Supplements to *Evaluation Highlight No. 2*: How are States and evaluators measuring medical homeness in the CHIPRA Quality Demonstration Grant Program?

Evaluation Highlight No. 2 is the second in a series of reports that present descriptive and analytic findings from the national evaluation of the Children's Health Insurance Program Reauthorization Act (CHIPRA) Quality Demonstration Grant Program. In the *Highlight*, we discuss the measurement of medical homeness in selected demonstration projects and describe the development of the Medical Home Index-Revised Short Form (MHI-RSF), an adaptation of the short version of the Medical Home Index (MHI), for use in evaluating the demonstration projects. The full text of the *Highlight* is available on the National Evaluation of the CHIPRA Quality Demonstration Grant Program Web page.

This resource includes five supplements to the *Highlight*. First, we provide background information on two medical home measurement tools. Next, we describe the construction of a cross-state database that we will analyze for the national evaluation. We also outline the methods for collecting the qualitative data that are analyzed in the *Highlight* and present findings from the psychometric assessment of the MHI-RSF. Finally, we explore the MHI-RSF scores in each of six States providing baseline data to the national evaluation team.

1. Background Information on Medical Home Measurement Tools

The MHI is a self-assessment tool developed by the Center for Medical Home Improvement (CMHI), with Federal support from the Maternal and Child Health Bureau (MCHB).[1] The MHI allows practices to gauge their "medical homeness," identify areas for quality improvement, and compare their scores to regional or national benchmarks. The MHI consists of 25 questions that fall into 6 domains of medical homeness: organizational capacity, chronic condition management, care coordination, community outreach, data management, and quality improvement. Each theme is scored 1 to 8, with 1 representing the most basic care and 8 representing the most comprehensive care; scores are totaled and then standardized to a scale of 0-100 for ease of interpretation. The six domains align with the American Academy of Pediatrics (AAP) and the MCHB definition of a medical home. The MHI usually can be completed in less than 2 hours by a physician and a non-physician staff member working together.

The National Committee on Quality Assurance (NCQA) 2008 Physicians Practice Connections-Patient Centered Medical Home (PPC-PCMH) tool was designed and has been used widely for the purpose of recognizing practices that may then receive financial incentives for meeting requirements as medical homes. The tool includes 166 questions pertaining to 9 standards, including access and communication; patient tracking and registry functions; care management; patient self-management support; electronic prescribing; test tracking; referral tracking; performance reporting and improvement; and advanced electronic communication. The Web-based survey is completed by up to four

2. Constructing

Table 1.

to demonstration States. The few respondents who were unavailable for interviews on site were interviewed by phone on dates preceding or following that State's site visit. One interviewer and one note-taker participated in each interview. Interviews were audio-recorded with respondents' expressed consent. These interviews provided additional insights into how the States and practices were using the medical home assessment tools during the implementation period and additional information on their perceived strengths and weaknesses.

4. Psychometric Assessment of the Medical Home Index-Revised Short Form

Creating the Medical Home Index-Revised Short Form

The MHI-RSF was developed as a low-burden medical home assessment tool for the national evaluation of the CHIPRA Quality Demonstration Grant Program. The tool modifies the Center for Medical Home Improvement's (CMHI) MHI-Sngra

Table 2. Domains and Topics on the MHI and MHI-RSF

MHI Domains	MHI Topics	Topic is on MHI-RSF
1. Organizational capacity	1.1 Mission of the practice	
	1.2 Communication/access	X*
	1.3 Access to medical records	
	1.4 Office environment	
	1.5 Family feedback	X
	1.6 Cultural competence	X
	1.7 Staff education	
2. Chronic condition management	2.1 Identification of CSHCN	X
	2.2 Care continuity	X
	2.3 Continuity across settings	
	2.4 Cooperative management with specialists	X
	2.5 Supporting transition to adult services	X
	2.6 Family support	
3. Care coordination	3.1 Role definition	X
	3.2 Family involvement	X*
	3.3 Child and family education	
	3.4 Assessment of needs/plans of care	X
	3.5 Resource information and referrals	
	3.6 Advocacy	
4. Community outreach	4.1 Community assessment of needs of CSHCN	X
	4.2 Community outreach to agencies and schools	
5. Data management	5.1 Electronic data support	X*
	5.2 Data retrieval capacity	X*
6. Quality improvement	6.1 Quality standards (structures)	X
	6.2 Quality activities (processes)	

Notes: CSHCN= children with special health care needs

Like the full MHI, each item on the MHI-RSF is scored 1 to 8, with 1 representing the most basic care and 8 representing the most comprehensive care. Scores are totaled and then standardized to a scale of 0-100 for ease of interpretation. In addition, overall and domain specific means (range: 1-8) are calculated.

The resulting MHI-RSF strikes a balance between comprehensively representing the domains of medical homeness as defined by the American Academy of Pediatrics (AAP) and the Maternal Child Health Bureau (MCHB), capturing all six domains in the full MHI, and being low burden for intervention and comparison practices participating in the demonstration.

Psychometric Analysis of the MHI-RSF

The MHI-RSF is an adaptation of two previously validated medical home assessment tools. To further assess the scientific properties of the MHI-RSF, we conducted descriptive and psychometric analyses on baseline data from 104 pediatric and other child-servicing practices participating as intervention or comparison practices in the CHIPRA Quality Demonstration Grant Program in six States. The evaluation team:

- Compared scores from the MHI-RSF and full MHI among the same practices.
- Calculated rank-order correlations between the MHI-RSF scores and MHI scores among the same practices.
- Calculated the internal reliability of the MHI-RSF.
- Analyzed performance on the MHI-RSF by several practice characteristics thought to be associated with medical homeness, providing evidence of the tool's validity.

MHI-RSF versus MHI Scores

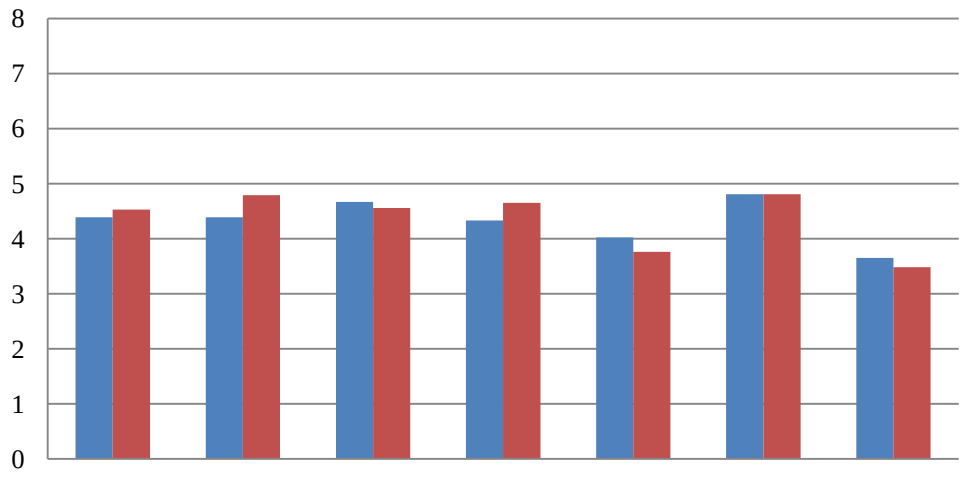
At baseline, 33 practices shared data on the full MHI and 71 practices on the MHI-RSF; counts include both intervention and comparison practices. Among the practices that provided data for the full MHI, we compared the scores from the 25 MHI items to the subset of 14 items included in the MHI-RSF. Table 3 shows descriptive statistics for the overall standardized total score (standardized to 100 points for both the MHI and MHI-RSF), the overall mean score (range: 1-8), and six domain mean scores (range: 1-8) for the 25 MHI items versus the subset of 14 MHI-RSF items. Figure 1 depicts the mean scores graphically.

Table 3. Comparison Between Scores on the 25-Item MHI and the Subset of 14 Items in the MHI-RSF, Among 33 Practices that Completed the MHI

	n	Mean (SD)	Minimum	Median	Maximum
MHI- full set of 25 items					
Overall standardized total score†	33	54.90 (12.3)	26.50	52.00	88.00

† standardized to a 100-point scale

Figure 1. Comparison Between Scores on the 25-Item MHI and the Subset of 14 Items in the MHI-RSF, Among 33 Practices that Completed the MHI



To assess whether the 33 practices rank similarly in medical homeness scores when measured by the MHI-

all 104 practices, the following characteristics are statistically associated with having higher MHI-RSF overall total scores: being involved in other medical home or quality improvement initiatives; having a care coordinator present in the practice; being knowledgeable about and regularly applying the concepts of the AAP medical home definition; and being knowledgeable about and regularly applying the concepts of the MCHB elements of family-centered care (Table 6). This analysis provides evidence of known-group validity of the MHI-RSF, indicating that the MHI-RSF is measuring the coneept it was desiMHI

Endnotes

[1] Additional information can be found at: http://www.medicalhomeimprovement.org/knowledge/practices.html.

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