

Chapter 4

Scoring Protocol

Scoring Protocol for the In-Office, Reduced-Item PHDS

Once the completed survey quota has been reached, the results are tabulated and scored in way that will allow for establishing targeted improvements in care.

This chapter provides an overview of data cleaning and analytic steps that can taken to insert the findings into the data reporting templates described in *Chapter 5* and provided in **Attachment 1** and **Attachment 2**. These templates are based on extensive one-on-one interviews and focus groups with health care providers and parents participating in our pilot project.

We know that few health care providers have the time, resources or skill sets needed to analyze and clean survey data. Generating the item-level frequencies will be extremely informative and can guide you in determining where improvements are needed. However, the templates provided allow for more strategic and targeted displays of the findings that may be more easily read and used by both health care providers and parents.

There may be help out there for you! Consider persons or organizations that you can partner with, who can help you score your survey data. Think creatively! For example, if you need statistical expertise to help you design your analysis, consider a partnership with a local university. Researchers may assist you with the analysis in exchange for the ability to use the data for more complex analyses or the rights to publish a peer-reviewed journal article.

Tip: *The scoring and templates in this manual represent one way of reporting the findings to health care providers and parents. The PHDS technical assistance manual on the FACCT Web site (www.facct.org) provides detailed descriptions of additional ways that the data can be analyzed and reported to various stakeholders.*

Step 1: Enter the complete survey responses into a database

A data base is created for analytic purposes. This database includes the following:

- Information gathered at the time of sampling on the tracking sheet and entered by the person who prepares the chart (See Page 38 and **Appendix A**)
- Information from the completed surveys. As you will see next to each response box on the age-specific surveys, there is a small number that indicates the response code entered into the database for that person for that particular survey question.

For example, for the question below a “1” is entered into the database if the parent answered never, a “2” is entered if the parent answered sometimes, a “3” is entered if the parent answered “usually,” and “4” is entered if the parent answered “always.”

3. In the last 12 months , how often did your child's doctors or other health providers. . .	Never	Sometimes	Usually	Always
a) Take time to understand the specific needs of your child	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

Appendix D provides a recommended data dictionary that includes the original survey questions and all analytic variables created.

Step 2: Prepare the database for analysis

Many people feel that the most difficult part of any analysis is the data preparation that needs occur prior to starting the analysis itself. Data preparation is necessary and is essential to ensuring valid results of the analysis. The following are necessary steps in preparing the data for analysis. The steps do not necessarily need to be conducted in the order presented.

1. *Verify survey completeness.* Only surveys with at least 80 percent of the questions that all respondents answer completed are included in the analysis.
2. *Check for duplicate data records.* Make sure that every record has a unique identifier.
3. *Check for out-of-range values.* Run frequencies on all of your variables to check for out-of-range values or odd-looking distributions. For example, question 3a asks respondents to report how often their child's health care providers take time to understand the specific needs of their child. There are

four possible response codes. If a number that is not between 1 and 4 has been entered, then there may be a data entry problem.

4. *Recode missing values.* Missing values are recoded in some way so that you know not to include them in the analyses. Designate missing values in the database to ensure that they are omitted when calculating measures of care. Also, recode the response options of 'refused' (primarily for telephone administration) and 'don't know' to be missing values. If you recode missing responses to "0," be very careful not to include them in your analyses, as this will affect your results.

Here are some quick analysis tips:

- *Always label your variables and make sure your data dictionary is updated. Good documentation can make the project run smoother!*
- *Create a backup of your data set in case of emergency. Also, create temporary and permanent data sets wisely. Think about what you would need to do if you lost the data.*
- *Always keep a copy of your original data set.*

Step 3: Create analytic variables for analysis

There are five measures of care in the in-office PHDS:

1. Anticipatory guidance and parental education (Questions #1-2)
2. Family-centered care (Question #3)
3. Ask about and address parental concerns (Question #5)
4. Follow-up for children at risk for developmental/behavioral delays (#7)
5. Assessment of the family (#8)

This section provides general information about the analytic variables needed for templates provided in Chapter 5. Chapter 5 also provides detailed information about how these five aspects of care can be reported back to health care providers and to parents.

The following variables will be needed to complete the data reporting templates:

- **Anticipatory guidance and parental education (Questions #1-2)**
 - a. On average, the percent of topics parents reported were discussed in the last 12 months. In order to calculate this percent, it is recommended that the "yes" responses be recoded to 100 and the "no" responses be recoded to zero. For each parent, a mean is calculated (only parents who answered all of the questions are included). The mean value across all eligible parents is, on average, the percent of topics discussed.
 - b. The proportion of parents who reported either "Yes, and my questions were answered" **OR** "No, but I already had information about that and did

- not need to talk about it any more” to ~~all of the age-appropriate topics~~ asked about in the PHDS.
- c. The proportion of parents who reported one or more times “No, but I wish we had talked about that” OR “Yes, but my questions were not answered.”
 - d. Item-level frequencies runs for questions #1 and #2 that list the percent of parents who said “Yes, and my questions were answered,” “No, but I already had information about that and did not need to talk about it any more” and either “No, but I wish we had talked about that” OR “Yes, but my questions were not answered.”
 - e. For the template recommended to report the findings to parents, the top two topics for which parents’ informational needs were met and the top two topics for which the parent’s informational needs were NOT met are listed. Therefore, the items are ranked in order based on the percent of parents who said “No, but I wish we had talked about that” OR “Yes, but my questions were not answered”.

Family centered care (Question #3)

- a. On average, the percent of topics for which parents reported that family-centered care was “usually” or “always” provided. In order to calculate this percent, it is recommended that the “usually” and “always” responses be recoded to 100 and the “sometimes” and “never” responses be recoded to zero. For each parent, a mean is calculated across the questions (only parents who answered all of the questions are included). The mean value across all eligible parents is, on average, the percent of topics for which parents reported that family-centered care was received.
- b. The proportion of parents who reported one or more times “Never” OR “Sometimes.”
- c. Item-level frequencies for question #3 that list the percent of parents who reported “Usually” OR “Always.”

Ask about and address parental concerns (Questions #5-#6)

- a. The proportion of parents who were asked if they had concerns about their child.
- b. The proportion of parents who noted concerns about their child’s learning, development or behavior who were asked whether they had concerns about their child (Question #4 asks parents if they have specific concerns about their child. A count variable is created that counts the number of questions for which parents reported “yes” or “a little.” A binomial variable is created that categorizes parents as those who reported a concern versus those who did not report a concern about their child.
- c. The proportion of parents who noted concerns about their child’s learning, development or behavior who received information to address their concerns.

Follow-up for children at risk for developmental/behavioral delays (#6)

- a. The proportion of children at risk for developmental/behavioral delays who received some form follow-up care.
 - i. Identifying children at risk: Question #4 is derived from the Parents Evaluation of Developmental Status¹ (PEDS) tool. Specific concerns that parents have about their children at specific ages can be an indication of a child's risk for developmental/behavioral delays. Children whose parents have one or more "indicator" concerns (parent said "yes" or "a little") are identified as being at risk. The following are the indicator concerns for each age group:
 - ⇒ 3-9.99 months old: #4 a, #4b
 - ⇒ 10-18.99 months old: #4a, #4b, #4f
 - ⇒ 19-35.99 months old*: #4a, #4b, #4c
 - ⇒ 36-46.99* months old: #4a, #4b, #4c, #4d

Children whose parents have noted concerns for only one indicator item are at moderate risk for delays. Children whose parents note two or more concerns to indicators items are at high risk for delays.

-- **Important Note** – This four category age break-out is different than the age break-out for the age-specific surveys (3-9.99 months, 10-18.99 months, 19-46.99 months). The child's age, in months, is documented on the tracking sheet (**Appendix A**) and is used in order to identify whether parents concerns are an indication of the child's risk for developmental/behavioral delays.

- ii. Provision of follow-up care: Question #7 asks parents about steps their child's health care provider may have taken to follow-up or address a child's risk for developmental/behavioral delays. A risk-specific algorithm is recommended to identify children who have received follow-up health care.
 - ⇒ Moderate Risk: Parent said yes at least once to #7 a or #7b or #7c or #7c.
 - ⇒ High Risk: Parent said yes to #7a or #7b or yes to both #7c and #7d.

Assessment of the family (#8)

- a. On average, the percent of topics questions #8c-#8e parents reported were discussed in the last 12 months. In order to calculate this percent, it is recommended that the "yes" responses be recoded to 100 and the "no" responses be recoded to zero. For each parent, a mean is calculated (only

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- parents who answered all of the questions are included). The mean value across all eligible parents is, on average, the percent of topics discussed.
- b. On average, the percent of topics in question #8a and question #8b parents reported were discussed in the last 12 months. In order to calculate this percent it is recommended that the “yes” responses be recoded to 100 and the “no” responses be recoded to zero. For each parent, a mean is calculated across the questions (only parents who answered both of the questions are included). The mean value across all eligible parents is, on average, the percent of topics discussed.
 - c. The proportion of parents who said “Yes” to all three questions #8c-#8e.
 - d. The proportion of parents who said “No” to all three questions #8c-#8e.
 - e. The proportion of parents who said “Yes” to both questions #8a and #8b.
 - f. The proportion of parents who said “No” to both questions #8a and #8b.
 - g. Item-level frequencies for question #8 showing the percent of parents who said “Yes.”

Tips: The data dictionary in **Appendix D** lists the analytic variables created. This data dictionary can be used to double check that the correct analytic variables are created. Be sure not to overwrite the original items in the database – create new items in case you make a mistake. For more detailed information about how to recode and score analytic measures, please refer to the *Promoting Healthy Development Survey Technical Assistance Manual* at www.facct.org, or email cahmi@facct.org.