change score for outcomes assessment.

Use total score to categorize as case (total score of 28 or higher if child is 6 or older and 35 item form is used) or non case (27 or lower). Other cut off scores for younger children or 17 item short form or subscales.

Answers of ''never', 'sometimes', or 'often' present for each item are scored as 0, 1, or 2, respectively. Weighted scores over all 35 items are summed. Use total score to calculate pre/post change score for outcomes assessment. Recode total scores of 28 or higher vs 27 or lower to indicate positive screen (case) vs lower scores which indicate negative screen [non case]. Other cut off scores for younger children or 17 item short form or subscales.

2a.22 Describe the method for discriminating performance (e.g., significance testing):

For individuals or groups of patients, changes in PSC total scores can be assessed using parametric statistical significance testing or for categorical score changes, chi square. In some settings, changes in scores for individual children are better viewed from the perspective of 'clinically significant difference' where a difference of six points has been proposed for PSC score changes.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):* In routine pediatric practice, front desk clerical staff usually ask parents to fill out the PSC survey form prior to the start of the pediatric visit and then attach the completed PSC to the patient's chart for the pediatrician to review at the start of the visit.

2a.24 Data Source (Check the source(s) for which the measure is specified and tested)

Documentation of original self-assessment

Paper medical record/flow-sheet

Electronic administrative data/claims

Electronic clinical data

Electronic Health/Medical Record

One page survey filled out by parent or patient.

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument*, *e.g. name of database, clinical registry, collection instrument*, *etc.*):

Data should be conceived of as a single score per individual per time. Data can be stored in paper or electronic medical records as a total score or as individual items or as presence absence of administration (billing record).

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL http://www2.massgeneral.org/allpsych/psc/psc_home.htm

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (Check the level(s) for which the measure is specified and tested)

Clinicians: Individual, Clinicians: Group, Program: Disease management, Program: QIO, Population: national, Population: regional/network, Can be measured at all levels

2a.36-37 Care Settings (Check the setting(s) for which the measure is specified and tested)
Ambulatory Care: Office, Ambulatory Care: Clinic, Ambulatory Care: Emergency Dept, Ambulatory Care: Hospital Outpatient, Home, Hospice, Hospital, Long term acute care hospital, Behavioral health/psychiatric unit, all settings, Group homes

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Behavorial Health: Mental Health, Clinicians: Psychologist/LCSW, Clinicians: Other, Clinicians: Physicians (MD/DO), Clinicians: Nurses Child psychiatrist

TESTING/ANALYSIS	
2b. Reliability testing	
2b.1 Data/sample <i>(description of data/sample and size)</i> : The PSC was originally validated and normed on a middle class outpatient pediatric sample of 206 and 31 outpatient mental health patients (27). Additional validation work was done on samples 300 middle class outpatients (9) and 123 pediatric outpatients from lower income communities (23). The national validation sample data were published in 1997 (11-14 years ago) by Kelley Kelleher and William Gardner (20; 28) and their associates on a representative sample of 21,065 pediatric outpatients from the US and Canada. As just noted, the cutoff scores, reliability and validity we published in 1986 and 1988 based on relatively small convenience samples were replicated (renormed) in Kelleher et al's 1997 national samples. We did some recalibration work ourselves (14) with this dataset in 1999 (12 years ago). More recently (2007), William Gardner and his colleagues from Columbus and Pittsburgh have done additional work validating the PSC against diagnoses on the K-SADS-PL (10).	
9.) Jellinek, M. S., J. M. Murphy, J. Robinson, A. Feins, S. Lamb and T. Fenton (1988). "The Pediatric Symptom Checklist: Screening school-age children for psychosocial dysfunction." J Pediatr 112: 201-209.	
10.) Gardner, W., A. Lucas, D. Kolko and J. Campo (2007). "Comparison of the PSC-17 and alternative mental health screens in an at-risk primary care sample." J Am Acad Child Adolesc Psychiatry 46(5): 611-8	
14.) Jellinek, M. S., J. M. Murphy, M. Little, M. E. Pagano, D. M. Comer and K. J. Kelleher (1999). "Use of the Pediatric Symptom Checklist to screen for psychosocial problems in pediatric primary care: a national feasibility study." Archives of Pediatrics & Adolescent Medicine 153(3): 254-60.	
20.) Kelleher KJ, Childs GE, Wasserman RC, McInerney TK, Nutting PA, Gardner W (1997), Insurance status and recognition of psychosocial problems: a report from PROS and ASPN. Arch Pediatr Adolesc Med 151:1109Y1115	
23.) Murphy, J. M., H. Arnett, M. S. Jellinek, J. Y. Reede and S. J. Bishop (1992). "Routine Psychosocial Screening in Pediatric Practice: A Naturalistic Study with the Pediatric Symptom Checklist." Clinical Pediatrics 31: 660-667.	
27) Jellinek MS, Murphy JM, Burns BJ. "Brief Psychosocial Screening in Outpatient Pediatric Practice" <i>J Pediatr.</i> 1986;109:371-378.	
28) Gardner, W., J. M. Murphy, G. Childs, K. Kelleher, M. E. Pagano, M. S. Jellinek, T. McInerny, M. Wasserman, P. Nutting and L. Chiapetta (1999). "The PSC-17: A brief pediatric symptom checklist with psychosocial problem subscales. A report from PROS and ASPN." <u>Ambulatory Child Health</u> 5: 225-236.	
2b.2 Analytic Method (type of reliability & rationale, method for testing): Cronbach alpha and correlation of scores with retest several weeks later.	
2b.3 Testing Results (reliability statistics, assessment of adequacy in the context of norms for the test conducted): Inter-rater reliability 84%	2b C□
Test-retest reliability 84% - 91% (for middle class vs lower income samples) Internal consistency (Cronbach alpha) 91%	P
2c. Validity testing	
2c.1 Data/sample <i>(description of data/sample and size)</i> : As noted above in 2b.1: The PSC was originally validated and normed on a middle class outpatient pediatric sample of 206 and 31 outpatient mental health patients (27). Additional validation work was done on samples 300 middle class outpatients (9) and 123 pediatric outpatients from lower income communities (23). The national validation sample data were published in 1997 (11-14 years ago) by Kelley Kelleher and Bill Gardner (20; 28) and their associates on a representative sample of 21,065 pediatric outpatients from the US and Canada. As just noted, the cutoff	2c C P M N

scores, reliability and validity we published in 1986 and 1988 based on relatively small convenience samples were replicated (re-normed) in Kelleher et al's 1997 national samples. We did some recalibration work ourselves (14) with this dataset in 1999 (12 years ago). More recently (2007), William Gardner and his colleagues from Columbus and Pittsburgh have done additional work validating the PSC against diagnoses on the K-SADS-PL (10).	
9.) Jellinek, M. S., J. M. Murphy, J. Robinson, A. Feins, S. Lamb and T. Fenton (1988). "The Pediatric Symptom Checklist: Screening school-age children for psychosocial dysfunction." J Pediatr 112: 201-209.	
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2c.2 Analytic Method (type of validity & rationale, method for testing): Correlation and sensitivity, specificity, and kappa with gold standard measures.	
2c.3 Testing Results (statistical results, assessment of adequacy in the context of norms for the test conducted):	
The validity of the PSC was established by comparing case non case screening results found with the PSC with case classifications based on the Child Behavior Checklist, CGAS ratings by mental health clinicians, and receiving services in an outpatient children's mental health clinic. More recent work has explored validity against structured psychiatric interviews. Concurrent, criterion-related validity: Sensitivity 95% middle income, 88% lower income. Specificity 68% middle income, 95-100% lower income.	
2d. Exclusions Justified	
2d.1 Summary of Evidence supporting exclusion(s): N/A	
2d.2 Citations for Evidence: N/A	2d
2d.3 Data/sample (description of data/sample and size): N/A	P
2d.4 Analytic Method (type analysis & rationale): N/A	N NA

2d.5 Testing Results (e.g., frequency, variability, sensitivity analyses): N/A	
2e. Risk Adjustment for Outcomes/ Resource Use Measures	
2e.1 Data/sample (description of data/sample and size): N/A	
2e.2 Analytic Method (type of risk adjustment, analysis, & rationale): N/A	2e
2e.3 Testing Results (risk model performance metrics): N/A	C P M
2e.4 If outcome or resource use measure is not risk adjusted, provide rationale: We have not explored this.	N NA
2f. Identification of Meaningful Differences in Performance	
2f.1 Data/sample from Testing or Current Use (description of data/sample and size): We have not explored this.	
2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance (type of analysis & rationale): We have not explored this.	25
2f.3 Provide Measure Scores from Testing or Current Use (description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance):	2f C P M M M M M M M M M
M=15.1, SD=10 in a national sample of pediatric outpatients aged 4-18.	N_
2g. Comparability of Multiple Data Sources/Methods	
2g.1 Data/sample (description of data/sample and size): In addition to the Kelleher et al national validation sample, the PSC has been used in large scale studies in several HMO's and several countries (Holland, Chile) as well as in a number of large intervention studies.	
2g.2 Analytic Method (type of analysis & rationale): No systematic work like this done so far.	2g C P M
2g.3 Testing Results (e.g., correlation statistics, comparison of rankings): N/A	N NA
2h. Disparities in Care	
2h.1 If measure is stratified, provide stratified results (scores by stratified categories/cohorts): N/A	2h C□
2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:	P
As noted earlier, differences in case rates have been noted for some minority groups and other risk factors but not explore systematically.	N NA
TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria for <i>Scientific Acceptability of Measure Properties?</i>	2
Steering Committee: Overall, to what extent was the criterion, Scientific Acceptability of Measure	<i>2</i> C□
Properties, met? Rationale:	P□
	M□ N□
3. USABILITY	

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Eval Rating
3a. Meaningful, Understandable, and Useful Information	
3a.1 Current Use: in use	
3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large) (If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years): The PSC is one of two broadband psychosocial screens recommended by the state of Massachusetts for use during all well child pediatric visits with school aged children as a part of its Children's Behavioral Health Initiative. Over the past 2.5 years about half of the one million Medicaid pediatric visits have included a screen, about half of these with school aged children and estimated half of these using the PSC. Data have been reported to a court monitor so are a matter of public record although they have not been published. It is interesting to note that the prevalence of positive screening scores (CTP 96110-U2) has shown a trend to decrease over time over the course of the Initiative, from 11% to 8% in the most recent quarter, which could be interpreted as showing the beneficial impact of large scale psychosocial screening efforts in decreasing the prevalence of serious problems in the population, although of course it is too soon to know if these trends will persist or what they actually signify. The PSC is also a recommended screening instrument in at least one half dozen other states in similar initiatives. In the country of Chile, a national mental health program attempts to screen all first grade children in more than 1000 high risk schools, with as many as 40,000 children each year screened with the PSC.	
3a.3 If used in other programs/initiatives (<i>If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). <u>If not used for QI</u>, state the plans to achieve use for QI within 3 years): The PSC is also used as an outcome measure to monitor changes in children's functioning over the course in treatment within the Partners Psychiatry and Mental Health system of care. The PSC has been used at the Massachusetts General Hospital Child Psychiatry Service as part of its outcomes rating project for three years for all cases at intake and then every three months. Scores for the PSC are now registered in the MGH electronic medical record.</i>	
Testing of Interpretability (Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement) 3a.4 Data/sample (description of data/sample and size): This has not been done	
3a.5 Methods (e.g., focus group, survey, QI project): N/A	3a C <u></u>
3a.6 Results (qualitative and/or quantitative results and conclusions): N/A	P
3b/3c. Relation to other NQF-endorsed measures	
3b.1 NQF # and Title of similar or related measures:	
(for NQF staff use) Notes on similar/related endorsed or submitted measures:	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 Are the measure specifications harmonized? If not, why?	3b C P M N NA
3c. Distinctive or Additive Value 3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-	3c C□

endorsed measures:	P M
5.1 Competing Measures If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), describe why it is a more valid or efficient way to measure quality:	N_
TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria for <i>Usability?</i>	3
Steering Committee: Overall, to what extent was the criterion, <i>Usability</i> , met? Rationale:	3 C P M N
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes	4a
4a.1-2 How are the data elements that are needed to compute measure scores generated? Survey,	C P M N
4b. Electronic Sources	
 4b.1 Are all the data elements available electronically? (elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims) Yes 4b.2 If not, specify the near-term path to achieve electronic capture by most providers. 	4b C P M N
4c. Exclusions	4
4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications? No 4c.2 If yes, provide justification.	4c C P M N NA NA NA NA NA NA
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences	1471
4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results. The PSC is susceptible to all the inaccuracies that patient completed surveys face: respondents can misread questions, mark their answers incorrectly, etc. One way to audit for inaccuracies is to compare to previous or subsequent administrations. Scores that vary widely from time to time may indicate inaccuracies and could be checked by having respondents review their answers.	4d C P M N
4e. Data Collection Strategy/Implementation	
4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:	4e C P M N

We have learned many things over the past 25 years. Most recently we have focused on promoting administration and scoring methods that take advantage of electronic technologies like internet, digital pen, voice recognition etc.	
4e.2 Costs to implement the measure (costs of data collection, fees associated with proprietary measures): -\$7.26 (3 min) Costs/ screen**- Materials -\$0.06 Costs/ screen**- Admin. & Scoring -\$3.60 Costs/ screen**- Total Self-Report (based on time to score) -\$3.66	
4e.3 Evidence for costs: N/A	
4e.4 Business case documentation: N/A	
TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria for Feasibility?	4
Steering Committee: Overall, to what extent was the criterion, <i>Feasibility</i> , met? Rationale:	4 C
RECOMMENDATION	
(for NQF staff use) Check if measure is untested and only eligible for time-limited endorsement.	Time- limited
Steering Committee: Do you recommend for endorsement? Comments:	Y□ N□ A□
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) Co.1 Organization Massachusetts General Hospital Department of Child Psychiatry, Yawkey 6A, 35 Fruit St. Boston Massac 02114 Co.2 Point of Contact Michael Murphy, Ed.D MMURPHY6@partners.org 617-724-3163	husetts
Measure Developer If different from Measure Steward Co.3 Organization Massachusetts General Hospital Department of Child Psychiatry, Yawkey 6A, 35 Fruit St. Boston Massachusetts 02114	
Co.4 Point of Contact Michael Murphy, Ed.D MMURPHY6@partners.org 617-724-3163	
Co.5 Submitter If different from Measure Steward POC Michael Murphy, Ed.D MMURPHY6@partners.org 617-724-3163- Massachusetts General Hospital	
Co.6 Additional organizations that sponsored/participated in measure development	
ADDITIONAL INFORMATION	
Workgroup/Expert Panel involved in measure development Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations.	

Describe the members' role in measure development.

Ad.2 If adapted, provide name of original measure:

Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.6 Year the measure was first released: 1990

Ad.7 Month and Year of most recent revision: 0-01

Ad.8 What is your frequency for review/update of this measure? Continuous review; new norms for each new population group in US and international

Ad.9 When is the next scheduled review/update for this measure? 2010-07

Ad.10 Copyright statement/disclaimers: copyright 1984, Michael Jellinek and Michael Murphy, Massachusetts General Hospital

Ad.11 -13 Additional Information web page URL or attachment: URL

http://www2.massgeneral.org/allpsych/psc/psc_home.htm

Date of Submission (MM/DD/YY): 02/03/2010