1.6: How was the PHDS developed?

The PHDS was designed and tested by CAHMI with a peer-reviewed measurement development process. It was developed to fill important gaps in available methods to evaluate quality in the many areas of recommended preventive and developmental services that require parent-reported information as well as program-wide assessments.

The following selection criteria were used to select topics assessed in the PHDS survey:

- Appropriateness for all children in the specific age group.
- Strength of scientific evidence.
- Professional consensus.
- No existing reliable, valid, or efficient way to measure the topic.
- Topic is important to parents (according to cognitive interviews and focus groups).
- The topic can be validly and reliably reported by parents.
- Parsimony (e.g., topic is not already largely represented by another, related topic in the PHDS).

A rigorous six-stage process was used to develop the PHDS, beginning with focus groups with families to identify the aspects of health care quality that are important to parents in the area of preventive care for their children. A review of literature identified through MedLine and through key interviews was conducted. The materials reviewed included more than a dozen parent surveys on early childhood development, family-centered care, and other topics, as well as encounter forms and checklists used by clinicians to help with the provision of anticipatory guidance and the assessment of young children and their families.

The six stages were:

Stage 1: Develop conceptual framework and investigate the relevance of each measure.

Stage 2: Develop starting point measurement proposal, including initial feasibility studies.

Stage 3: Develop draft instrument and implementation methodology.

Stage 4: Conduct field-testing.

Stage 5: Revise and refine as necessary.

Stage 6: Develop scientific and technical documentation to support larger scale implementation and dissemination.

In the early stages of developing the PHDS, many existing surveys and tools were reviewed, particularly those designed to evaluate the Healthy Steps project or survey-based tools, such as Parental Evaluation of Development Status (PEDS). Although many of the PHDS survey concepts reflect those in existing surveys and tools, nearly all of the PHDS items were new, due to a lack of available, tested candidate items appropriate for performance assessment in a self-administered survey.

Three advisory groups within CAHMI—comprised of pediatricians, family practitioners, consumer representatives, public health experts, and researchers—regularly reviewed and provided input on the identification of quality measurement topics and the development of the PHDS.

Special Note About Cognitive Testing and Reading Grade Level:

An important component of the development of the PHDS-PLUS was to ensure that the survey was written at a low reading-grade and cognitive-ease levels. Computer programs were used to determine reading-grade level estimates, using algorithms that take into account the length of the words used, etc. However, a very common word used in a cognitive interview may be considered easy to read, but may have a high reading-grade level because its length. The cognitive ease of a survey can be assessed by conducting formal cognitive interviews with subjects on the survey items.

Reading-grade-level experts, such as Mark Hochauser, Ph.D., recommend conducting a formal reading grade level assessment with standard computer programs coupled with cognitive interviews.

In accordance with these recommendations, the CAHMI team conducted the following steps to ensure that the PHDS is at an appropriate reading-grade level and cognitive level for parents of Medicaid clients**:**

1. Formal readability assessments were conducted that indicated that the PHDS is written at the eight to ninth grade reading level using various reading-grade level computer programs.

2. In-depth cognitive testing was conducted with 15 families representing a range of racial, income, and educations groups, as well as different types of health insurance coverage, age of child, age, and sex of parent, and number of children in family. Parents were uniformly able to complete the self-administered survey in 10–15 minutes and the readability of the survey was confirmed.

3. A second round of cognitive testing was conducted in 2001 to ensure that the PHDS-PLUS survey, when administered over the telephone, was feasible to administer to parents of children enrolled in Medicaid. The CAHMI team conducted cognitive interviews with 20 parents of children 3–48 months old who were enrolled in Medicaid. Five of these interviews were conducted in-person, while the remaining 15 were

conducted over the telephone to assess the response burden and cognitive ease of the PHDS-PLUS when using a telephone administration.

For each item, instances where the respondent required clarification or did not appropriately answer an item were noted. Also, items where the interviewer had difficulty asking the question without edits to the wording were noted. Survey modifications were made based on these findings to improve the reliability, validity, and cognitive ease of the PHDS-PLUS items.

Development of the Reduced-Item PHDS

The reduced-item PHDS (ProPHDS) was developed so that it could be feasibly implemented in health care provider offices. The manual for implementing the ProPHDS in office settings is listed in Step 1.8.

The ProPHDS is different from the full-length PHDS in the following ways:

1) **Length of the Survey**. The in-office PHDS is a reduced-item version of the PHDS. Research with health care providers demonstrated that for the in-office survey administration to be feasible, the survey must take no longer than five minutes for parents to complete.

   Three criteria were used to determine which items to include in the reduced-item version of the survey:

   - Preference was given to PHDS items focused on preventive and developmental care over items related to child health, parenting behaviors, and parent ratings of the health care provided.
   - CAHMI kept a majority of the items within measures of care that health care providers and parents found to be the most valuable for improving quality of care.
   - Preference was given to items for which national data was available or where a national objective, such as Healthy People 2010, was measured.

   Using these criteria, the item-reduction process was informed by the following:

   - Two focus groups with the health care providers in the participating practices.
   - Two focus groups with parents whose child receives care in these practices.
   - Review of national surveys focused on preventive and developmental care for young children, such as the National Survey of Early Childhood Health.
   - Review of key national health objectives.

The result of this work was the creation of the four-page, reduced-item version of the PHDS provided in this toolkit. This reduced-item version of the PHDS collects some descriptive information about parenting behaviors and issues in the family, and captures information about six PHDS measures of care:

- Anticipatory guidance and parental education.*
- Family-centered care.*
- Ask about and address parental concerns.*
- Follow-up for children at risk for developmental/behavioral delays.
- Assessment of the family.

* Because research with health care providers and parents demonstrated that these three measures of care are the most valuable in gathering information for quality improvement purposes, all items within this measure of care were included in the reduced-item version of the PHDS.

2) **Age-Specific Surveys.** The anticipatory guidance and parental education section has three age-specific sections to ensure that the questions asked are age appropriate. To increase the feasibility of administering the PHDS in the office, three distinct age-specific surveys are recommended as opposed to one survey with age-specific skip patterns provided for a mail or telephone administration. The three surveys are for the following age groups:

    - 3–9.99 months old
    - 10–18.99 months old
    - 19–47.99 months old