

Attachment for 1.18 of Instrument and Ratings IDM Forms

Steps for Calculating Individual Items and Multi-Item Measure Scores for the ICH CAHPS Survey

I. Overview

The Centers for Medicare & Medicaid Services began publicly reporting In-Center Hemodialysis Consumer Assessment of Healthcare Providers and Systems (ICH CAHPS®) Survey results at the Dialysis Facility Compare (DFC) link on the [Medicare website](https://www.medicare.gov/) (https://www.medicare.gov/) in October 2016. In 2020, Medicare.gov transitioned from the DFC to the compare tool on Medicare.gov. ICH CAHPS Survey results are currently refreshed or updated on Care Compare on Medicare.gov twice each year and are based on data from the two most recent semiannual surveys. This document describes how the two individual rating measures and two multi-item measures are being calculated:

Rating Measures

- Rating of Dialysis Center Staff (Question 20)
- Rating of the Dialysis Center (Question 23)

Multi-Item Measures

- Quality of Dialysis Center Care and Operations (Questions 3, 4, 5, 6, 7, 8, 11, 13, 14, 15, 21, 22, and 31). On Medicare Care Compare, results for this multi-item measure are shown as “Doctors & Staff: Patients who reported that dialysis center staff ‘always’ communicated well, kept patients as comfortable and pain-free as possible, behaved in a professional manner, and kept the center clean.”
- Providing Information to Patients (Questions 9, 16, 17, 18, 19, 24, 26, 27, and 28). On Medicare Care Compare, results for this multi-item are shown as “Patients who reported YES their kidney doctors and dialysis center staff gave them the information they needed to take care of their health.”

Multi-item measures are composed of multiple questions that ask about related topics or domains of care. The individual questions included in each ICH CAHPS multi-item measure are shown in *Exhibit 1*.

This document provides instructions for calculating ICH CAHPS Survey ratings and multi-item measure scores. Note that the ICH CAHPS Coordination Team statistically adjusts the data for differences in ICH CAHPS scores resulting from differences in patient-mix. The instructions below are for calculating scores from one semiannual period of data. To calculate scores for a specific reporting period, the ICH CAHPS Coordination Team determines the average score for each measure across two semiannual reporting periods.

Exhibit 1. ICH CAHPS Survey Multi-Item Measures

Quality of Dialysis Center Care and Operations (QDCCO)		Response categories
Q3.	For the next questions, dialysis center staff does not include doctors. Dialysis center staff means nurses, technicians, dietitians and social workers at this dialysis center. In the last 3 months, how often did the dialysis center staff listen carefully to you?	Never, Sometimes, Usually, Always
Q4.	In the last 3 months, how often did the dialysis center staff explain things in a way that was easy for you to understand?	Never, Sometimes, Usually, Always
Q5.	In the last 3 months, how often did the dialysis center staff show respect for what you had to say?	Never, Sometimes, Usually, Always
Q6.	In the last 3 months, how often did the dialysis center staff spend enough time with you?	Never, Sometimes, Usually, Always
Q7.	In the last 3 months, how often did dialysis center staff make you as comfortable as possible during dialysis?	Never, Sometimes, Usually, Always
Q8.	In the last 3 months, did you feel comfortable asking the dialysis center staff everything you wanted about dialysis care?	Yes, No
Q11.	In the last 3 months, how often did dialysis center staff check you as closely as you wanted while you were on the dialysis machine?	Never, Sometimes, Usually, Always
Q13.	In the last 3 months, how often was the dialysis center staff able to manage problems during your dialysis?	Never, Sometimes, Usually, Always
Q14.	In the last 3 months, how often did dialysis center staff behave in a professional manner?	Never, Sometimes, Usually, Always
Q15.	In the last 3 months, how often did dialysis center staff explain blood test results in a way that was easy to understand?	Never, Sometimes, Usually, Always
Q21.	In the last 3 months, when you arrived on time, how often did you get put on the dialysis machine within 15 minutes of your appointment or shift time?	Never, Sometimes, Usually, Always
Q22.	In the last 3 months, how often was the dialysis center as clean as it could be?	Never, Sometimes, Usually, Always
Q31.	In the last 12 months, how often were you satisfied with the way they handled these problems?	Never, Sometimes, Usually, Always

(continued)

Exhibit 1. ICH CAHPS Survey Multi-Item Measures (continued)

Providing Information to Patients (PIP)	Response categories
Q9. The dialysis center staff can connect you to the dialysis machine through a graft, fistula, or catheter. Do you know how to take care of your graft, fistula or catheter?	Yes, No
Q16. As a patient you have certain rights. For example, you have the right to be treated with respect and the right to privacy. Did this dialysis center ever give you any written information about your rights as a patient?	Yes, No
Q17. Did dialysis center staff at this center ever review your rights as a patient with you?	Yes, No
Q18. Has dialysis center staff ever told you what to do if you experience a health problem at home?	Yes, No
Q19. Has any dialysis center staff ever told you how to get off the machine if there is an emergency at the center?	Yes, No
Q24. You can treat kidney disease with dialysis, kidney transplant or with dialysis at home. In the last 12 months, did your kidney doctors or dialysis center staff talk to you as much as you wanted about which treatment is right for you?	Yes, No
Q26. In the last 12 months, has a doctor or dialysis center staff explained to you why you are not eligible for a kidney transplant?	Yes, No
Q27. Peritoneal dialysis is dialysis given through the belly and is usually done at home. In the last 12 months, did either your kidney doctors or dialysis center staff talk to you about peritoneal dialysis?	Yes, No
Q28. In the last 12 months, were you as involved as much as you wanted in choosing the treatment that is right for you?	Yes, No

II. Calculating Individual Item (Ratings) Measures

The two ICH CAHPS individual item (ratings) measures are rating of the dialysis center staff (Question 20) and rating of the dialysis center (Question 23).

A. Calculating the Rating of the Dialysis Center Staff (Question 20)

In Question 20, respondents are asked “Using any number from 0 to 10, where 0 is the worst dialysis center staff possible and 10 is the best dialysis center staff possible, what number would you use to rate your dialysis center staff?”

The scoring for Question 20 will represent the proportion of respondents who answered “9” or “10”. The steps for calculating the Rating of the Dialysis Center Staff measure score are shown below.

Step 1 Identify the cases to be included in this calculation. Include only cases that pass the completeness criteria described in Section IX of the *ICH CAHPS Survey Administration and Specifications Manual*.

Step 2 Calculate the proportion “P” of survey responses with a response of “9” or “10.”

The proportion P is defined as follows: $P = X/Y$, where

- the numerator X is the number of respondents who answered the question “9” or “10”, and
- the denominator Y is the total number of respondents who answered Question 20.

Example

If 1,150 respondents answered Question 20 and 900 of the respondents answered the question with “9” or “10”,

then $X = 900$ and $Y = 1,150$. The ratio of $900/1150 = 0.783$.

B. Calculating the Rating of the Dialysis Center (Question 23)

In Question 23, respondents are asked “Using any number from 0 to 10, where 0 is the worst dialysis center possible and 10 is the best dialysis center possible, what number would you use to rate your dialysis center?”

The scoring for Question 23 will represent the proportion of respondents who answered “9” or “10”. The steps for calculating the Rating of the Dialysis Center measure score are shown below.

Step 1 Identify the cases to be included in this calculation. Include only cases that pass the completeness criteria described in Section IX of the *ICH CAHPS Survey Administration and Specifications Manual*.

Step 2 Calculate the proportion “P” of survey responses with a response of “9” or “10.”

The proportion P is defined as follows: $P = X/Y$, where

- the numerator X is the number of respondents who answered the question “9” or “10,” and
- the denominator Y is the total number of respondents who answered Question 23.

Example

If 1,150 respondents answered Question 23 and 900 of the respondents answered the question with “9” or “10”,

then $X = 900$ and $Y = 1,150$. The ratio of $900 / 1150 = 0.783$

III. Steps for Calculating Multi-Item Measure Scores

A multi-item measure combines the results from multiple questions that ask about a common or related topic area or domain. The steps for computing a “score” for each of the two ICH CAHPS multi-item measures are provided in this section.

A. Calculating the Score for the Quality of Dialysis Center Care and Operations (QDCCO) Multi-Item Measure

The score for this multi-item measure is produced by combining responses to the 13 questions listed in *Exhibit 1* above.

Note that the response categories are “Never,” “Sometimes,” “Usually,” and “Always” for all the questions except Question 8, where the response categories are “Yes” and “No.”

The scoring on this multi-item measure will represent the proportion of respondents who responded “Always” to these questions and “Yes” to Question 8. The steps for calculating a facility’s score for the QDCCO multi-item measure are presented below.

Step 1 Identify the cases to be included in this calculation. Include only cases that passed the completeness criteria described in Section IX of the *ICH CAHPS Survey Administration and Specifications Manual*.

Step 2 For each of the 13 questions included in the multi-item, calculate the proportion ($P = X/Y$) of cases as follows:

P1 = Proportion of respondents whose response to Question 3 is Always

P2 = Proportion of respondents whose response to Question 4 is Always

P3 = Proportion of respondents whose response to Question 5 is Always

P4 = Proportion of respondents whose response to Question 6 is Always

P4 = Proportion of respondents whose response to Question 7 is Always

P5 = Proportion of respondents whose response to Question 8 is Yes

P6 = Proportion of respondents whose response to Question 11 is Always

P7 = Proportion of respondents whose response to Question 13 is Always

P8 = Proportion of respondents whose response to Question 14 is Always

P9 = Proportion of respondents whose response to Question 15 is Always

P10 = Proportion of respondents whose response to Question 21 is Always

P11 = Proportion of respondents whose response to Question 22 is Always

P13 = Proportion of respondents whose response to Question 31 is Always

The proportions P1 through P13 are defined as follows: $P = X / Y$, where:

- The numerator X for each question in the multi-item measure is the number of respondents in who gave the most positive response to each (that is, responded “Always” to Questions 3, 4, 5, 6, 7, 11, 13, 14, 15, 21, 22, and 31 and responded “Yes” to Question 8).
- The denominator Y for each question in the multi-item measure is the total number of respondents who answered the question.

Step 3 Average the proportions calculated for the 13 questions to derive the score for the QDCCO Multi-Item Measure.

Multi-item score for the QDCCO multi-item measure = $(P1 + P2 + P3 + P4 + P5 + P6 + P7 + P8 + P9 + P10 + P11 + P12 + P13) / 13$

Example

If 100 of the total of 110 responses to Question 3 are Always, then $P1 = 100 / 110 = 0.909$

If 90 of the total of 105 responses to Question 4 are Always, then $P2 = 90 / 105 = 0.857$

If 80 of the total of 100 responses to Question 5 are Always, then $P3 = 80 / 100 = 0.800$

If 80 of the total 100 responses to Question 6 are Always, then $P4 = 80 / 100 = 0.800$

If 110 of the total of 120 responses to Question 7 are Always, then $P5 = 110 / 120 = 0.917$

If 100 of the total of 110 responses to Question 8 are Yes, then $P6 = 100 / 110 = 0.909$

If 90 of the total of 105 responses to Question 11 are Always, then $P7 = 90 / 105 = 0.857$

If 80 of the total of 100 responses to Question 13 are Always, then $P8 = 80 / 100 = 0.800$

If 80 of the total 100 responses to Question 14 are Always, then $P9 = 80 / 100 = 0.800$

If 110 of the total of 120 responses to Question 15 are Always, then $P10 = 110 / 120 = 0.917$

If 100 of the total of 110 responses to Question 21 are Always, then $P11 = 100 / 110 = 0.909$

If 90 of the total of 105 responses to Question 22 are Always, then $P12 = 90 / 105 = 0.857$

If 80 of the total of 100 responses to Question 31 are Always, then $P13 = 80 / 100 = 0.800$

Then, $(P1 + P2 + P3 + P4 + P5 + P6 + P7 + P8 + P9 + P10 + P11 + P12 + P13) / 13 = (0.909 + 0.857 + 0.800 + 0.800 + 0.917 + 0.909 + 0.857 + 0.800 + 0.800 + 0.917 + 0.909 + 0.857 + 0.800) / 13 = 11.132 / 13 = 0.856$

The denominator in this equation should include only those questions in the multi-item measure that had at least one nonmissing response across the facility's respondents. If a question was completely missing for all respondents in a facility, then this equation does not include that question. For example, if all of the respondents in the facility did not answer the last question in the multi-item (Q31), then the numerator should be divided by 12 instead of 13.

B. Calculating the Score for the Providing Information to Patients (PIP) Multi-Item Measure

The score for this multi-item measure is produced by combining responses to the nine questions listed in *Exhibit 1* above.

Note that the response categories for all nine questions are "Yes" and "No." The scoring on this multi-item measure will represent the proportion of respondents who answered "Yes" to all of these questions.

The steps for calculating the PIP multi-item measure are provided below.

Step 1 Identify the cases to be included in this calculation. Include only cases that passed the completeness criteria described in Section IX of the *ICH CAHPS Survey Administration and Specifications Manual*.

Step 2 For each of the nine questions included in the multi-item measure, calculate the proportion
($P = X / Y$) of cases in the quarter as follows:

P1 = Proportion of respondents whose response to Question 9 is Yes

P2 = Proportion of respondents whose response to Question 16 is Yes

P3 = Proportion of respondents whose response to Question 17 is Yes

P4 = Proportion of respondents whose response to Question 18 is Yes

P5 = Proportion of respondents whose response to Question 19 is Yes

P6 = Proportion of respondents whose response to Question 24 is Yes

P7 = Proportion of respondents whose response to Question 26 is Yes

P8 = Proportion of respondents whose response to Question 27 is Yes

P9 = Proportion of respondents whose response to Question 28 is Yes

The proportions for P1 through P9 are defined as follows: $P = X / Y$, where:

- The numerator X for each question in the multi-item measure is the number of respondents who gave the most positive response to each question (that is, responded “Yes”).
- The denominator Y for each question in the multi-item measure is the total number of respondents in who answered the question.

Step 3 Average the proportions calculated for the nine questions to derive the score for this multi-item measure, as follows.

Communications between Providers and Patients Multi-Item = $(P1 + P2 + P3 + P4 + P5 + P6 + P7 + P8 + P9) / 9$

Example

If 100 of the total of 110 responses to Question 9 are Yes, then $P1 = 100 / 110 = 0.909$

If 90 of the total of 105 responses to Question 16 are Yes, then $P2 = 90 / 105 = 0.857$

If 80 of the total of 100 responses to Question 17 are Yes, then $P3 = 80 / 100 = 0.800$

If 110 of the total of 120 responses to Question 18 are Yes, then $P4 = 110 / 120 = 0.917$

If 90 of the total of 110 responses to Question 19 are Yes, then $P5 = 90 / 110 = 0.818$

If 90 of the total of 105 responses to Question 24 are Yes, then $P6 = 90 / 105 = 0.857$

If 80 of the total of 100 responses to Question 26 are Yes, then $P7 = 80 / 100 = 0.800$

If 110 of the total of 120 responses to Question 27 are Yes, then $P8 = 110 / 120 = 0.917$

If 90 of the total of 110 responses to Question 28 are Yes, then $P9 = 90 / 110 = 0.818$

Then, $(P1 + P2 + P3 + P4 + P5 + P6 + P7 + P8 + P9) / 9 = (0.909 + 0.857 + 0.800 + 0.917 + 0.818 + 0.857 + 0.800 + 0.917 + 0.818) / 9 = 7.693 / 9 = 0.855$

The denominator in this equation should include only those questions in the multi-item measure that had at least one nonmissing response across the facility's respondents. If a question was completely missing for all respondents in a facility, then this equation does not include that question. For example, if all of the respondents in the facility did not answer the last question in the multi-item (Q28), then the numerator should be divided by 8 instead of 9.