CBE ID

0258

Title

In-Center Hemodialysis Consumer Assessment of Healthcare Providers and Systems (ICH CAHPS) Survey

Project

Advanced Illness and Post-Acute Care

Is Under Review

No

Next Maintenance Cycle

Spring 2030

Previous Endorsement Cycle

Spring 2025

Steward

Centers for Medicare & Medicaid Services

1.0 New or Maintenance

Maintenance

1.1 Measure Structure

Instrument + Derived Measure Set

1.1a Instrument or Derived Measure

Instrument

1.6 Measure Description

The ICH CAHPS Survey is designed to measure the experiences of people receiving in-center hemodialysis care from Medicare-certified dialysis centers. The survey is designed to meet the following three broad goals:

- Produce comparable data from the patient's perspective that will allow objective and meaningful comparisons between dialysis centers on domains that are important to consumers.
- Create incentives for dialysis centers to improve their quality of care.
- Enhance public accountability in health care by increasing the transparency of the quality of care provided in return for public investment.

Specifically, the survey measures patients' experiences on topics that are important from the perspective of patients and help them make more informed choices when selecting a dialysis center as well as helping dialysis centers improve the quality of dialysis care for their patients.

The survey is administered semiannually to patients who have received in-center hemodialysis for at least 3 months from Medicare-certified dialysis centers. Data collection for each survey period is 12 weeks. The survey is available in mail-only, phone-only, and mail with phone follow-up.

Survey results publicly reported include two ratings and two measures:

- Global rating of dialysis center staff
- Global rating of dialysis center
- Quality of Dialysis Center Care and Operations measure (QDCCO, calculated from 13 survey questions)
- Providing Information to Patients measure (PIP, calculated from 9 survey questions)

1.7 Measure Type

Patient-reported Experience Performance Measure (PRE-PM)

1.8 Level of Analysis

Facility

1.9 Care Setting

Other

1.9b Other Care Setting

In-center Hemodialysis Facility

1.10 Measure Rationale

One of the goals of the CMS National Quality Strategy is to foster engagement and to bring the voices of patients to the forefront. As part of fostering engagement, it is critical to hear the voice of individuals by obtaining feedback from them on in-center hemodialysis (ICH) facility performance and incorporating it as part of CMS's comprehensive approach to quality. Patient-centeredness is a central goal of dialysis care and can be directly measured through surveys of dialysis patients. CMS created the In-Center Hemodialysis CAHPS® Survey, a component of the End-Stage Renal Disease (ESRD) Quality Incentive Program (QIP), to ensure that an assessment of the patient-centeredness of care would be included to monitor dialysis facility performance, promote quality improvement, and inform consumer decision making in the selection of a dialysis facility via public reporting of results. The ICH CAHPS Survey is a standardized survey instrument and data collection methodology for measuring ICH patients' perspectives on their care in Medicare-certified dialysis centers. The survey is administered semiannually to patients who have received dialysis for at least 3 months from Medicare-certified dialysis centers.

1.13 Data Dictionary

Not attached. I attest that all information will be provided where codes and/or value sets are needed (1.14a - 1.15c).

1.16 Type of Score

Rate/proportion

1.17 Measure Score Interpretation

Better performance = Higher score

1.18 Calculation of Measure Score

The survey is administered semiannually to patients who have received in-center hemodialysis for at least 3 months from Medicare-certified dialysis centers. Data collection for each survey period is 12 weeks.

Survey results publicly reported include two ratings measures and two multi-item measures:

- Global rating of dialysis center staff
- Global rating of dialysis center
- Quality of Dialysis Center Care and Operations multi-item measure (QDCCO, calculated from 13 survey questions)
- Providing Information to Patients multi-item measure (PIP, calculated from 9 survey questions)

CMS calculates ICH CAHPS Survey measure scores using top-box scoring for completed surveys (a survey is defined as completed when at least 50% of the core questions applicable to all patients are answered). The top-box score refers to the percentage of respondents who give the most positive response(s).

ICH CAHPS Survey respondents are eligible adult patients who have received care from an ICH dialysis center for at least 3 months. The numerator for the multi-item measures is the number of most positive responses (9/10 for ratings and “Yes” or “Always” for multi-item measures). The denominator for the ICH CAHPS multi-item measures is the total number of respondents with completed surveys who answered at least one item within the multi-item measure.

Cases are excluded from the measure denominator if:

- Patients are under 18 years of age
- Patients' eligibility is unclear in mail survey
- Patients are not currently receiving dialysis
- Patients are deceased or receiving hospice
- Patients have not received ICH dialysis for at least 3 months
- Patients receive dialysis at a nursing home where they reside or at home
- Patients reside in jail or prison
- Patients are mentally or physically incapable
- Patients are no longer receiving care at sampled facility
- Patients have a language barrier
- Survey completed by a proxy

More information on the risk adjustment and related calculations can be found in the two attachments submitted for 1.18a. One of the attachments is in Section 7 (supplemental).

1.18a Attach measure score calculation diagram

1-18-att-Instrument-Form-Ratings-Forms.pdf

1.20 Types of Data Sources

Patient-Reported Data and/or Survey Data, Other

1.20a Other Data Source

EQRS source data for demographic information for case-mix adjustors.

1.20c Format: Patient-Reported Data and/or Survey Data

Non-digital

1.20d Format: Other Data Source

Digital

1.21a Data Collection Tool URL(s)

http://example.com

1.21b Attach Data Collection Tool(s)

1-21b-att-Instrument-Form.pdf

1.22 Proxy Responses

No

1.23 Survey Respondent

Patient

1.24 Data Collection and Response Rate

The ICH CAHPS Survey is conducted semiannually each spring and fall. CMS-trained survey

vendors can offer survey administration via mail-only, telephone-only, or mixed mode (mail with phone follow-up) to their client ICH facilities. The survey is available in English, Spanish, traditional and simplified Chinese, Samoan, and Vietnamese; the telephone interview is only available in English and Spanish. Vendors must administer the survey in English, but can choose whether to offer other languages.

We do not yet know response rates for the revised survey since it has not been implemented in the national implementation. Our overall response rate for the current ICH CAHPS Survey (not the revised survey) is around 30%; the mixed mode has the highest response rates of the 3 offered modes. Response rates are calculated for the instrument as a whole:

Response Rate = Total Number of completed surveys/(Total Number of Surveys Fielded - Total Number of Ineligible Surveys)

There is no minimum response rate requirement on ICH CAHPS. We are continuously working with survey vendors and ICH facilities to help improve response rates, by offering things such a flyers/posters and waiting room FAQs to place in facilities, training telephone interviewers on avoiding refusals, and using the CMS logo on mailing materials. We also have a dialysis patient page on our project website with survey FAQs and we reference this in the materials that are mailed to sample patients.

1.25 Data Source Details

In addition to survey responses from patients, we receive data from a CMS database. ICH facilities are required to enter dialysis information for all patients into the ESRD Quality Reporting System (EQRS). EQRS data are then used to create the samples for each ICH CAHPS Survey period. In addition, information such as sex and age are pulled from the EQRS data and merged with survey response data files for analysis purposes. We work with the EQRS team on a continuous basis to remain up to speed on the data, changes to the data or data format, and to mitigate any issues with the data.

1.26 Minimum Sample Size

Every facility’s sample size differs, depending on the number of survey-eligible patients in the EQRS data, and the size of the facility. There is no minimum sample size per ICH facility. If a facility did not serve 30 survey-eligible patients in the preceding year, they are not required to participate in that year’s surveys. In order for ICH CAHPS scores (for the 2 ratings and 2 multi-item measures) to be publicly reported, a facility must have 30+ completed surveys across the two survey periods that are being reported during that Care Compare refresh on medicare.gov. For example, for the 2024 October Care Compare refresh period, a facility needed at least 30 completed surveys between the 2023 Spring and 2023 Fall Surveys, in order for the scores for the

global ratings and QDCCO and PIP multi-item measures to be reported.

2.1 Attach Logic Model

2-1-attachment-Instrument-Form.pdf

2.2 Evidence of Measure Importance

The Consumer Assessment of Healthcare Providers and Systems (CAHPS) set of patient experience surveys are well-established measures of healthcare quality. Each semiannual survey period, between 350,000 and 415,000 ICH patients are selected to receive the ICH CAHPS Survey. Public reporting of these survey results creates incentives for dialysis centers to improve their quality of care, directly impacting the patients who receive it. Because of this, it is important to ensure that the survey aligns with what patients believe constitutes high-quality care. Specifically, the survey measures patients' experiences on topics that are important from the perspective of patients and where the patient is the best source of information. The results help dialysis patients make more informed choices when selecting a dialysis center as well as helping dialysis centers improve the quality of dialysis care for their patients.

In addition to a number of psychometric analyses, RTI conducted literature reviews, several rounds of focus groups and cognitive interviews with dialysis patients, conversations with ESRD stakeholders and Technical Expert Panels (TEP), and discussions with the CAHPS Consortium prior to finalizing a revised survey to test in a 2022 field test/mode experiment. Following the field test, results were discussed with the same groups of experts and all supported the revised survey.

During the focus groups, dialysis patients were asked about characteristics that were important to them in regards to high quality dialysis care. They were then asked about specific survey items identified for removal in the psychometric analysis. For each survey item, participants were asked how important questions were in rating and evaluating the care that they receive at their dialysis center. For the QDCCO measure, there was a mix of opinions on each question identified to be removed, but the consensus of the focus group participants was that if questions had to be removed from the measure, then these were the best to remove.

The 2020 and 2023 TEPs regarding survey revisions included 10 members each, consisting of dialysis patients, ESRD network representatives, a survey expert, dialysis patient advocates, and large dialysis organization representatives.

Data from the 2022 ICH CAHPS Survey field test/mode experiment do not allow for direct assessment of the relationship between survey measures and structures or processes. However, given that the modified instrument-derived multi-item measures (QDCCO and PIP) are the same or similar to current ICH CAHPS measures, CMS anticipates that these revised measures will exhibit

similar relationships to those of the existing ICH CAHPS Survey measures. For example, an exercise comparing the current QDCCO multi-item measure (prior to item removal) to the revised QDCCO multi-item measure results in a near-perfect correlation (r=0.991) and illustrating the strong relationship between the current and revised state of the QDCCO multi-item measure.

2.6 Meaningfulness to Target Population

A successful survey should be relevant to the target audience and produce meaningful results that can be used to inform decisions. For the ICH CAHPS Survey, this includes a survey that accurately measures characteristics of quality dialysis care from the patient's perspective and produces results that ICH centers can use to improve their care.

Each survey period, between 80 and 100k sample patients respond to the current ICH CAHPS Survey, indicating that the survey is meaningful and that they feel that providing their information is valuable. The survey focuses on topics that ESRD patients have reported as being important in defining high-quality dialysis care; these patients are the only source of this information. During survey revisions, we met with 2 focus groups of 9 people who all noted that they felt the ICH CAHPS Survey is important and were happy to know that it was being reduced in length. CMS also receives a number of letters from dialysis patients noting that they believe the survey is valuable and that they appreciate being able to convey their thoughts and have their voices heard.

During the 2024 Pre-Rulemaking Measure Review (PRMR) process, the Patients for Patient Safety US organization commented the following: *We certainly support this, because the experiences of patients is a valuable data source, and we're happy to see it included in instruments like CAHPS as well as other ways in which we use PROMs and PREMs. I will say that our organization Patients for Patient Safety US does see the CAHPS surveys as an incredibly important tool, not only for feeding back patient experience, but improving health equity, by bringing in people who are less likely to use these surveys by asking the right kinds of questions and including meaningful questions in them and I think this falls into that category.*

Activities conducted by RTI during the survey revision process, such as focus groups, interviews, and TEP meetings, helped to ensure that the survey is relevant to the target audience, and that survey results are meaningful to both patients and the ICH facilities that provide care.

4.1a Data Structure and Availability

As these patient-experience data are collected from patients based on their ICH dialysis care experiences, the structured data are not available in electronic sources outside of this data collection. Web-based data collection was tested in the 2022 ICH CAHPS Survey field test/mode experiment, but due to a lack of email addresses available in the sampling data, we had very few

responses. We are working now to determine whether we can obtain additional email addresses to retest web data collection in a future mode experiment.

Proposed revisions to the current ICH CAHPS Survey instrument include shortening it and was developed through focus groups, cognitive interviews, and other instrument-development activities conducted for this revised instrument. The changes to the current ICH CAHPS survey were implemented to mitigate the challenges and barriers to responding to the current full survey. The shortened survey reduces patient burden and is expected to increase response rates.

The ICH CAHPS Survey is administered by independent survey vendors that are approved by CMS, and CMS's implementation contractor provides oversight on a regular basis to ensure that the vendors are following established protocols. Additionally, the survey vendors are required to conduct regular review and monitoring of their own operational systems, whether the survey is administered by mail or telephone. Data is assessed semiannually for accuracy and missing data.

ICH CAHPS Survey results for the updated survey instrument will be fully publicly reported in October 2027 (2026 Spring + 2026 Fall data). However, because the April 2027 refresh would include a survey period that used the current survey (2025 Fall) and a survey period that used the revised survey (2026 Spring), we would plan to reanalyze the 2025 Fall data based on the revised survey measures and case-mix, then combine the reanalyzed data with the 2026 Spring data for public reporting in April 2027; therefore, we are not missing a refresh for ICH CAHPS data.

The following revisions were made to shorten the ICH CAHPS Survey:

The Nephrologist Communication and Caring (NCC) Measure was removed, which included the following questions:

- In the last 3 months, how often did your kidney doctors listen carefully to you?
    - In the last 3 months, how often did your kidney doctors explain things in a way that was easy for you to understand?
    - In the last 3 months, how often did your kidney doctors show respect for what you had to say?
    - In the last 3 months, how often did your kidney doctors spend enough time with you?
    - In the last 3 months, how often did you feel your kidney doctors really cared about you as a person?
    - Using any number from 0 to 10, where 0 is the worst kidney doctors possible and 10 is the best kidney doctors possible, what number would you use to rate the kidney doctors you have now?
    - Do your kidney doctors seem informed and up-to-date about the health care you

receive from other doctors?

The following questions were removed from the QDCCO Measure:

- In the last 3 months, did dialysis center staff keep information about you and your health as private as possible from other patients?
    - In the last 3 months, how often did dialysis center staff insert your needles with as little pain as possible?
    - In the last 3 months, did dialysis center staff talk to you about what you should eat and drink?
    - In the last 3 months, how often did you feel your kidney doctors really cared about you as a person?

The following questions were also removed from the survey; these items were not included in a measure:

- In the last 3 months, has anyone on the dialysis center staff asked you about how your kidney disease affects other parts of your life?
    - Medicare and your State have special agencies that check the quality of care at this dialysis center. In the last 12 months, did you make a complaint to any of these agencies?
    - Are you being treated for high blood pressure?
    - Are you being treated for diabetes or high blood sugar?
    - Are you being treated for heart disease or heart problems?
    - Are you deaf or do you have serious difficulty hearing?
    - Are you blind or do you have serious difficulty seeing, even when wearing glasses?
    - Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?
    - Do you have serious difficulty walking or climbing stairs?
    - Do you have difficulty dressing or bathing?
    - Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone, such as visiting a doctor’s office or shopping?
    - Who helped you complete this survey?

4.1b Implementation Costs and Burden

ICH facilities that served 30 or more survey-eligible patients in the preceding year are required by the ESRD PPS Rule to participate in the current calendar year’s two surveys. They are required to contract with one of the CMS-approved ICH CAHPS Survey vendors, who administers the survey on their behalf. Neither CMS nor RTI are involved in payment discussions between the vendors and facilities, and we have no cost information in terms of the facilities. The proposed revisions will not cause a significant burden to vendors or CMS’s implementation contractor, other than the modification of existing computer programs. Regarding burden to sample dialysis patients, the revised survey will take approximately 12 minutes of their time up to two times each year.

4.1c Confidentiality

The sample is drawn from EQRS data, meaning that facilities are not involved and do not know who was selected to participate in the survey (unless a sample patient specifically tells them). Sample patients are asked to not ask for help from facility staff, and facilities are told not to assist their patients in completing the survey if asked and not to ask any patient whether they were sampled for the survey.

ICH CAHPS Survey data submitted to the ICH CAHPS Data Center (CMS's implementation contractor) are de-identified. Case-level data are assigned a unique case ID, randomly generated so that there is no identifying information embedded in it. ICH CAHPS Survey results are aggregated at the facility level and publicly reported at the facility-, state- and national-level.

Vendors are allowed to provide unofficial aggregated results to their facility clients; however, there are rules on sharing such information when the number of responses is too low.

4.3 Feasibility Informed Final Measure

After the 2022 field test/mode experiment, and after the results were discussed with stakeholders (Technical Expert Panel members representing different ESRD organizations and large dialysis organizations, as well as the CAHPS Consortium), CMS approved the deletion of multiple items from the current nationally fielded ICH CAHPS Survey. The revised instrument is being submitted via this Instrument submission. For the 4 instrument-derived measures (2 ratings and 2 multi-item measures), 3 are the same as the current ICH CAHPS Survey and one is slightly modified.

4.4 Proprietary Information

Not a proprietary measure and no proprietary components

5.1.1 Data Used for Testing

The revised ICH CAHPS Survey was tested in fall 2022 during a field test/mode experiment. The total sample for the field test/mode experiment, based on EQRS data, was 24,354. Data were collected in English and Spanish, by mail, telephone, mail with telephone follow-up, and web with mail follow-up. Analyses are based on the field test/mode experiment data collected between October 2022 and January 2023, including 4605 respondents representing 3211 facilities. Field test/mode experiment data were used for the internal consistency analyses (Reliability – Section 5.2), factor analysis (Validity – Section 5.3), correlations among ratings and multi-item measures (Validity – Section 5.3), and risk analysis (IDM – Risk Adjustment – Section 5.4) analyses. For the signal-to-noise (IDM – Reliability – Section 5.2) and performance gap (IDM – Performance Gap – Section 2.4) analyses, national implementation data was used, which was collected during the 2023 Spring and 2023 Fall Surveys.

The national ICH CAHPS Survey is offered in six languages: English, Spanish, Chinese (simplified and traditional), Samoan, and Vietnamese. Additional translations will be made as needed.

There are no fees or licensing for use of the ICH CAHPS® Survey, training or oversight activities, or for accessing publicly reported ICH CAHPS® Survey measure scores or star ratings on the CMS Medicare.gov website.

5.1.1a Dates of Testing Data

Field not required Spring 2025

5.1.2 Differences in Data

None

5.1.3 Characteristics of Measured Entities

For the field test/mode experiment that was conducted from October 2022 through January 2023, we took a sample of 24,354 ICH patients, using a stratified sampling method so as to have the least impact on public reporting. There were 6,736 facilities represented in the field test/mode experiment sample, located throughout the country. Facilities ranged in size from very small to very large. To have the least impact in public reporting, facilities that always meet the public reporting threshold (always have 30+ completed surveys for the two reporting periods) and facilities never meet the public reporting threshold (do not come close to the 30+ completes) were oversampled, and facilities that are normally right on the threshold line were undersampled. We randomly assigned sampled patients to one of the four data collection modes using the inverse of the estimated response rates to achieve the desired sample size in each mode. The final sample closely mirrored the national population of dialysis centers. Analyses were conducted using data from the 4605 respondents, who represented 3211 facilities.

For the 2023 Spring/Fall national implementation data used for facility-level analyses, all facilities registered on the ICH CAHPS website, by each dialysis facility that has determined they are required to participate in the surveys, were included in the sample if they had sample in the EQRS data. For the 2023 Spring/Fall Survey national implementation data, the following sample strategy was used:

Facilities with up to 240 patients: A census of all survey-eligible patients will be conducted for facilities with fewer than 240 survey-eligible patients at each semiannual sampling wave. Thus,

patients at these ICH facilities may be sampled twice in a 12-month period. Facilities with 240 or more patients.

For dialysis centers with 240 or more survey-eligible ICH patients: A simple random sample will be selected for each sampling period, with the goal of obtaining 200 completed surveys per year while attempting to minimize the overlap of patients between subsequent semiannual waves of sampling.

The 2023 Spring Survey included 6675 facilities across the US and its territories, and the 2023 Fall Survey included 6674 facilities. Facility size differed from small to large; facilities were required to participate if they served 30+ survey-eligible patients in the prior calendar year.

5.1.4 Characteristics of Units of the Eligible Population

For the field test/mode experiment, our sampling design randomly assigned sample patients to one of the four data collection modes, with a target of completing approximately 1,570 interviews for each mode. This design allowed us to measure mode effects related to nonresponse and measurement differences (e.g., because of social desirability) and also allowed for case-mix analyses. 24,354 ICH patients were sampled for the field test/mode experiment, using a stratified sampling method so as to have the least impact on public reporting. To have the least impact in public reporting, facilities that always meet the public reporting threshold (always have 30+ completed surveys for the two reporting periods) and facilities never meet the public reporting threshold (do not come close to the 30+ completes) were oversampled, and facilities that are normally right on the threshold line were undersampled. We randomly assigned sampled patients to one of the four data collection modes using the inverse of the estimated response rates to achieve the desired sample size in each mode. The final sample closely mirrored the national population of dialysis centers. Analyses were conducted using data from the 4605 respondents, who represented 3211 facilities.

For the 2023 Spring/Fall Survey national implementation data, the following sample strategy was used:

Facilities with up to 240 patients: A census of all survey-eligible patients will be conducted for facilities with fewer than 240 survey-eligible patients at each semiannual sampling wave. Thus, patients at these ICH facilities may be sampled twice in a 12-month period. Facilities with 240 or more patients.

For dialysis centers with 240 or more survey-eligible ICH patients: A simple random sample will be selected for each sampling period, with the goal of obtaining 200 completed surveys per year while attempting to minimize the overlap of patients between subsequent semiannual waves of

sampling.

For the 2023 Spring, 378,513 patients were sampled. 91,914 respondents, representing 6609 facilities across the nation and its territories, were included in the analyses. For the 2023 Fall, 383,116 patients were sampled, 86,566 respondents representing 6595 facilities, were included in the analyses.

Eligibility criteria for the field test/mode experiment sample mirrored the criteria used for national implementation. Sample patients must:

- Be at least 18 years of age or older,
- Have received hemodialysis at an in-center facility for 3 months or longer,
- Be alive as of the last day of the sampling window, and
- Not be institutionalized or receiving hospice.

Attachment 5.1.4 with patient characteristics can be found in Supplemental 7.1 zip file.

5.2.1 Reliability Testing Conducted (instrument)

Person or encounter level (i.e., data element) (e.g., inter–abstractor reliability)

5.2.2 Method(s) of Reliability Testing

Psychometric testing at the instrument level includes a reliability assessment using the Cronbach's alpha estimate, from the internal consistency analysis of measurement error. The reliability analysis was conducted at the item and patient level, using SAS's PROC CORR procedure with ALPHA notation specified, which employs listwise deletion of missing data. Available response data from the revised survey field test/mode experiment was included as input for the internal consistency analysis.

Output from the PROC CORR was evaluated against psychometric thresholds of acceptable internal consistency. In general, Cronbach's alpha estimates of above 0.9 were evaluated as good internal consistency and 0.7 was considered a minimum threshold for acceptability in this analysis (Nunnally & Bernstein, 1994).

Citation:

Nunnally J, Bernstein L. Psychometric theory. New York: McGraw-Hill Higher, INC; 1994.

5.2.3 Reliability Testing Results

The attachment provides the internal consistency results for the Quality of Dialysis Center Care and Operations (QDCCO) and Providing Information to Patients (PIP) item sets. The item-total correlations are provided in the second column from the right, and the alpha estimate for the set (if a particular item is removed) is in the far right. In summary, the 13 QDCCO items have a standardized Cronbach's alpha estimate of 0.930 which exceeds the threshold for good internal consistency. In addition, the standardized item-total correlations range from 0.54 to 0.78 and none of the alpha estimates improve substantially with any item removed.

The 9 PIP items have a standardized Cronbach's alpha estimate of 0.743 which is just above the minimal acceptability threshold. The standardized item-total correlation range for the PIP item set has a minimum of 0.29 and a maximum of 0.55, and again, none of the alpha estimates improve substantially with any item removed.

5.2.3a Attach Additional Reliability Testing Results

5-2-3a-att-Instrument-Form.pdf

5.2.4 Interpretation of Reliability Results

The internal consistency estimates for the QDCCO item set (α = 0.930), and PIP item set (α = 0.743) are above the minimal acceptability threshold (Nunnally & Bernstein, 1994). In addition,

most of the item-total correlations across multi-item measures are above 0.5, the remaining primarily above 0.3, with one value at 0.29. Therefore, the items assigned to each multi-items measure (QDCCO and PIP) function well together and we conclude that the items perform consistent measurement of the representative constructs.

5.3.1 Validity Testing Conducted (instrument)

Person or encounter level (i.e., data element) (e.g., sensitivity and specificity)

5.3.3 Method(s) of Validity Testing

Changes to the items within the QDCCO multi-item measure were assessed with face validity. Next, structural and convergent validity were used to determine whether the QDCCO and PIP item sets measure their respective construct as intended.

Confirmatory factor analysis (CFA) was used to determine structural validity of the QDCCO and PIP item sets through model fit statistics compared to acceptability thresholds. The thresholds for model acceptability are as follows:

RMSEA of 0.05 or less (Browne & Cudeck, 1993)

CFI of 0.90 at a minimum (Hu & Bentler, 1999)

TLI of 0.90 at a minimum historically, 0.95 indicates good fit

Convergent validity was also assessed through CFA by evaluating factor loadings for each item. CFA analyses were conducted using the Mplus analytic software (Version 8.11; 2023) using the Weighted Least Squares Mean and Variance adjusted (WLSMV) estimator to account for categorical data with pairwise deletion for missing data. In addition, correlations, conducted using SAS PROC CORR, evaluating the two multi-item measures from the item sets (QDCCO and PIP) with ratings of the Dialysis Center and Dialysis Staff, were provided for convergent validity.

Citations:

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), Testing structural equation models (pp. 136–162). Thousand Oaks, CA: Sage.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling, 6(1), 1–55. http://dx.doi.org/10.1080/10705519909540118

Muthén, L. K., & Muthén, B. O. (1998-2023). Mplus (Version 8.11) [Computer software]. Los Angeles, CA: Muthén & Muthén

Glossary:

RMSEA - root mean square error of approximation

CFI - comparative fit index

TLI - Tucker-Lewis Index

5.3.4 Validity Testing Results

All experts confirmed face validity and agreed that the remaining items still provided construct representation of the quality of a facility's care and operations. In addition, psychometric results showed that the removal of 4 questions from the QDCCO did not negatively impact the measure's validity.

Confirmatory factor analysis (CFA) model fit to assess structural validity produced acceptable values, consistent with a well-fitting model. These estimates are:

RMSEA=0.038 (95% CI = 0.036 0.040)

CFI=0.987

TLI=0.985

The attachment provides the estimates for each standardized factor loading on the representative items to assess convergent validity. Correlative information on the factors is also provided, and moderate. All factor loadings for the QDCCO and PIP item sets are above 0.4, with the majority above 0.5, and all are statistically significant ($p < 0.001$).

The final assessment of convergent validity through correlation information results in the relationship between each averaged measure, and the Dialysis Staff Rating (r_{QDCCO} = 0. 0.757, r_{PIP} = 0.434) and the Dialysis Center Rating (r_{QDCCO} = 0.737, r_{PIP} = 0.403), all of which are statistically significant ($p<0.001$).

5.3.4a Attach Additional Validity Testing Results

5-3-4a-att-Instrument-Form.pdf

5.3.5 Interpretation of Validity Results

The QDCCO and PIP item sets continue to effectively measure consistent constructs. Confirmatory factor analysis (CFA) produced appropriate model fit indices and statistically significant factor loadings. Correlational analyses showed moderate relationships to patient ratings of the overall facility and the staff. The findings confirm the valid measurement of the QDCCO and PIP constructs.

6.1.1 Current Status

In use

6.1.3 Current Use(s)

Public Reporting, Payment Program, Quality Improvement with Benchmarking (external benchmarking to multiple organizations), Quality Improvement (Internal to the specific organization)

6.1.3 Program Details

Name of the program and sponsor
ESRD Quality Incentive Program (QIP) sponsored by CMS
URL of the program
https://www.cms.gov/medicare/quality/end-stage-renal-disease-esrd-quality-incen...

Purpose of the program
The first of its kind in Medicare, the QIP program changes the way CMS pays for the treatment of patients who receive dialysis by linking a portion of payment directly to facilities' performance on quality of care measures.
Geographic area and percentage of accountable entities and patients included
We provide annual information to QIP for ~2,320 dialysis facilities, representing ~100,828 dialysis patients nationwide; this accounts for ~26% of facility CCNs provided by QIP, as we do not provide information to QIP if a facility had 30 completes/year.
Applicable level of analysis and care setting

Dialysis facility

6.2.1 Actions of Measured Entities to Improve Performance

Dialysis center scores will increase as they target these measures, therefore improving patients' perspective of their dialysis care. Each dialysis center may have different training mechanisms or internal procedures which can help improve the overall quality of the services they deliver.

In an attempt to increase survey response rates (performance on the survey overall) to have enough data to be publicly reported, ICH facilities are encouraged to hang posters/flyers and waiting room FAQs in their facilities, so that patients understand that the ICH CAHPS survey is legitimate.

6.2.2 Feedback on Measure Performance

The revised instrument has not been implemented beyond the field test stage; however, we did receive positive feedback during the Pre-Rulemaking Measure Review (PRMR) process. The PRMR hospital committee recommended the revised survey. The PRMR committee recognized the importance of patient experience of care data and supported efforts to reduce the length of the survey while maintaining scientific acceptability. The CAHPS Consortium noted that we should remove one additional question (which was done after more analyses) and then move forward with the revised survey; they felt that it would help survey burden and was a great start at reducing a very long survey. In addition, feedback was obtained from several large dialysis organizations (LDOs) during TEP meetings and email correspondence. They noted that this was a good start at reducing the survey but would like to see it reduced even more in the future. The consensus from the LDOs was that the revised survey didn't remove any major questions that would raise alarm.

6.2.3 Consideration of Measure Feedback

Although this revised survey has not been implemented yet, final decisions were based on feedback from many stakeholders, including representatives from our LDOs. During Technical Expert Panel (TEP) meetings and via email discussions, feedback was provided on which questions could safely be dropped from the current survey, to create a revised survey to reduce patient burden. The TEP supported efforts to shorten the survey to reduce burden on respondents. They

noted that there were no major concerns with the questions removed and appreciated the effort to make this a little easier on the patients responding to the survey.

6.2.5 Unexpected Findings

The revised survey has not been implemented beyond the field test/mode experiment phase. No unexpected findings were observed during the field test/mode experiment. Respondents appreciated the shorter survey.

7.1 Supplemental Attachment

Supplemental 7.zip

Developer POC email

tkline@rti.org

Measure Developer POC

Tracy Kline
RTI International
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The measure developer is different from the measure steward

Yes

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Steward Organization

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Steward Organization URL

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