Transfer of Health Information and Care Preferences Quality Measures Pilot Test for Skilled Nursing Facilities (SNFs), Inpatient Rehabilitation Facilities (IRFs), Long-Term Care Hospitals (LTCHs), and Home Health Agencies (HHAs)

A Summary of Findings

Deliverable 14, February 28, 2018

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TRANSFER OF HEALTH INFORMATION AND CARE PREFERENCES QUALITY MEASURES PILOT TEST FOR SKILLED NURSING FACILITIES (SNFS), INPATIENT REHABILITATION FACILITIES (IRFS), LONG-TERM CARE HOSPITALS (LTCHS), AND HOME HEALTH AGENCIES (HHAS) – A SUMMARY OF FINDINGS

DELIVERABLE 14

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LIST OF ACRONYMS AND SHORT FORMS

CMS	Centers for Medicare & Medicaid Services
EMR	Electronic Medical Record
HHA	Home Health Agency
HIE	Health Information Exchange
IMPACT Act	Improving Medicare Post-Acute Care Transformation Act of 2014
IRB	Institutional Review Board
IRF	Inpatient Rehabilitation Facility
IRF-PAI	Inpatient Rehabilitation Facility-Patient Assessment Instrument
LTCH	Long-Term Care Hospital
MDS	Minimum Data Set
OASIS	Outcome and Assessment Information Set
PAC	Post-Acute Care
PCP	Primary Care Physician
QM	Quality Measure
SNF	Skilled Nursing Facility
RTI	Research Triangle Institute
TEP	Technical Expert Panel
TOH	Transfer of Health Information and Care Preferences

SECTION 1.
PILOT OVERVIEW

1.1 Pilot Test Overview

This report summarizes pilot testing conducted during the summer of 2017 of two quality measures related to the transfer of health information. **Information in this report is current as of October 1, 2017**. Since that time, these measures have been revised and continue to undergo development and testing.

1.1.1 Purpose & Legislative Authority

The Centers for Medicare & Medicaid Services (CMS) has contracted with RTI International and Abt Associates to develop cross-setting transfer of health information and care preferences measures in order to meet the mandate of the Improving Post-Acute Care Transformation Act of 2014 (IMPACT Act). RTI international and Abt Associates are developing and testing two Transfer of Health Information and Care Preferences (TOH) quality measures for Skilled Nursing Facilities (SNFs), Inpatient Rehabilitation Facilities (IRFs), Long-Term Care Hospitals (LTCHs), and Home Health Agencies (HHAs). Two measures were developed and tested: 1) an admission quality measure that estimates the percent of patient[1] or resident stays or episodes with an admission/start of care/resumption of care assessment indicating that health information was received at admission/start of care/resumption of care from the previous provider and the information received was from at least one of ten categories of information and 2) a discharge quality measure that estimates the percent of patient or resident stays or episodes with a discharge or transfer assessment indicating that health information was provided at discharge or transfer to the subsequent provider and the information provided was from at least one of ten categories of information. The purpose of the pilot test was to test admission and discharge quality measures related to the transfer of health information and patient care preferences, including reliability and feasibility across post-acute care settings. Results from this pilot test will inform refinements to the measures under development.

1.2 Pilot Test Objectives

The primary objective of the pilot was to collect patient/resident quantitative data using the assessment items used to calculate the quality measures. Provider qualitative data was collected through multiple phone interviews. The main goals of the pilot test were to examine reliability, completion time estimates, feasibility, and the overall experience of collecting and submitting data for these TOH quality measures.

1.3 Measures Overview

The Transfer of Health Information and Care Preferences includes two process quality measures:

[1] Throughout this report, the word “patient” also includes SNF residents.

1. Transfer of Information at Post-Acute Care Admission, Start, or Resumption of Care from Other Providers/Settings.
2. Transfer of Information at Post-Acute Care Discharge or End of Care to Other Providers/Settings

1.3.1 Admission Measure

The admission quality measure estimates the percent of patient or resident stays or episodes with an admission/start of care/resumption of care assessment indicating that health information was received at admission/start of care/resumption of care from the previous provider and the information received was from at least one of ten categories of information. As shown in Appendix A, TOH1 is the admission measure gateway question which asks, "did your facility/agency receive, from the previous provider, the patient's/resident's health information and/or care preferences that were needed to plan and provide care?" TOH2 then collects data on the categories of information received (if applicable), including functional status, cognitive function and mental status, special services, treatments, and/or interventions, medical conditions and co-morbidities, impairments, medication information, patient/resident care preferences, goals of care, diet/nutrition and discharge instructions. TOH3 then asks the routes of transmission by which the information was received, including health information exchange, electronic medical record, other electronic means, verbal or paper-based.

1.3.2 Discharge Measure

The discharge quality measure estimates the percent of patient or resident stays or episodes with a discharge or transfer assessment indicating that health information was provided at discharge or transfer to the subsequent provider and the information provided was from at least one of ten categories of information. As shown in Appendix A, TOH4 is the discharge measure gateway question which asks, "did your facility/agency provide the patient's/resident's health information and/or care preferences to the subsequent provider?" TOH5 then collects data on the categories of information provided (if applicable), including functional status, cognitive function and mental status, special services, treatments, and/or interventions, medical conditions and co-morbidities, impairments, medication information, patient/resident care preferences, goals of care, diet/nutrition and discharge instructions. TOH6 then asks the routes of transmission by which the information was provided, including health information exchange, electronic medical record, other electronic means, verbal or paper-based.

TOH 7 asks, "did your facility/agency provide relevant health information to the patient/family/caregiver when the patient/resident was discharged or transferred?" TOH8 then collects data on the categories of information provided (if applicable), including functional status, cognitive function and mental status, special services, treatments, and/or interventions, medical conditions and co-morbidities, impairments, medication information, patient/resident care preferences, goals of care, diet/nutrition and discharge instructions. TOH7 and TOH 8 are not used in the discharge measure calculation and are collected for benchmarking purposes only.

SECTION 2.
PILOT TEST METHODS

2.1 Site Recruitment and Selection Process

Pilot test site recruitment began January 10, 2017. Emails were sent to all those nominated to be technical expert panel (TEP) members, other PAC stakeholders, such as industry associations, and the CMS listserv alerting them of the planned pilot test and requesting volunteer HHAs, IRFs, LTCHs, and SNFs. Approximately 150 sites across the four settings volunteered for the pilot testing. In March and April 2017, 47 sites (11-13 from each setting) were selected and invited to participate.

Facilities/agencies were selected purposively so that they varied on several key characteristics across the four settings: geographic location (10 CMS regions), size (small, medium and large), ownership type (for-profit and not-for-profit), and whether they currently use an electronic medical record (EMR). Within each setting, we sought to include facilities/agencies that represented multiple geographic locations, at least one small, medium and large facility, some that were for profit and some not-for-profit and some that currently used EMRs. Characteristics of the final facilities by setting are shown in ***Table 1*** below.

In April 2017, telephone interviews were conducted with the 47 selected sites to explain the pilot test procedures and expectations and ascertain sites' level of interest and ability to participate. Thirty-two sites agreed to participate. Pilot sites were not provided with any incentives to participate. Pilot site characteristics are detailed in Section 3.1.

2.2 Site Training

Pilot site training was conducted by teleconference by RTI and Abt in May 2017 and included two training dates per setting: HHA, IRF, LTCH and SNF. Each training session lasted no longer than 90 minutes. Before the training, participating sites were provided with a training manual and guidance document explaining how to complete each TOH assessment item. During the training, representatives from each site were walked through the pilot test procedures step-by-step. Training participants were instructed in how to complete each assessment item, record the time to complete items, and track the assessments that were completed and submitted via the pilot testing secure website. The pilot testing manual included screen shots of the data collection website data collection forms. Participants were provided with instructions for accessing the website and entering data. Questions received during and shortly after the pilot test training were compiled and responses were distributed to the pilot test sites just before data collection began.

2.2.1 Check-In Calls

Within two weeks of beginning data collection, most sites participated in a check-in call. The purpose of these calls was to answer any questions that sites had once data collection activities began. RTI pilot test staff also reviewed the pilot data entered by the site before the call to identify any data that seemed incorrect or anomalous. The purpose of these calls was to ensure that sites were correctly following pilot test procedures, entering data into the website correctly, and completing assessment items in accordance with the guidance provided. The questions and

answers were recirculated to all pilot participants along with assessment coding reminders to address common coding issues identified. Sites were instructed to contact the pilot test team by email or telephone if they had additional questions.

2.3 Data Collection

2.3.1 Data Collection Methods

Participating sites were instructed to collect data for 10-20 patients/residents at admission and 10-20 patients/residents at discharge using the assessment forms shown in Appendix A. Sites were also asked that data for half of those patients/residents include data collected at both admission and discharge because this would allow for analysis of patients with data from a complete stay (i.e., an admission and discharge assessment). Sites were asked to select two data collectors who would complete admission and discharge assessments independently. Therefore, each patient/resident assessment (both admission and discharge) were completed by two independent data collectors. The paired data allowed for analysis of inter-rater reliability. Some sites used two different data collectors for the admission assessments and an additional two for the discharge assessments. Each site was also asked to assign a data collection coordinator. This person, who in some cases was also a data collector, kept a log of the participating patients/residents and the completed assessments. This log was for internal use by the sites and was not shared with RTI. Data collection began the last week in May 2017 and ended the second week of July 2017. The RTI IRB confirmed that this research is exempt.

2.3.2 Data Collection Website

RTI International created a secure data collection website for the submission of pilot test data. Each participating site was provided with a unique username and password for data entry. Use of a data collection website helped ensure submission of high-quality data because the website data entry system included checks to ensure that data from the same time period (admission or discharge) was not entered more than once for each patient by each data collector. The website also included automated skip patterns. The data collectors did not need to determine intended skip patterns and, in some cases, the automated skip patterns prevented errors in entry of data that should not be entered (e.g., discharge dates before admission dates). The data collection website was available to the participating sites during the entire data collection period.

2.3.3 Debriefing Interviews

After the conclusion of the data collection period in July 2017, participating sites took part in a debriefing interview. The purpose of the interview was to gather in-depth qualitative information about the participant sites' experience collecting data, the processes they used, and their impressions of the assessment items and related quality measures (QMs) (see Appendix B). Individual sites participated in interviews and included the data collection coordinator and, often, the data collectors. The discussion was facilitated by RTI pilot test staff using a semi-structured interview protocol. Abt staff also participated in the interviews with HHAs. An additional RTI staff member was on each call to take notes and the calls were recorded as back-up and supplement for detailed final drafts of note-taking.

2.3.4 Data Security

As a Business Associate to CMS on this contract RTI followed Health Insurance Portability and Accountability Act (HIPAA) HIPAA requirements for protecting the privacy of patients and their protected health information (PHI). The PHI provided to RTI for this pilot study was de-identified, in compliance with the regulations. In addition, facilities submitted de-identified data on a secure website, and RTI maintained the data on RTI's Enhanced Security Network. This network meets the Federal Information Processing Standards (FIPS) Moderate level for data security and confidentiality.

2.4 Data Analysis

2.4.1 Quantitative Analyses

We conducted several types of quantitative analyses, including measuring inter-rater reliability for each assessment item. The tests of inter-rater reliability allowed us to determine the level of agreement between the two independent data collectors across assessments, sites and settings. In addition, we conducted multiple descriptive analyses of the admission and discharge assessment items and the time to complete items as well as analyses to predict how the quality measure would perform if the current specifications were changed. Specifically, we explored the resulting quality measure scores under varying numerator requirements. This is discussed further in Section 3.5.

2.4.2 Qualitative Analyses

RTI and Abt had one or two interviewers on each call, with an additional team member on the call taking detailed notes and tracking the participants' responses. Participants agreed to this note-taking, were assured their responses would be kept confidential and were told they could skip any questions they wished. Interview notes were extracted into an Excel spreadsheet where closed ended questions were coded as 1=Yes, 2=No, 3=Don't Know, and 0 = missing or no response. Open ended question responses were also put into the Excel database and analyzed for consistencies and commonalities in responses. The unit of analysis used was the site, but there were a few instances where there were different responses between the participants at the site and those were coded separately.

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SECTION 3.
PILOT TEST FINDINGS

3.1 Pilot Site Characteristics

Of the 32 sites that agreed to participate, 30 submitted data between the last week in May and second week in July 2017. The 30 sites consisted of eight Home Health Agencies (HHAs), nine Inpatient Rehabilitation Facilities (IRFs), six Long Term Care Hospitals (LTCHs) and seven Skilled Nursing Facilities (SNFs). Characteristics of the participating sites are shown in ***Table 1*** below. As discussed in Section 2.1, sites were selected to represent a variation of several key characteristics including geographic region, average daily census, average length of stay, bed size, profit-status, EMR use and whether the site was facility-based or freestanding.

Table 1.
Characteristics of Participating Sites

Variables	Across All Sites	By Setting			
		HHA (n=8)	IRF (n=9)	LTCH (n=6)	SNF (n=7)
Setting Type					
Hospital or Facility Based	40.00%	50.00%	55.56%	16.67%	28.57%
Freestanding	60.00%	50.00%	44.44%	83.33%	71.43%
Chain Status					
Independently Owned	46.67%	37.50%	55.56%	50.00%	42.86%
Part of a chain	53.33%	62.50%	44.44%	50.00%	57.14%
CMS Region					
Region 1*	10.00%	12.50%	11.11%	16.67%	0.00%
Region 2	13.33%	12.50%	11.11%	0.00%	28.57%
Region 3	10.00%	12.50%	11.11%	16.67%	0.00%
Region 4	23.33%	25.00%	22.22%	33.33%	14.29%
Region 5	13.33%	12.50%	11.11%	0.00%	28.57%
Region 6	16.67%	12.50%	22.22%	33.33%	0.00%
Region 7	6.67%	12.50%	0.00%	0.00%	14.29%
Region 8	3.33%	0.00%	0.00%	0.00%	14.29%
Region 9	3.33%	0.00%	11.11%	0.00%	0.00%
Region 10	0.00%	0.00%	0.00%	0.00%	0.00%
Facility Statistics					
Daily Census	34.06	759.13	26.68	42.43	24.66
Number of Beds	68.50	NA	36.67	65.17	112.71
Average Length of Stay	31.60	46.91	13.71	31.22	24.66

(continued)

Table 1. (continued)
Characteristics of Participating Sites

Variables	Across All Sites	By Setting			
		HHA (n=8)	IRF (n=9)	LTCH (n=6)	SNF (n=7)
Profit Status					
For Profit, Publicly Traded	13.33%	12.50%	11.11%	16.67%	14.29%
For Profit, Not Publicly Traded	20.00%	12.50%	22.22%	16.67%	28.57%
Government Entity	3.33%	0.00%	0.00%	0.00%	42.86%
Not for Profit	63.33%	75.00%	66.67%	66.67%	14.29%
EMR Use					
Yes	66.67%	87.50%	77.78%	33.33%	57.14%
Partially	23.33%	12.50%	22.22%	33.33%	28.57%
No	10.00%	0.00%	0.00%	33.33%	14.29%

* Region 1: CT, ME, MA, NH, RI, VT; Region 2: PR, VI, NY, NJ; Region 3: MD, DC, DE, WV, VA, PA; Region 4: NC, SC, TN, FL, GA, AL, KY, MS; Region 5: MI, MN, OH, IL, IN, WI; Region 6: TX, LA, AR, OK, NM; Region 7: MO, KS, IA, NE; Region 8: ND, UT, SD, WY, CO, MT; Region 9: NV, AZ, CA, HI, AS, Pacific Territories; Region 10: WA, AK, ID, OR

3.2 Assessments Submitted

We received 744 admission assessments and 625 discharge assessments from the 30 participating sites, with a mean of 14 admitted patients1 per site and 12 discharged patients per site. This resulted in 324 pairs of patient assessments at admission (i.e., completed by each of the two data collectors) and 268 pairs of assessments at discharge.

3.3 Inter-rater Reliability

The paired data were used to determine inter-rater reliability, or the proportion of the time that the two independent data collectors agreed. As shown in ***Table 2***, inter-rater reliability was generally high across both the admission and discharge assessment items. The ranges of agreement for the 10 categories included in items TOH2, TOH5 and TOH 8 are shown in Table 2 below as are the ranges of agreement for the five types of route of information transfer in items TOH3 and TOH6. Additional tables showing the agreement levels for each individual category are shown in Appendix C.

Qualitative data from the debriefing interviews reinforced the findings related to inter-rater reliability. Participating sites were asked if their data collectors used the same process to collect the assessment data. Four sites said that they did not use the same process, one did not know if they did, but 21 sites said they used the same process. In addition, when asked about their data collectors, 18 sites reported using data collectors who interacted with patient charts as a part of their jobs, three sites used data collectors who did not interact with patient charts, and four sites mentioned that at least one of their data collectors was not a staff person who regularly interacts with patient charts as a part of care. Some interacted with charts in a manner not involving direct care (e.g., MDS coordinators).

Table 2.
Inter-rater Agreement on Assessment Items

Assessment Item	Inter-rater Agreement (%)
Admission Item TOH1	98.7
Admission Item TOH2	72.8 – 92.9
Admission Item TOH3	77.8 – 89.8
Discharge Item TOH4	91.0
Discharge Item TOH5	75.0 – 91.0
Discharge Item TOH6	75.4 – 92.3
Discharge Item TOH7	89.8
Discharge Item TOH8	73.4 – 84.5

Note: TOH1 = admission measure gateway question; TOH2 = categories of information received at admission; TOH3 = routes of transmission used at admission; TOH4 = discharge measure gateway question; TOH5 = categories of information provided at discharge; TOH6 = routes of transmission used at discharge; TOH7 = patient/family/caregiver gateway question; TOH8 = categories of information provided to patient/family/caregiver

3.4 Categories of Information Transferred

The TOH measures include assessment items about the categories of information received at admission, sent at discharge and provided to patients and/or their caregivers at discharge. These categories include:

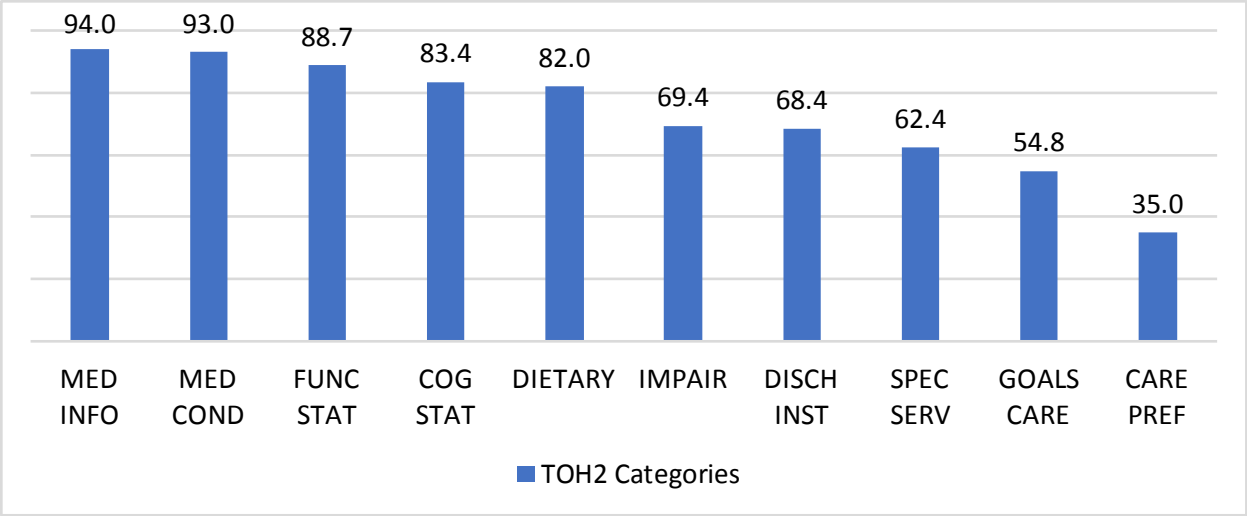
A. Functional status
B. Cognitive function and mental status
C. Special services, treatments, and/or interventions (e.g., ventilator support, dialysis, IV fluids, blood product use)
D. Medical conditions and co-morbidities (e.g., pressure ulcers/injuries and skin status, pain)
E. Impairments (e.g., incontinence, sensory)
F. Medication information
G. Patient/resident care preferences
H. Goals of care
I. Diet/nutrition (e.g., parenteral nutrition, therapeutic diets)
J. Discharge instructions

We conducted descriptive analyses to determine the frequency that each of these categories is transferred at admission and discharge as well as examining differences in this by setting.

3.4.1 Received at Admission

Nearly 94% of admission assessments indicated the receipt of medication information at admission. Information about medical conditions and comorbidities was coded as having been received on 93% of admission assessments. Functional status, cognitive function and mental status, and diet/nutrition information were coded as having been received on 88.7%, 83.4%, and 82% of admission assessments, respectively. All other categories were coded on less than 70% of assessments, with care preferences coded on the fewest proportion of assessments (35%). See ***Figure 1*** below.

Figure 1.
Categories of Information Received at Admission

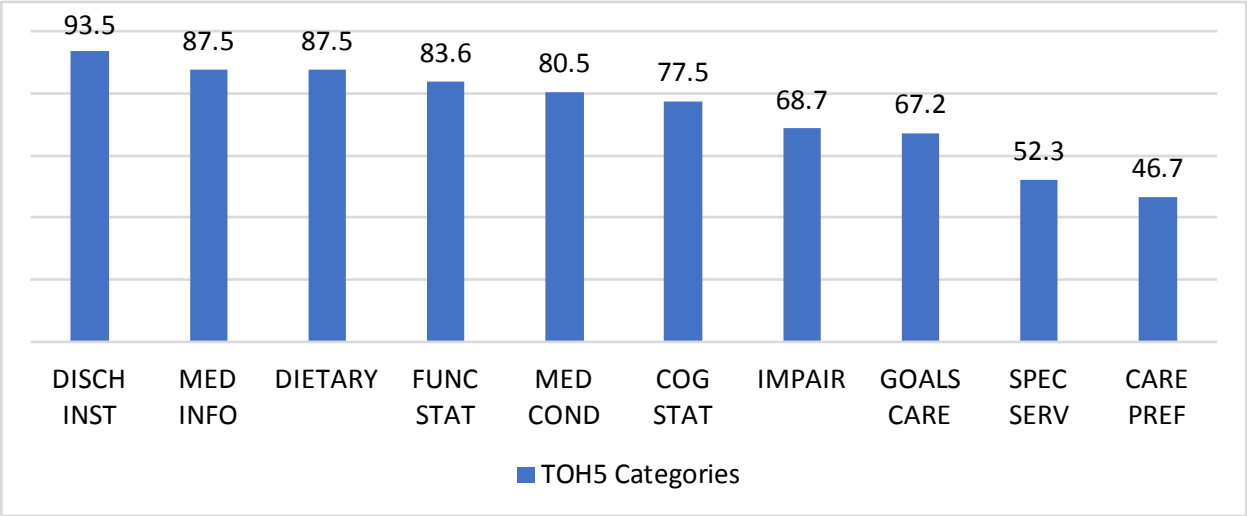


Qualitative data from the debriefing interviews with participating sites helped explain why the category of care preferences was coded less frequently. The majority of participants reported difficulty in coding patient care preferences and there was confusion as to what would qualify. Multiple sites reported that medical records did not have a standard place to find this information, if they had the information at all. A couple of sites reported a verbal exchange with the previous provider that provided them with the patient preferences. Some sites reported that they rarely received patient care preferences and some used inference to find preferences from the transferred information, since they were often not explicitly stated.

3.4.2 Provided at Discharge

Discharge assessments indicated that medication information was sent to the next provider at discharge 93.5% of the time. Information about medical conditions and comorbidities was coded as having been sent at discharge on 87.5% of discharge assessments. Functional status, discharge instructions, diet/nutrition information, and cognitive status and mental function were coded as having been sent on 87.5%, 83.6%, 80.5%, 77.5% of discharge assessments, respectively. All other categories were coded on less than 70% of assessments, with care preferences coded on the fewest proportion of assessments (46.7%). See ***Figure 2*** below.

Figure 2.
Categories of Information Sent to the Next Provider at Discharge



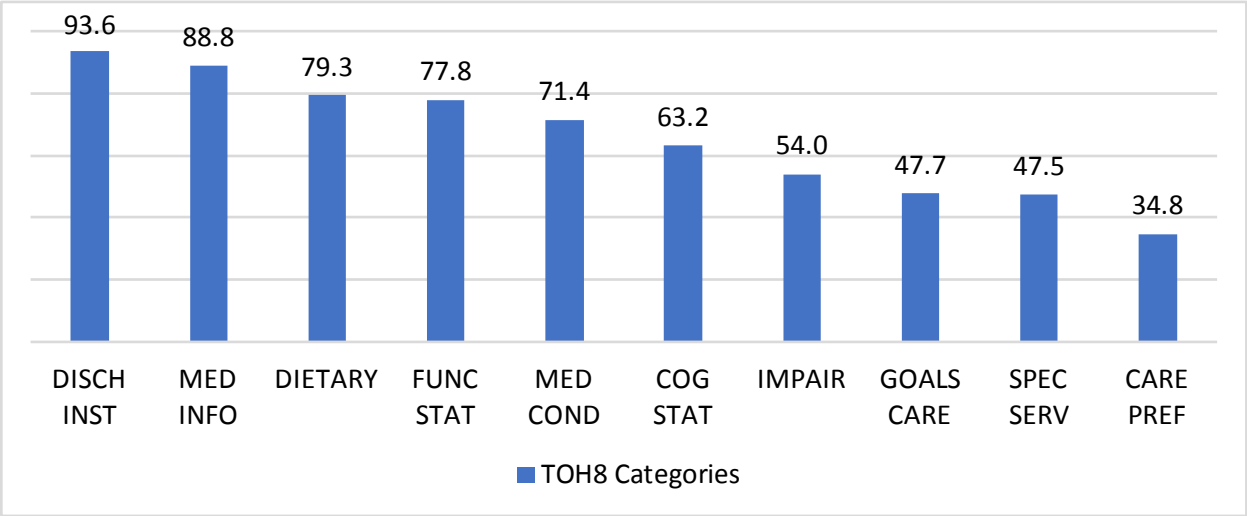
Again, qualitative data from the debriefing interviews helped explain why patient care preferences were sent to the next provider less frequently. When asked about how participating sites documented patient care preferences at discharge, the majority of sites responded that their discharge summaries would contain this information. Some sites reported using a standardized form, while most sites said that the information was in their documentation, but it was not a standardized section. One site said they realized through this pilot test that they were not doing "a good job" of documenting patient care preferences.

3.4.3 Provided to Patients

Discharge assessments indicated that discharge instructions were shared with the patient and/or their caregiver at discharge 93.6% of the time. Medication information, diet/nutrition information, functional status, and medical conditions and comorbidities were coded as having been shared with the patient and/or caregiver on 88.8%, 79.3%, 77.8%, 71.4% of discharge assessments, respectively. All other categories were coded on less than 70% of assessments, with care preferences coded on the fewest proportion of assessments (34.8%). See ***Figure 3*** below.

As the quantitative data reveal, different categories of information were shared more commonly with patients and/or caregivers than were sent to the next provider. The debriefing interviews revealed that most sites thought that not all of the categories of information needed to be sent home with patients, specifically cognitive status, goals of care, and patient care preferences. Additionally, many sites stated that their discharge summaries included information from most of the other categories, which may have contributed to fewer of the other categories being coded.

Figure 3.
Categories of Information Shared with Patients and/or Caregivers at Discharge



3.4.4 Differences Between Settings

As part of our analyses examining the categories of information reportedly received at admission, sent at discharge to other providers, and shared with patients and/or their caregivers at discharge, we explored differences across settings. These analyses revealed that HHAs received, sent, and shared most categories of information less frequently than other settings. (See ***Figures 9-14*** in ***Appendix C***.) Evaluation of admission assessments across settings revealed that HHAs received an average of 5.8 categories of information, while SNFs, IRFs, and LTCHs received 7.5, 7.7, and 8.2 categories of information, respectively. (See ***Figure 12*** in ***Appendix C***.) Results were similar for the number of categories of information sent to the next provider and shared with patients and/or their caregivers. (See ***Figure 13*** and ***Figure 14*** in ***Appendix C***.)

Qualitative data from the debriefing interviews revealed that because not all referrals to HHA are coming from an acute hospital, as is the case with other settings, not all categories were a "good fit" or made logical sense for HHA. Sometimes this was because the patient was not actually changing locations or care teams at the end of care. The other unique factor that came up numerous times regarding HHAs was that the agencies were unsure how to define the transfer of information at discharge when the patient was remaining at home. They did not understand that communication with the attending physician would count in this case.

3.5 Quality Measure (QM) Scores

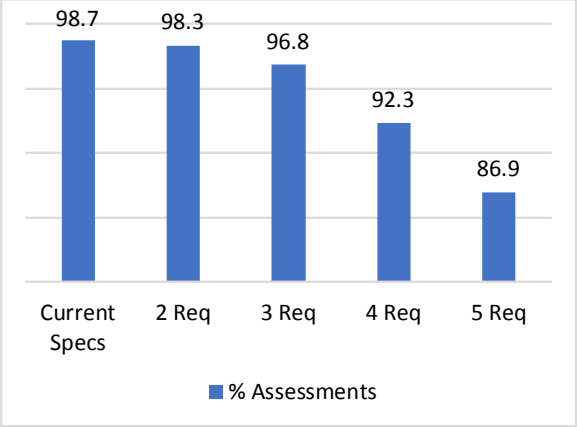
The specifications under development (current as of October 1, 2017) for admission and discharge require one category of information to be coded. This information retrieved for this category would be included in the site numerator (i.e., to achieve the numerator). For this analysis, we used all of the assessments from each site to generate a QM score (number of assessments with at least one category of information/all assessments x 100). Under these specifications, the average admission QM score across all sites was 98.7% and the average

discharge QM score across all sites was 87.8%. Results were the same when only stay-based assessments were used in analyses (i.e., assessments were included only if both an admission and discharge assessment were submitted for a patient/resident) (results not shown).

3.5.1 Admission and Discharge QM Scores with Different Specifications

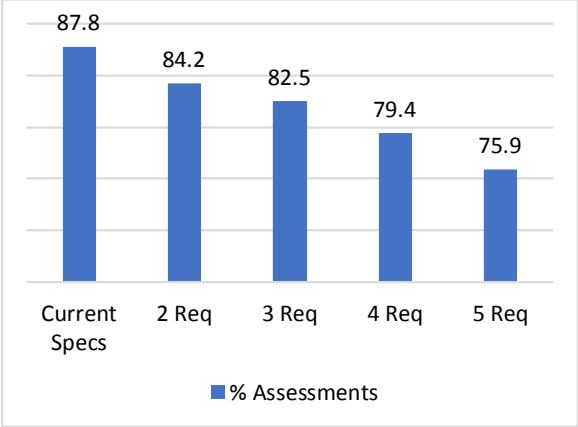
We conducted additional analyses to examine the results of increasing the number of categories required to meet the numerator. As the numerator requirements were increased, the average QM scores deceased. As shown in ***Figure 4***, if the numerator requirements were increased to five categories, the average admission QM score across sites would be 86.9%. Similarly, as shown in ***Figure 5***, the average discharge QM score would decrease to 75.9%

Figure 4.
Proportion of Assessments in the Admission QM Numerator Under Different Specifications



Note: This graph denotes the proportion of assessments that meet the numerator criteria under varying specifications. The current specifications are that one category of information be received at admission to meet the numerator. Also shown are the proportion of assessments that would meet the numerator if the specifications were increased to two, three, four or five categories required.

Figure 5.
Proportion of Assessments in the Discharge QM Numerator Under Different Specifications

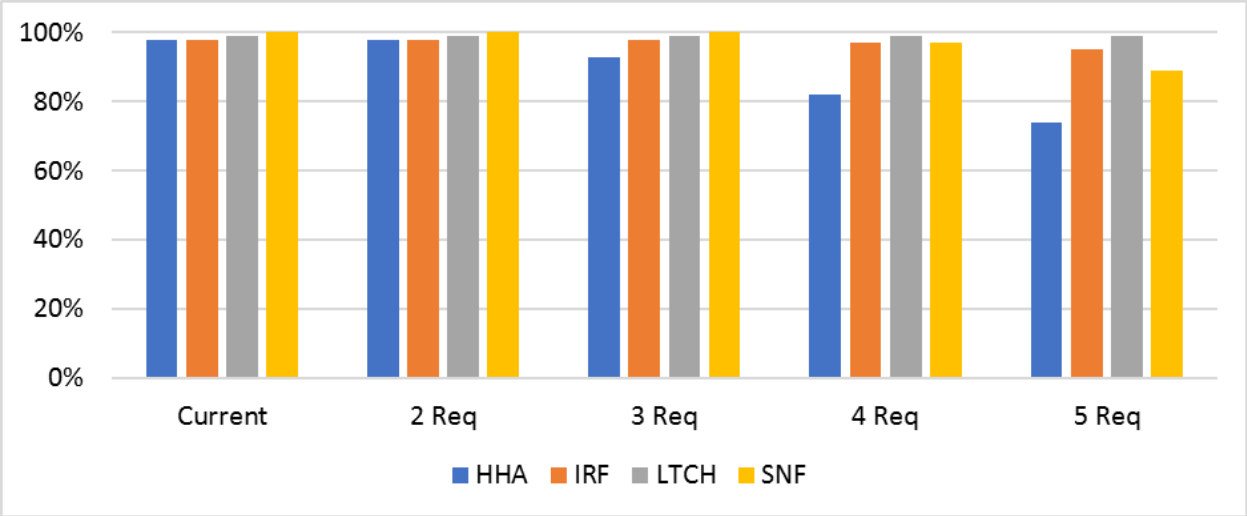


Note: This graph denotes the proportion of assessments that meet the numerator criteria under varying specifications. The current specifications are that one category of information be provided at discharge to meet the numerator. Also shown are the proportion of assessments that would meet the numerator if the specifications were increased to two, three, four or five categories required.

3.5.2 Differences Between Settings

We also examined how increasing the numerator requirements for the admission and discharge QMs would affect QM scores across the different settings. Because HHAs reported both receiving and sending fewer categories of information, as reported in Section 3.4.4, their scores would be most affected by increasing the number of categories required to meet the numerator. In contrast, the average admission QM scores for LTCHs would be largely unaffected. This is shown in ***Figure 6*** below. Analyses examining the results of changes to the numerator requirements for the discharge QM showed similar results, with HHAs average scores being most affected. See ***Figure 15*** in ***Appendix C***.

Figure 6.
Admission QM Scores Under Different Numerator Specifications by Setting



During debriefing interviews, the sites were asked for their opinions about the admission QM as currently drafted (i.e., requiring one category to be transferred) and how well it reflected quality of the information transfer process. More than half (16) of the sites stated that the admission QM's criteria of only requiring one category to be included in the numerator would not be a good reflection of quality of information transfer processes. Of more importance to these participants was the relevance of the information, and its accuracy and completeness. Two sites lacked agreement between their coders, where one felt that it was sufficient and another felt it was not a good threshold and that more than one category should be required. Six sites said that one category would be enough to reflect a PAC provider's quality of information transfer processes. Some of those stated that if no information was sent then this reflected poor information transfer as it would not be possible to plan for the patient's care. Of note, even for those who responded that one category was enough, almost all still mentioned that "more information is better."

When asked whether the discharge QM would reflect the quality of information transfer processes of their own sites, 9 sites said that yes, as drafted, the measure would reflect better quality. However, more than half that answered 'yes' also responded that one is enough, but more would be better. One site mentioned that their discharge instructions covered all of the other categories, so it would be sufficient to reflect the facility's quality.

3.6 Time Estimates to Complete Items

To determine the time involved in completing each admission and discharge assessment item, data collectors where asked to report the amount of time taken to collect data for each TOH item. The questions regarding staff data collection time came immediately after each assessment item question, so that data collectors did not have to rely on recall. See Appendix A for the time estimate questions.

3.6.1 Admission and Discharge Time Estimates

On average, the admission gateway question (TOH1) took 1.6 minutes to complete and the question listing the categories of information received (TOH2) took 4.3 minutes to complete. Resulting in an average total time for the two items included in the admission QM measure of 5.9 minutes. Assessment item TOH3, which collects data on the route of information transfer, took an average of 1.9 minutes to complete. (See ***Table 8*** in ***Appendix C***.)

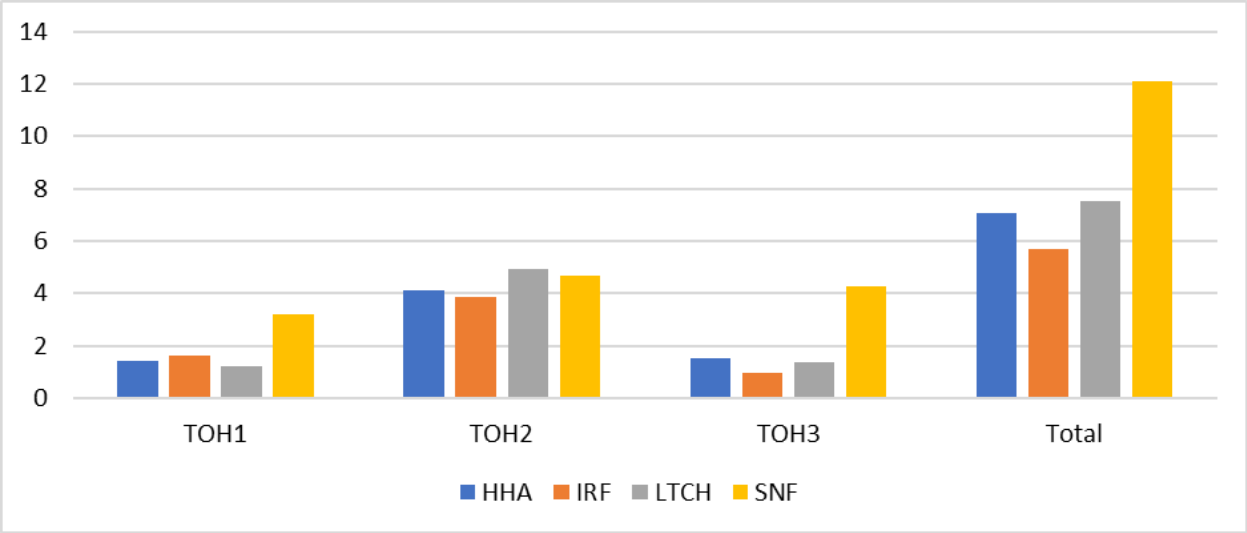
The discharge assessment items were found to take slightly less time to complete with the discharge gateway question (TOH4) taking on average 1.6 minutes to complete and the question listing the categories of information sent (TOH5) taking 2.5 minutes to complete on average. Resulting in an average total time for the two items included in the discharge QM measure of 4.1 minutes. The route of information transfer assessment item (TOH6) took 1.4 minutes to complete on average and the assessment items related to the transfer of information to patients and/or their caregivers (TOH7 and TOH8) took on average 1.5 and 2.4 minutes, respectively. (See ***Table 9*** in ***Appendix C***.)

The most common response when asked during the debriefing interviews about what contributed to longer and shorter time estimates was that sites found it easier, in general, to code for discharge categories because it was "their data" and they knew where it was documented, compared to admission categories. Additionally, sites reported a “learning curve” to coding the data, and that as the pilot test continued they became quicker at coding the data. However, a number of sites reported that they knew information was transferred but were not able to locate documentation of some types of information transferred at discharge, e.g., if information was transferred verbally and not specifically documented. In addition, the qualitative feedback given on the patient care preferences and goals of care had strong implications for inclusion in the QM measures. These categories were most frequently cited as reasons for increasing the time to complete the assessment items, and were the most burdensome for sites to find or infer as to what the patient’s care preferences were.

3.6.2 Differences Between Settings

We conducted additional analyses to examine differences between settings in the average time to complete the admission and discharge assessment items. As shown in ***Figure 7*** below, there were not consistent differences in the time to complete the three admission assessment items across settings, with SNFs reporting a longer average time to complete some admission assessment items and HHAs reporting a longer average time to complete other assessment items. SNFs reported the longest average total time to complete the admission items. Similar results were found for the discharge assessment items with SNFs and LTCHs reporting the longest average times for different questions. LTCHs reported the longest average total time to complete the discharge items.

Figure 7
Average Times by Setting to Complete Admission Assessment Items



Note: TOH1 = admission measure gateway question; TOH2 = categories of information received at admission; TOH3 = routes of transmission used at admission

3.6.3 Differences Between Coders

We also explored differences in time estimates between the two data collectors. For each assessment item, the average time difference between the two data collectors across all paired assessments was determined. These were then used to determine the average differences in time estimates by setting for each assessment item. For the admission assessment items, SNFs were found to have the largest average differences between data collectors on TOH1 and TOH3. However, HHAs were found to have the largest average differences between data collectors for TOH2. (See ***Figure 16*** in ***Appendix C***.) For the discharge assessment items, SNFs were consistently found to have the greatest average differences between data collectors across all assessment items. (See ***Figure 17*** in ***Appendix C***.)

Sites were asked about the factors that contributed to longer time estimates to complete the items. Some sites reported that the staff who were collecting data were not those who regularly review information in the charts making it more difficult for them to find the information, which impacted the time estimates. For some this was due to having a second data collector who reviewed the information retrospectively, for others it was because they had non-patient care staff review the records.

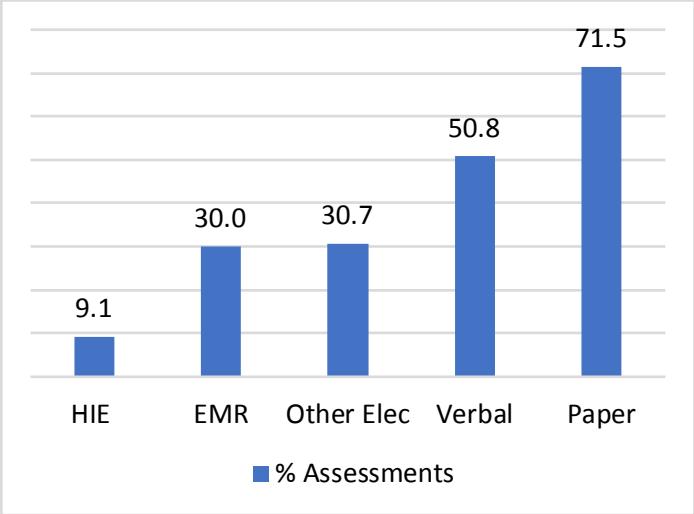
3.7 Route of Transmission

As discussed above (and shown in Appendix A), the TOH assessment items include two items pertaining to how sites received and sent patient health information and care preferences. For each admission assessment, sites were asked to report how information was received. For each discharge assessment, sites were asked to report how information was sent to the next provider. Sites could report more than one route of transmission for each assessment and routes

included health information exchange (HIE), electronic medical record (EMR), other electronic means, verbal, or paper-based.

3.7.1 Admission

Figure 8.
Proportion of Assessments Reporting Routes of Transmission at Admission



As shown in ***Figure 8***, the most common route of transmission at admission was paper-based, with over 70% of admission assessments reporting this route. Verbal transmission was also reported on over 50% of assessments. The use of HIE was reported on less than 10% of assessments. Sites often received information by more than one route. At admission, sites reported using on average 1.9 routes of transmission

Qualitative data from the debriefing interviews revealed that sites had difficulty completing the route of transmission admission assessment item. This was primarily due to a lack of understanding of the electronic routes. For example, sites that reported use of HIE were asked to describe the system used. A few of them stated that they knew their facility/agency had arrangements with a third party, described as an HIE or portal, to access patient health information through their EMR. One site stated that they receive secure e-mails from a third party which alert them to access and view the patients' information from the referring provider's EMR. Others explained that they incorrectly chose HIE as a route of transmission at the beginning of the pilot study, but subsequently stopped coding HIE after the check-in calls. In some cases, their facility/agency actually used a shared and integrated EMR within their organization and should have selected that route. In other cases, the sites had "view only" access to the HIE information so it was not interoperable HIE. Although 10 sites coded HIE as the route of transmission on admission, only one site described interoperable HIE consistent with the guidance.

3.7.2 Discharge

As shown in ***Figure 18*** in ***Appendix C***, the most common route of transmission was paper-based, with over 65% of discharge assessments reporting this route. Verbal transmission was reported on over 40% of assessments. All electronic means were reported at a lower proportion than on the admission assessments. Sites often provided information by more than one route. At discharge, sites reported using on average 1.7 routes of transmission.

Qualitative data from the debriefing interviews revealed that it was easier for the data collectors to code the route of transmission at discharge because the discharge planning processes and the transfer of information upon discharge were more familiar to staff. However, seven sites still reported use of HIE even though only one site described an interoperable HIE consistent with the guidance. The majority of the sites that reported using an EMR were the

facilities/agencies that were part of a network or a health system that shared the same EMR. Other sites reported that patient information from their EMR is transmitted by notifying and allowing other subsequent providers, PCPs, medical groups, and/or offices to access, view, and possibly save the patient's information, often via a portal. However, some sites did not indicate or know if this EMR information could be integrated into the subsequent provider's EMR system, which should have been coded as other electronic means, rather than EMR. Some sites that coded EMRs on discharge assessments realized that they coded this incorrectly as they thought an "e-fax" was an EMR. For those sites that coded no information was transferred, it was discovered that several sites did not understand the guidance, and that if they made their EMR information available to the subsequent provider, via a portal, on-site access or other means, that this should be coded as transferred and the route would be "other electronic" route, even if they did not know if and what the subsequent provider received.

SECTION 4.
CONCLUSIONS

Pilot testing of the TOH admission and discharge assessment items and QMs was conducted in May through July 2017. Thirty pilot sites participated in this pilot study representing four post acute care setting types – eight HHAs, nine IRFs, six LTCHs and seven SNFs. These post acute care setting sites submitted 744 admission assessments and 625 discharge assessments. Paired data collectors submitted data on 324 admitted patients/residents and 268 discharged patients/residents. Inter-rater reliability across the pairs of data collectors was high for most TOH QM assessment items.

Home Health Agencies were found to have received and sent fewer categories of information than other PAC settings. This means that HHA TOH QM scores could be most affected by changes to the TOH QM specifications that would require the transfer of more than one category of information to be included in the numerator. However, during debriefing interviews, most pilot testing sites across settings endorsed the idea of requiring more categories of patient information be received or sent to meet the requirements of inclusion in the admission and discharge TOH QM numerators. Many participants stated that "more information is better."

In addition, discharge TOH QM scores may have been affected, in some cases, by a lack of understanding by the discharging PAC, that the subsequent provider for patients/residents discharged to home who were not discharged to a PAC facility is the patient's outpatient provider. An outpatient provider includes, for example, the patient's primary care physician, the outpatient facility that may continue with rehabilitation. It is possible that this misunderstanding had a greater impact on HHAs because they are most likely to be discharging patients with no additional services.

Time estimates for assessment item completion reported by data collectors were relatively high. Justifications for the increase in burden includes difficulties data collectors encountered in finding patient care preferences in their records, participation of data collectors who do not usually work with patient/resident records, searching for documentation of each of the 10 categories of information from volumes of paper records, collecting the data retrospectively which resulted in reviewing medical records solely for the purpose of identifying the categories transferred and routes of transmission, and data collectors' unfamiliarity with (or lack of knowledge) of the routes of information transfer used by their site to receive and send information.

Relatedly, guidance for the route of transmission assessment items will need to be better clarified or the definitions revised. For example, clarification about what is meant by "third party" as some sites interpreted this to mean EMR, referral, and other software they use, when it was intended to refer only to a third party that provides access to interoperable HIE. Another clarification needed is the difference between being able to access, view, and download information from a portal to EMR data versus interoperable standards-based HIE which is currently not common in PAC, and allows the receiving provider to integrate the HIE information directly into their EMR.

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SECTION 5.
SUMMARY

CMS will use the results of the TOH QM admission and discharge assessment items and TOH QMs pilot test to continue development of these QMs. Plans are to revise these measures to focus on the transfer of medication information at discharge from PAC. In late 2017 and early 2018 input will be sought from subject matter experts and new measure specifications will be drafted. In early 2018, we will seek public comment on the revised measures.

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APPENDIX A:
TOH ADMISSION AND DISCHARGE ASSESSMENT ITEMS TESTED

A. TOH Admission and Discharge Assessment Items Tested

RTI INTERNATIONAL

facility1
New Assessment
Log Off

TRANSFER OF HEALTH INFORMATION AND CARE PREFERENCES PILOT TEST

PATIENT/RESIDENT ASSESSMENT FORM

To complete the admission assessment, complete the form below.

Site Information	
Site	TOH1
Patient Information	
Patient ID	14
Assessor ID	ST
Assessment Type	Admission
Admission Items - Provider to PAC Transfer of Information	
Date of Patient/Resident Admission	
Admission Date	
	☐ MM/DD/YYYY
TOH-1. Receipt of Health Information on Admission/Start of Care/Resumption of Care	
On admission, did your facility/agency receive, from the previous provider, the patient's health information and/or care preferences that were needed to plan and provide care?	
Enter Code ☐	1. **Yes** 2. **No** ➜ *Skip to Signature* 3. **NA** - Patient was not under the care of another provider immediately prior to this admission/start of care/resumption of care ➜ *Skip to Signature*
Time Estimate, in minutes, of the time it took to complete item TOH-1	
	☐

TOH-2. Types of Health Information Received on Admission/Start of Care/Resumption of Care	
Indicate the types of health information your facility/agency received from the previous provider.	
↓	Check all that apply
☐	**A. Functional status**
☐	**B. Cognitive function and mental status**
☐	**C. Special services, treatments, and/or interventions** (e.g., ventilator support, dialysis, IV fluids, blood product use)
☐	**D. Medical conditions and co-morbidities** (e.g., pressure ulcers/injuries and skin status, pain)
☐	**E. Impairments** (e.g., incontinence, sensory)
☐	**F. Medication information**
☐	**G. Patient/resident care preferences**
☐	**H. Goals of care**
☐	**I. Diet/nutrition** (e.g., parenteral nutrition, therapeutic diets)
☐	**J. Discharge instructions**
☐	**Z. None of these types of health information were received**
Time Estimate, in minutes, of the time it took to complete item TOH-2	
	☐

TOH-3. Route of Health Information Transmission on Admission/Start of Care/Resumption of Care	
Indicate the route(s) of transmission of health information received from the previous provider.	
↓	Check all that apply
☐	**A. Electronic using health information exchange organization or other third party**
☐	**B. Electronic means using an electronic health/medical record**
☐	**C. Other electronic means** (e.g., secure messaging, email, e-fax, portal, video conferencing)
☐	**D. Verbal** (e.g., in-person, telephone)
☐	**E. Paper-based** (e.g., fax, copies/printouts)
Time Estimate, in minutes, of the time it took to complete item TOH-3	
	☐

By entering your first name and last name below in the signature box you digitally signing this form and certifying that you completed this form.	
	A. First Name **B. Last Name** **C. Date Pilot Data Collection Form was Completed** MM/DD/YYYY
Please describe any difficulties you may have encountered when completing the assessment items above. **Please do not provide any protected health information or other patient/resident information such as the patient, family, or caregiver names, dates (other than year) directly related to the patient, or names of their healthcare providers.**	

Save

TRANSFER OF HEALTH INFORMATION AND CARE PREFERENCES PILOT TEST

PATIENT/RESIDENT ASSESSMENT FORM

To complete the discharge assessment, complete the form below.

Site Information	
Site	TOH1
Patient Information	
Patient ID	14
Assessor ID	ST
Assessment Type	Discharge

Discharge Items - PAC to Provider Transfer of Information	
Date of Patient/Resident Discharge	
Discharge Date	
	☐ MM/DD/YYYY
TOH-4. Provision of Health Information at Discharge or Transfer	
At discharge or transfer, did your facility/agency provide the patient's health information and/or care preferences to the subsequent provider?	
Enter Code ☐	1. **Yes** 2. **No** ➜ *Skip to Provision of Health Information to Patient/Family/Caregiver at Discharge or Transfer* 3. **NA (Home Health only)** - The agency was not made aware of this transfer timely and therefore was unable to transfer health information to the subsequent provider. ➜ *Skip to Signature* 4. **NA** - Patient was not discharged to the care of another provider at discharge or transfer ➜ *Skip to Provision of Health Information to Patient/Family/Caregiver at Discharge or Transfer*
Time Estimate, in minutes, of the time it took to complete item TOH-4	
	☐

TOH-5. Types of Health Information Provided at Discharge or Transfer	
Indicate the types of health information provided by your facility/agency to the subsequent provider.	
↓	Check all that apply
☐	**A. Functional status**
☐	**B. Cognitive function and mental status**
☐	**C. Special services, treatments, and/or interventions** (e.g., ventilator support, dialysis, IV fluids, blood product use)
☐	**D. Medical conditions and co-morbidities** (e.g., pressure ulcers/injuries and skin status, pain)
☐	**E. Impairments** (e.g., incontinence, sensory)
☐	**F. Medication information**
☐	**G. Patient/resident care preferences**
☐	**H. Goals of care**
☐	**I. Diet/nutrition** (e.g., parenteral nutrition, therapeutic diets)
☐	**J. Discharge instructions**
☐	**Z. None of these types of health information were provided**
Time Estimate, in minutes, of the time it took to complete item TOH-5	
	☐

TOH-6. Route of Health Information Transmission at Discharge or Transfer	
Indicate the routes(s) of transmission of health information from your facility/agency to the subsequent provider.	
↓	Check all that apply
☐	**A. Electronic using health information exchange organization or other third party**
☐	**B. Electronic means using an electronic health/medical record**
☐	**C. Other electronic means** (e.g., secure messaging, email, e-fax, portal, video conferencing)
☐	**D. Verbal** (e.g., in-person, telephone)
☐	**E. Paper-based** (e.g., fax, copies/printouts)
Time Estimate, in minutes, of the time it took to complete item TOH-6	
Discharge Items - PAC to Patient/Family/Caregiver Transfer of Information	
TOH-7. Provision of Health Information at Discharge or Transfer	
Did your facility/agency provide relevant health information to the patient/family/caregiver when the patient was discharged or transferred?	
Enter Code 3	1. **Yes** 2. **No** → *Skip to Signature* 3. **NA (Home Health only)** - The agency was not made aware of this transfer timely and therefore was unable to transfer health information to the patient/family/caregiver. → *Skip to Signature.*
Time Estimate, in minutes, of the time it took to complete item TOH-7	

TOH-8. Types of Health Information Provided to the Patient/Family/Caregiver at Discharge or Transfer	
Indicate the types of health information provided to the patient/family/caregiver at the time of discharge or transfer.	
↓	Check all that apply
☐	**A. Functional status**
☐	**B. Cognitive function and mental status**
☐	**C. Special services, treatments, and/or interventions** (e.g., ventilator support, dialysis, IV fluids, blood product use)
☐	**D. Medical conditions and co-morbidities** (e.g., pressure ulcers/injuries and skin status, pain)
☐	**E. Impairments** (e.g., incontinence, sensory)
☐	**F. Medication information**
☐	**G. Patient/resident care preferences**
☐	**H. Goals of care**
☐	**I. Diet/nutrition**(e.g., parenteral nutrition, therapeutic diets)
☐	**J. Discharge instructions**
☐	**Z. None of these types of health information were provided**
Time Estimate, in minutes, of the time it took to complete item TOH-8	
	☐

By entering your first name and last name below in the signature box you digitally signing this form and certifying that you completed this form.
A. First Name ☐ **B. Last Name** ☐ **C. Date Pilot Data Collection Form was Completed** ☐ MM/DD/YYYY
Please describe any difficulties you may have encountered when completing the assessment items above. **Please do not provide any protected health information or other patient/resident information such as the patient, family, or caregiver names, dates (other than year) directly related to the patient, or names of their healthcare providers.**
☐

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APPENDIX B:
DEBRIEFING INTERVIEW TOPICS

These interviews are being conducted with all sites that participated in the Transfer of Health Information and Care Preferences (TOH) pilot test to:

- better understand processes your facility/agency used to collect data, estimate time to complete the items, what impacted your time estimates, how you coded the items and any problems
- get your impressions of the draft assessment items and the 2 quality measures you are helping to test.
  - Please refer to the list of items and the draft quality measure descriptions in the Attachments.
  - All interview responses will remain confidential; no sites will be identified in any report or summaries.
  - Responding to the questions is optional. If you are not comfortable answering any questions let us know. This will not reflect negatively on your site or feedback.
  - Some questions ask for opinions. We encourage anyone who has an opinion to state it, even if different from others.

These are draft measures and items under development. As you consider the questions, RTI, Abt, and CMS would like to reiterate that:

- The intent of the quality measures under development is to improve patient health information transfer processes and increase awareness of transmission of patient health information during care transitions from one provider to the next.
- These are *process measures* intended to explore the transfer of patient healthcare information across care settings as a person traverses the care continuum.
- The measures are required under the IMPACT ACT - the transfer of health information at both admission to and discharge from post-acute care (PAC) settings.
- The admission measure is not intended to penalize the PAC provider if they did not receive the information or to attribute responsibility to the PAC provider for what a hospital, other provider may have sent or not sent.

Admission Assessment Questions

TOH 1 asks if your facility/agency received at admission, from the previous provider, information needed to plan and provide patient care. **TOH 2** asks you to check any of the 10 categories of information received

TOH 3 asks about 5 routes of information transmission at admission used by previous provider. We will ask you about:

- Interpretation of the question to reflect both receiving patient information directly from the previous provider AND actively procuring or obtaining any needed information from the previous provider
- Interpretation of 'at admission'?
- Adequacy of data received at admission for planning and providing care and how you coded the item
- Any problems in coding/selecting any of these categories? Patient preferences and goals? Need for better guidance?
- Electronic routes of transmission – routes used and how coded
- If you receive a standard transfer form or document when receiving information at admission
- Your views on reliability, consistency item coding for the same patient across different data collectors

Draft admission items and quality measure - Items TOH-1 and TOH-2 may be used to create an admission process quality measure. Under the draft specifications, a patient/resident would be counted in the measure numerator, or get credit, if your facility/agency received at least one category of information on admission.

We will ask your views about:

- If this measure reflects quality and can distinguish providers with good quality of care and information transfer processes from those with poorer quality of care and information transfer processes?
- Changing the measure criteria to require more than one category of information received to better reflect quality of care and information transfer processes
- Relative importance of each of the 10 categories of information to receive at admission? (if you can, please rank order them)

Discharge Assessment Questions

TOH 4 asks if you provided information at discharge to the subsequent provider. **TOH 5** asks you to select any of the 10 categories of information provided to the subsequent provider. **TOH 6** asks about 5 routes used to transmit information to the subsequent provider at discharge.

We will ask you about:

- Interpretation of 'at discharge'?
- Transfer of information to subsequent provider (e.g., outpatient) when patient is discharged home/ community with no home health or hospice services? Clarity of guidance for this situation
- Any problems in coding/selecting any of these categories? Need for better guidance?
- Electronic routes of transmission – routes used and how coded

- If you use a transfer form or document when providing information to the subsequent provider that displays certain pre-determined types of critical information?

TOH 7 and TOH 8 asked if information was transferred to the patient/family/caregiver using the same categories as above. We will ask you about:

- Any problems in coding/selecting any of these categories? Need for better guidance?
- Documentation of information that was shared with the patient/family/caregiver, including staff was involved in the documentation.
- Appropriateness of categories of information for transfer of information to patient/family/caregiver

Draft discharge items and quality measure Items TOH-4 and TOH-5 may be used to create a discharge process quality measure. Under the draft specifications, a patient/resident would be counted in the measure numerator, or get credit, if your facility/agency provided at least one category of information to the subsequent provider on discharge.

We will ask your views about:

- If this measure reflects quality and can distinguish providers with good quality of care and information transfer processes from those with poorer quality of care and information transfer processes?
- Changing the measure criteria to require more than one category of information provided to better reflect quality of care and information transfer processes
- Relative importance of each of the 10 categories of information to provide at discharge? (if you can, please rank order them)

Review and Understanding the Data Collection Time Estimates

- Adequacy of training, TOH Manual and TOH Guidance for you and staff to complete the time estimates accurately?
- Estimate of time it took to prepare/train the data collectors so that they understood and could code the items correctly. Please include up-front time involved in reviewing the guidance and training manuals, creating any tools to support data collection, and developing internal processes for data collection.
- Explanation of time that was included in your time estimate. If it included the time it took to determine which categories of information were received at admission and were provided at discharge
- What contributed to longer vs. shorter data collection times for specific items, for the different coders

Processes, Systems, Sources to Facilitate Data Collection, Admission and Discharge Items

- Any changes to your processes and/or systems to support the data collection

- Other staff sources used to complete items on information provided to next provider and to patient/family (e.g., case manager)
- Any differences in processes used by data collectors and impact on time estimates
- If these measures and items were implemented, likelihood your facility/agency would use the same processes used during the pilot data collection, anything you may do differently, and implications for time to complete the items

Your Experience with TOH Item Data Collection

- Confidence in accuracy of information your facility/agency provided
- Anything that could have improved the data collectors' understanding of how to code the items
- Any insight into your site's processes for transferring patient information from this pilot test.
- Any changes made to health information transfer processes with respect to:
  - information you receive and procure at admission?
  - information you provide at discharge to the subsequent provider?
  - Information you provided at discharge to the patient/family/caregiver?
- Any anticipated changes to your information transfer processes if measures are implemented
- Anything else you would like to share about your experience collecting and submitting data during the TOH QM Pilot?

APPENDIX C:
ADDITIONAL TABLES AND GRAPHS

Table 3.
Inter-rater Agreement on TOH2 Categories

Category	Inter-rater Agreement
Medication Information	89.5
Medical Conditions and co-morbidities	92.9
Functional Status	87.7
Cognitive Function and Mental Status	84.3
Diet/Nutrition	82.7
Impairments	72.8
Discharge Instructions	75.6
Special Services, Treatments, Interventions	82.1
Goals of Care	78.1
Patient/Resident Care Preferences	81.2

Table 4.
Inter-rater Agreement on TOH 3 Categories

Category	Inter-rater Agreement
Electronic using health information exchange organization or other third party	89.8
Electronic means using an electronic health/medical record	85.5
Other electronic means (e.g., secure messaging, email, e-fax, portal, video conferencing)	81.5
Verbal	77.8
Paper-based	89.2

Table 5.
Inter-rater Agreement on TOH 5 Categories

Category	Inter-rater Agreement
Medical Information	91.0
Medical Conditions and co-morbidities	86.9
Functional Status	86.9
Cognitive Function and Mental Status	83.2
Diet/Nutrition	85.7
Impairments	80.6
Discharge Instructions	80.2
Special Services, Treatments, Interventions	75.0
Goals of Care	76.1
Patient/Resident Care Preferences	82.5

Table 6.
Inter-rater Agreement on TOH 6 Categories

Category	Inter-rater Agreement
Electronic using health information exchange organization or other third party	92.3
Electronic means using an electronic health/medical record	91.0
Other electronic means (e.g., secure messaging, email, e-fax, portal, video conferencing)	82.3
Verbal	75.4
Paper-based	82.8

Table 7.
Inter-rater Agreement on TOH 8 Categories

Category	Inter-rater Agreement
Medical Information	84.5
Medical Conditions and co-morbidities	82.8
Functional Status	82.1
Cognitive Function and Mental Status	78.7
Diet/Nutrition	82.5
Impairments	80.2
Discharge Instructions	73.4
Special Services, Treatments, Interventions	76.1
Goals of Care	75.7
Patient/Resident Care Preferences	80.6

Figure 9.
Proportion of Assessments Indicating Categories Received at Admission by Setting

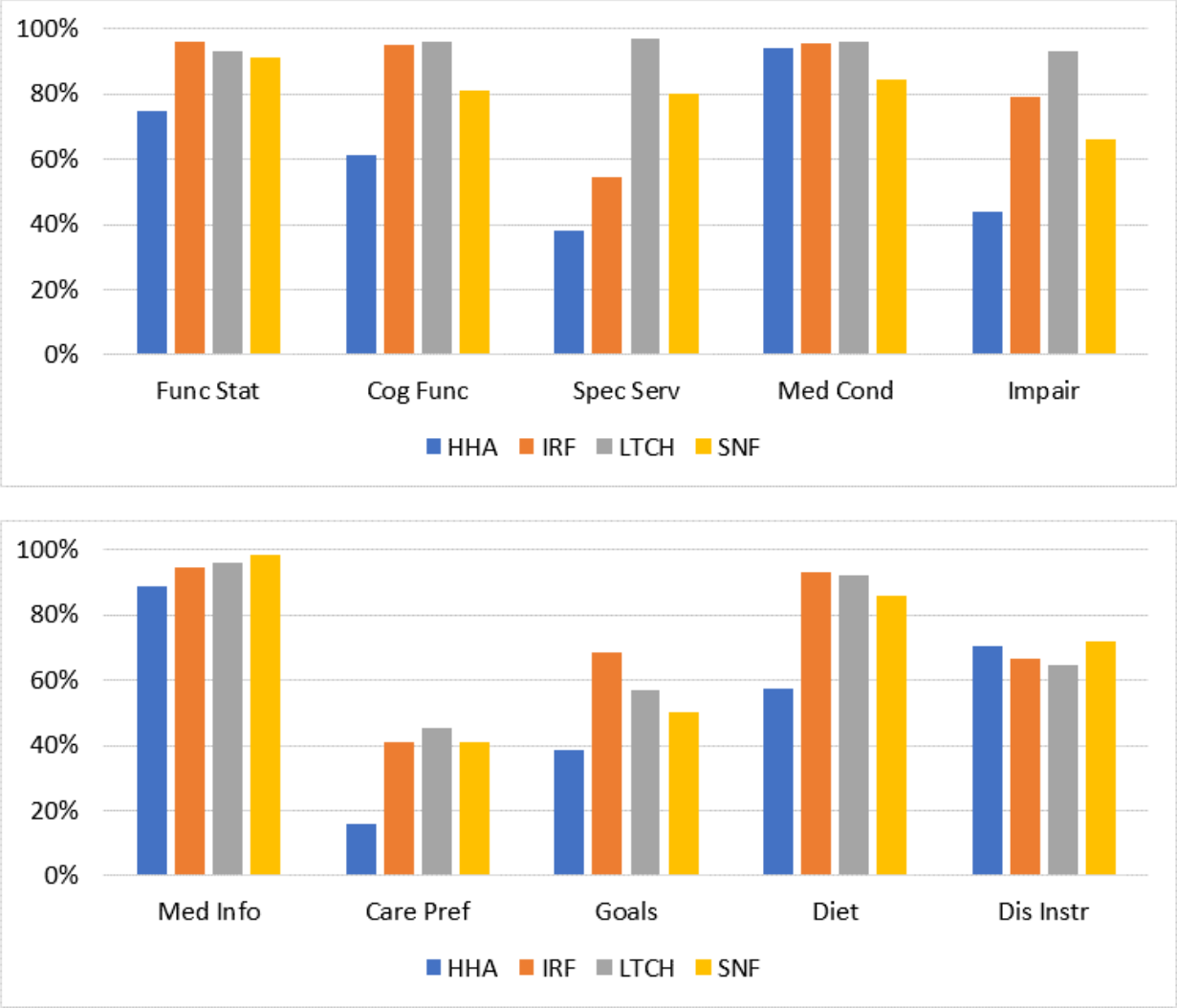

Figure 10.
Proportion of Assessments Indicating Categories Sent to Next Provider at Discharge by Setting

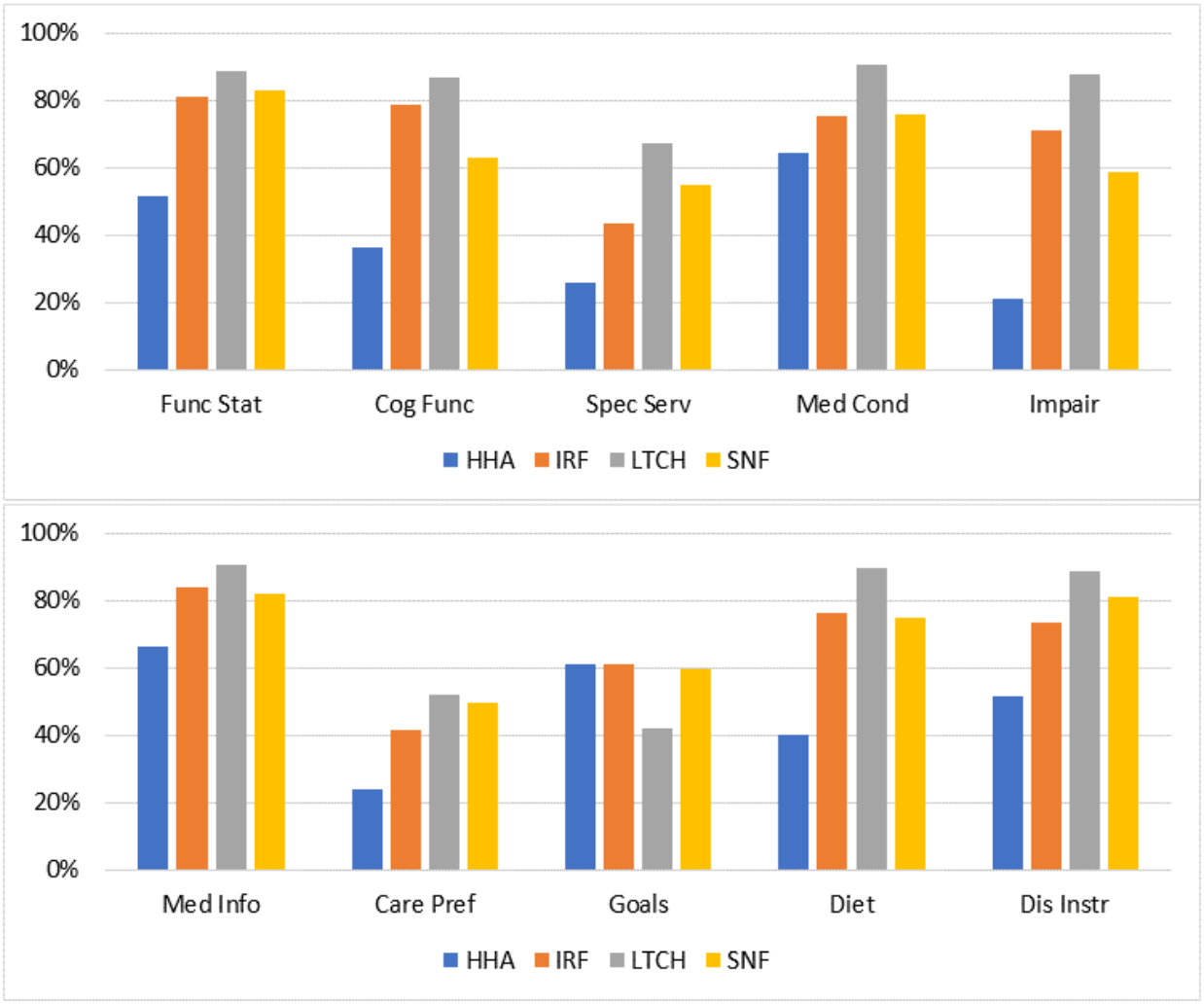

Figure 11.
Proportion of Assessments Indicating Categories Shared with Patients at Discharge by Setting

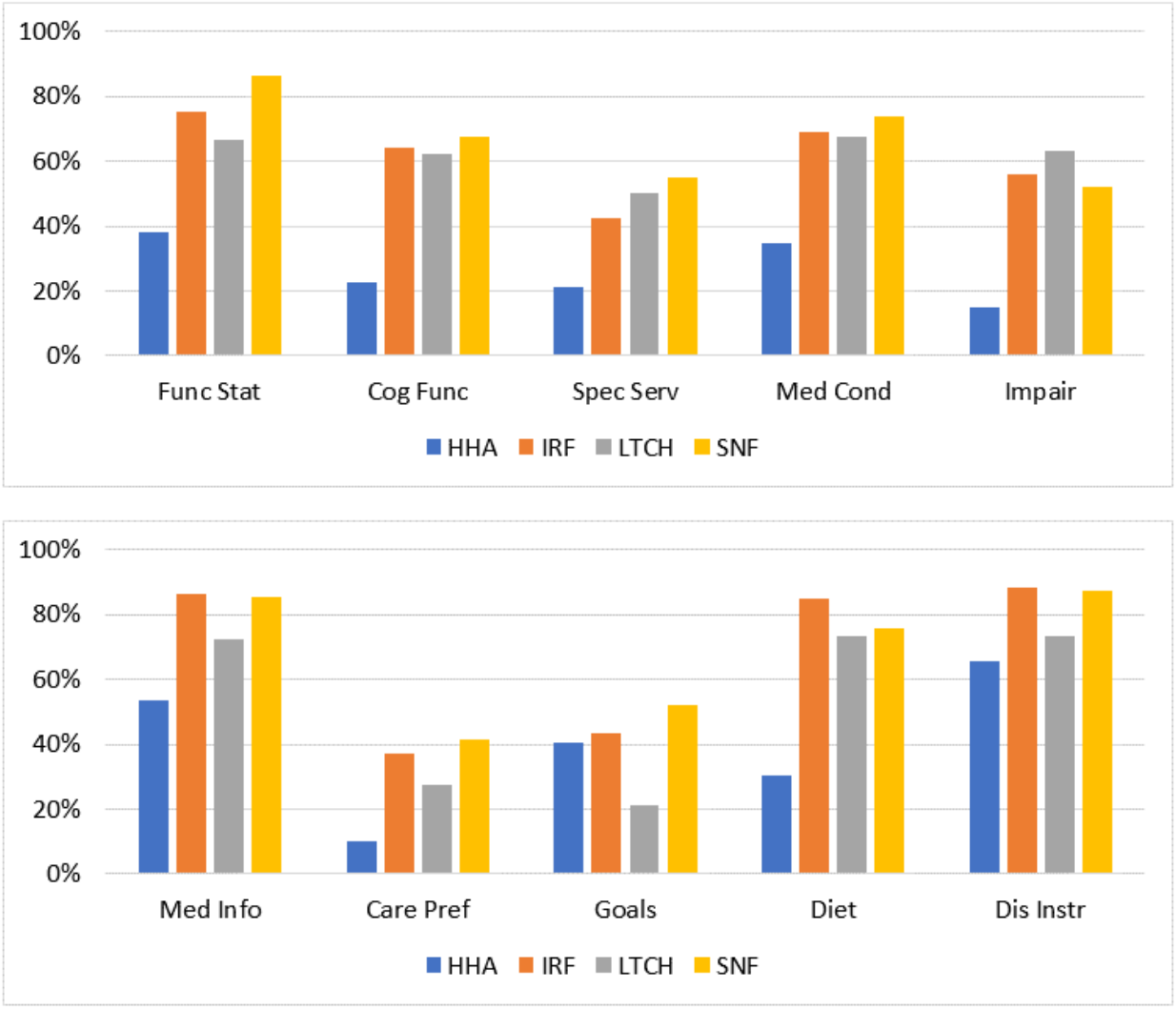

Figure 12.
Average Number of Categories Received at Admission by Setting

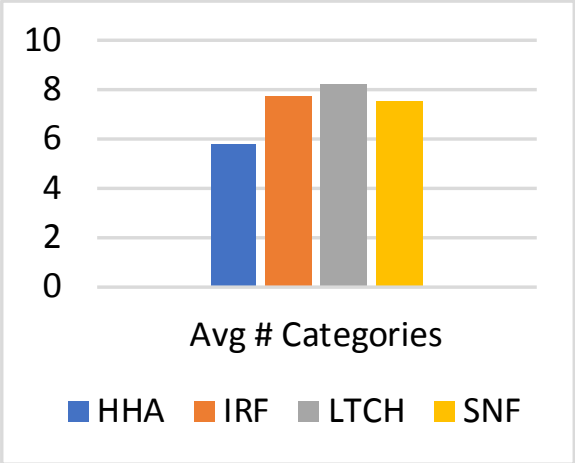

Figure 13.
Average Number of Categories Sent to the Next Provider at Discharge by Setting

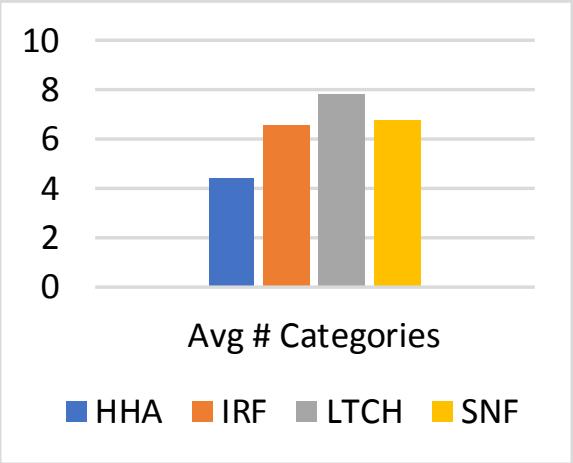

Figure 14.
Average Number of Categories Shared with Patients at Discharge by Setting

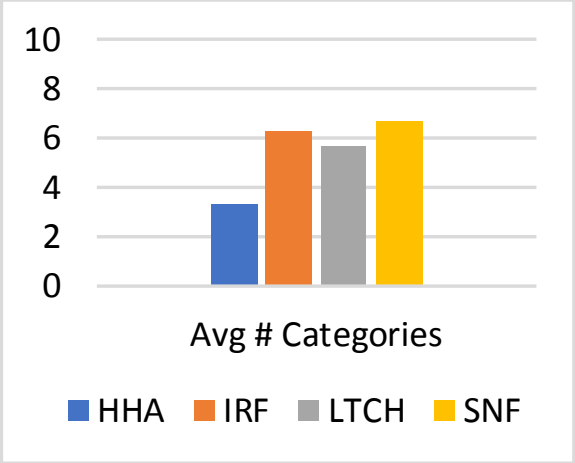

Figure 15.
Discharge QM Scores Under Different Numerator Specifications by Setting

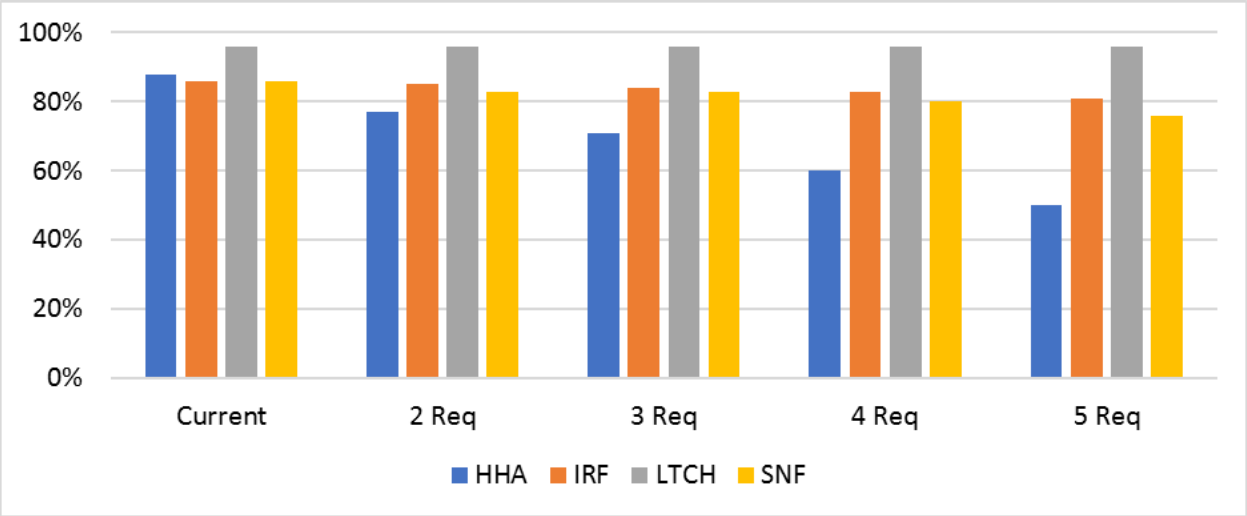

Table 8.
Admission Assessment Item Time Estimates

Assessment Item	Mean (s.d.) (in minutes)	Mode (in minutes)
TOH-1	1.6 (3.2)	1
TOH-2	4.3 (5.0)	5
(items in QM calculation only)	5.9	
TOH-3	1.9 (4.2)	1
Admission Item Total	7.7 (10.0)	3

Table 9.
Discharge Assessment Item Time Estimates

Assessment Item	Mean (s.d.) (in minutes)	Mode (in minutes)
TOH-4	1.6 (3.8)	1
TOH-5	2.5 (3.5)	0
(items in QM calculation only)	4.1	
TOH-6	1.4 (3.1)	1
TOH-7	1.5 (4.0)	1
TOH-8	2.4 (4.7)	0
Discharge Items Total	9.5 (17.2)	5

Figure 16.
Average Admission Assessment Item Time Differences Between Data Collectors by Setting

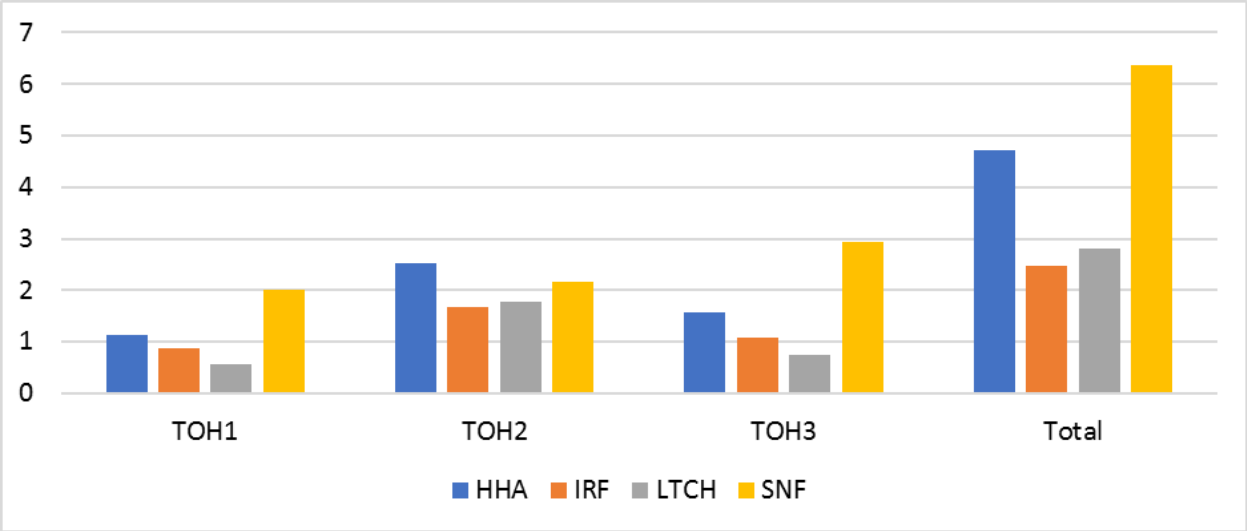

Figure 17.
Average Discharge Assessment Item Time Differences Between Data Collectors by Setting

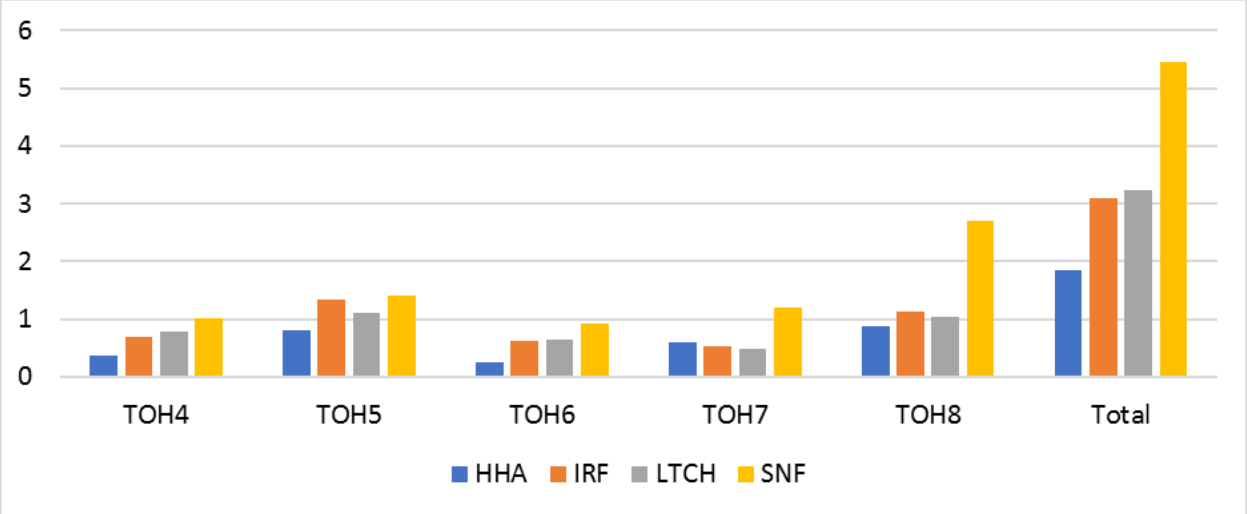

Figure 18.
Proportion of Assessments Reporting Routes of Transmission at Discharge