

CoreQ

Getting to the core of customer satisfaction
in skilled nursing and assisted living.

Satisfaction Questionnaire & User's Manual

Questionnaire Development

Nick Castle, Ph.D., from the University of Pittsburgh led an effort with input from an AHCA/NCAL workgroup to develop a short, reliable and valid questionnaire that could be added to existing survey instruments or used by itself to collect information to calculate a set of quality measure(s) related to individuals discharged following short-term rehabilitation services, for long-stay resident and their family members and for residents and their families in assisted living. The SNCC related measures were endorsed by the National Quality Forum (NQF) in 2016. The AL measures is still undergoing some final testing before submitting an application to NQF.

The draft questionnaire was administered to over 25,000 residents in SNCCs (both short-term and long- stay residents) and ALCs across several organizations and states with approximately 10,000 responses. Dr. Castle, and Matt O'Connor, Ph.D., HCR ManorCare, conducted extensive psychometric testing. The results identified three core questions that were reliable and valid across SNCCs and ALCs for both short-stay and long stay residents. There was one extra question about the discharge process for the short-stay discharges and one extra question for assisted living (see appendix A for the final validated questionnaires). These questions yielded the same information, when aggregated together and summed as a quality measure at the center/community level, as using additional questions. In other words, additional questions did not change a center/community's score or ranking. Additional questions did help identify areas for improvement.

Several satisfaction vendors have been involved with this work; keeping them informed of the process at each step. Many of the vendors have added the questions to their existing instruments for both skilled nursing and assisted living. To date, Rhode Island has incorporated the long-stay CoreQ questionnaire into its state-wide satisfaction data collection for their public reporting program.

Satisfaction Quality Measures

There are five center-level satisfaction measures (NQF submission pending) that were developed to assess the customer satisfaction/experience in SNCCs and ALCs. The measures will be based on the CoreQ questionnaires (see appendix A). The validity of these measures are described in Appendix B.

Measure #1: **Short-Stay Discharges Satisfaction** defined as the percentage of individuals discharged from short-term rehab who were satisfied (defined as an average rating of the center as either a 3, 4 or 5 on the CoreQ Short-Stay Discharges questionnaire).

Measure #2: **Long-Stay Resident Satisfaction** defined as the percentage of individuals who are long-stay residents who were satisfied (defined as an average rating of the center as either a 3, 4 or 5 on the CoreQ Long-Stay Resident questionnaire).

Measure #3: **Long-Stay Family Satisfaction** defined as the percentage of families or designated responsible party for long-stay residents who were satisfied (defined as an average rating of the center as either a 3, 4 or 5 on the CoreQ Long-Stay Family questionnaire).

Measure #4: **Assisted Living Resident Satisfaction** defined as the percentage of AL residents or designated responsible party who were satisfied (defined as an average rating of the community as either a 3, 4 or 5 on the CoreQ AL Resident questionnaire).

Measure #5: **Assisted Living Family Satisfaction** defined as the percentage of families or designated responsible party for AL residents who were satisfied (defined as an average rating of the community as either a 3, 4 or 5 on the CoreQ AL Family questionnaire).

Sample Selection

The sample selection ideally should be drawn by the organization from their administrative and/or clinical database and the list of names with contact information provided to the survey vendor. If a Center, cannot identify any of the exclusions, it is ok to send a survey to those individuals who would be excluded if such data was available (e.g. those with dementia/cognitive impairment), however as a result it is likely that they will either not get a response (and thus lower their response rate) or get a questionnaire back that has been completed by someone other than the resident or the intended recipient (which will result in exclusion from the measure calculation).

CoreQ Assisted Living Resident. All current residents in the community are initially eligible. Residents who meet any of the following criteria are excluded from either receiving or being administered the CoreQ questionnaire:

- Dementia impairing their ability to answer the questionnaire defined as BIMS score of 7 or lower or MMSE score of 12 or lower. [Note: we understand that many ALCs may not have information on cognitive function. We will suggest administering the survey to all AL residents and assume that those with cognitive impairment will not complete the survey or have someone else complete on their behalf which in either case will exclude them from the analysis.]
- Have a legal court appointed guardian.
- Residents on hospice.
- Residents who have been in the ALC for less than two weeks.

Ideally, the sample of residents should be drawn from the ALC's current census records for all current residents in the building at the time of survey. All residents should be included minus any meeting the above exclusions.

CoreQ Assisted Living Family. The resident representative (i.e., the primary contact) for each current resident is initially eligible regardless of their being a family member or not. Only one primary contact per resident should be selected. Primary contacts who meet any of the following criteria are excluded from receiving the CoreQ questionnaire:

- Court appointed guardian.
- Family members who reside in another country.
- Residents on hospice.
- Residents who have been in the ALC for less than two weeks.

Ideally, the sample of family members and contact information should be drawn from the assisted living's resident contact lists. All primary contacts should be included except for those meeting exclusion criteria.

Core Q Long-Stay Resident. All current residents are initially eligible. Residents who meet any of the following criteria are excluded from receiving/administered the CoreQ questionnaire:

- Dementia impairing their ability to answer the questionnaire defined as having a BIMS score on the MDS as 7 or lower. [Note: we understand that some SNCCs may not have information on cognitive function available to help with sample selection. In that case, we suggest administering the survey to all residents and assume that those with cognitive impairment will not complete the survey or have someone else complete on their behalf which in either case will exclude them from the analysis.]
- Have a legal court appointed guardian.
- Patients on hospice as recorded on the MDS as Hospice (O0100K1 = 1).
- Residents who have lived in the SNCC for less than 100 days.

CoreQ Long-Stay Family. The resident representative (i.e., the primary contact) for each current resident is initially eligible regardless of their being a family member or not. Only one primary contact per resident should be selected. Primary contacts who meet any of the following criteria are excluded from receiving the CoreQ questionnaire:

- Court appointed guardian.
- Family members who reside in another country.
- Patients on hospice as recorded on the MDS as Hospice (O0100K1 = 1).

- Residents who have lived in the SNCC for less than 100 days.

Ideally, the sample of family members and contact information should be drawn from the resident contact records.

CoreQ Short-Stay Discharges. All residents admitted from a hospital to the SNCC regardless of payor who were discharged back to the community within 100 days of admission are initially eligible. Discharged back to the community includes discharges to home or ALC. Residents who meet any of the following criteria are excluded from receiving/administered the CoreQ questionnaire:

- Discharged to a hospital, another SNCC, psychiatric facility, Inpatient Rehabilitation Facilities (IRF), or Long Term Care Hospital (LTCH).
- Discharged on hospice.
- Have dementia impairing their ability to answer the questionnaire defined as having a BIMS score on the MDS as 7 or lower. [Note: we understand that some SNCCs may not have information on cognitive function available to help with sample selection. In that case, we suggest administering the survey to all residents and assume that those with cognitive impairment will not complete the survey or have someone else complete on their behalf which in either case will exclude them from the analysis.]
- Have a legal court appointed guardian.
- Left Against Medical Advice (AMA).
- Died during their SNCC stay.

Questionnaire Administration

Timing of Administration. The frequency in which the questionnaires should be administered can be left up to the provider or vendor except for the CoreQ short-stay discharges (see below) but should at least be administered once a year.

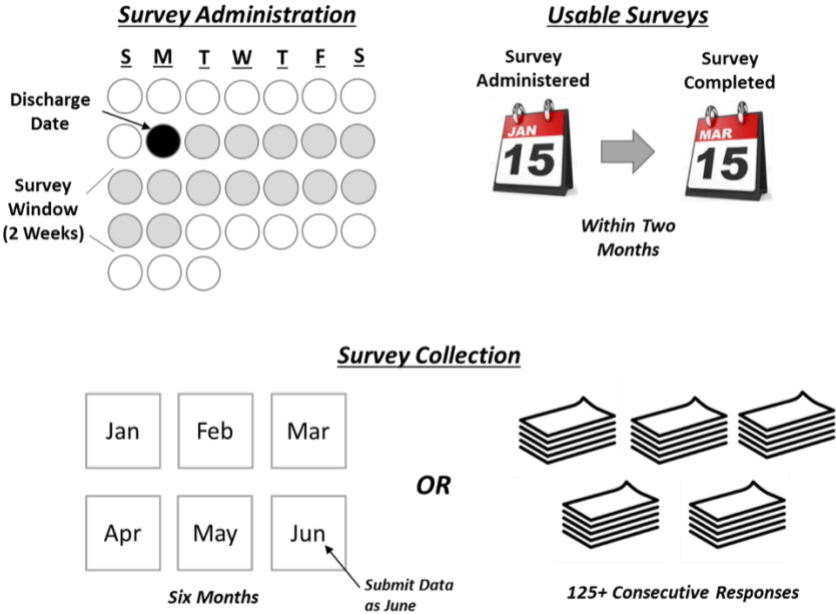
CoreQ Assisted Living: No specifications on frequency but assume it will be a cross-sectional collection at a point in time of current resident with some specified follow-up period.

Core Q Long-Stay Resident: No specifications on frequency but assume it will be a cross-sectional collection at a point in time of current resident with some specified follow-up period.

CoreQ Long-Stay Family: No specifications on frequency but assume it will be a cross-sectional collection at a point in time of current resident with some specified follow-up period.

CoreQ Short-Stay Discharges: Should be initially administered within two weeks of discharge from the center. The data collection should continue for the next six months or you may stop once you receive 125 or more valid responses. Please note you must have at least 20 valid responses to meet the minimum requirements for the minimum sample size (see Reporting Center’s Results section for more information). These must be **consecutive** returns and cannot be the “best 125 responses” (See Figure 1). The questionnaire should be administered AFTER discharge not the day of discharge similar to the requirement for the Consumer Assessment of Health Care Providers and Systems (CAHPS) survey.

Figure 1. Short-stay survey administration



Follow-up Reminders. The use of follow-up reminders are encouraged to boost the response rate, but are not required. Incentives to complete the survey may also be used, but are not required.

Additional Questions. Several additional questions about the respondent completing the questionnaire should be collected as they are required in the analysis of the measure (see Figure 2). This does NOT apply to the family CoreQ questionnaires. These include questions about any help the respondent received in completing the questionnaire and who helped complete the questionnaire. If these are already included in an existing questionnaire that the CoreQ is being added to, then use those questions. They do not have to be exactly worded the same way as the example below. Additional similarly worded questions are not necessary. Additional questions about the respondents’ demographics such as age and gender are optional.

Figure 2. Example questions to assess help completing the survey

26. Did someone help you complete this survey?

- ① Yes ② No (If no, please return the survey in the postage paid envelope.)

27. How did that person help you? (Check all that apply.)

- ① Read the questions to me. ② Wrote down the answers I gave.
③ Answered the questions for me. ④ Translated the questions into my language.
⑤ Helped in some other way.

Administering CoreQ by Itself. The CoreQ can be administered by itself as a stand-alone questionnaire which must include, at a minimum, the CoreQ questions and when given to residents, the two additional questions about assistance in completing the questionnaire above.

Including CoreQ in Other Questionnaires. These questions, when added to a vendor's questionnaire, should always be grouped together with an introduction sentence: *"The following three/four questions are part of a national initiative to measure the quality of skilled nursing care centers/assisted living communities"*. The Association recommends that the CoreQ questions appear first on the questionnaire, when used as part of a larger longer satisfaction questionnaire.

Survey Completion Window. We recommend using only surveys returned within two months of the resident initially receiving the survey. Responses received after two months are excluded.

Scoring Survey. Responses to each question will be translated into a numeric response.

- Excellent = 5
- Very good = 4
- Good = 3
- Average = 2
- Poor = 1

See the section on quality measure calculation for how each person's average response is calculated and used in the quality measure.

Quality Measure Calculation

Overview

For each respondent, the numeric responses to the three or four questions are summed together and divided by the total number of questions. This yields an average score for each respondent. The total number of respondents with a score greater than or equal to 3.0 is divided by the total number of respondents who are not excluded.

Figure 3. Algorithm for calculating a SNCC’s/ALC’s satisfaction CoreQ score

- Step 1.** Assign numeric value for the resident’s response to each question.
Note excellent = 5, very good = 4; good = 3; fair = 2 and poor = 1.
- Step 2.** Determine if the person has an answer to all the questions.
If **yes**, go to Step 4.
If **no**, are they missing answers to more than 1 question?
If yes, exclude this person from the analysis
If no, impute missing response for the missing question (see step 3)
- Step 3.** Impute missing data see below & Table 2.
- Step 4.** Calculate each resident’s average response by adding up all of their responses and divide by the total number of questions.
- Step 5.** Count all residents with an average rating of greater than or equal to 3.00.
- Step 6.** Count all the residents with usable data (e.g. those who answered all the questions or had only one question with missing data).
- Step 7.** Divide the count of everyone with a rating ≥ 3.00 by the total number of respondents with usable data.

Calculating Respondents Average Score. Each respondent’s answers to the CoreQ need to be averaged. Table 1 shows an example of how the average answers are calculated for three different responses. The numeric values are summed and divided by the number of questions to calculate the average score.

Table 1. Example of calculating average resident’s ratings

Core Q items	Answers		
	Resident A	Resident B	Resident C
Question #1	5	3	5
Question #2	4	2	4
Question #3	3	1	4
Total	12	6	13
Avg calculation	12/3	6/3	13/3
Average Score	4.0	2.0	4.3

Imputing Missing Data. If information from **one** question is missing, we will impute missing data by taking the average of the other two (or three) questions. If there is missing information for two or more questions; the respondent’s information is excluded.

Table 2 below demonstrates how imputation works for four different scenarios. Resident B is the only scenario where imputation would occur since data is missing for only 1 question on the CoreQ. The average of the other two questions is imputed for the missing question and then the resident’s average is calculated using the imputed value.

Table 2. When and how to impute data when information on a question is missing

Core Q items	Resident	Resident	Resident	Resident
	A	B	C	D
Question #1	5	3	5	Missing
Question #2	4	2	Missing	Missing
Question #3	3	Missing	Missing	Missing
Total	12	5	5	--
Imputation	--	YES	NO	NO
Imputation Value	--	(3+2)/2	--	--
Average Calculation	(12/3)	(3+2+2.5)/3	Excluded	Excluded
Average Score	4.0	2.5	Excluded	Excluded

Calculating a Center's/Community's Satisfaction Rating. The number of respondents with an average score greater to or equal to 3.0 are counted (numerator) and divided by the total number of valid responses to the same questionnaire type (denominator) to yield the center's/community's satisfaction score (e.g. percent of respondents who are satisfied). For example, a center has four respondents with average scores of 2.9, 3.1, 4.0, and 4.2 on the CoreQ long-stay resident questionnaire (see Figure 4). Three residents have an average score of greater than 3.0. Thus, the numerator is 3 and the denominator is 4 so the center's long-stay resident satisfactions core is 75 percent (3 divided by 4).

Figure 4. Demonstrating the calculation of a center/community's satisfaction rating

Core Q items	Answers			
	Resident A	Resident B	Resident C	Resident D
Question #1	3	3	5	4
Question #2	4	2	4	Missing
Question #3	3	1	4	Missing
Total	10	6	13	--
Average calculation	10/3	6/3	13/3	NO
Average Score	3.33	2.0	4.3	Excluded

2 Residents w/score ≥ 3.0
 3 Residents with usable data
 Facility Satisfaction Rating = (2 / 3) or 66.6%

Excluding Resident Surveys from the Calculation. Surveys that meet any exclusion criteria should be omitted from the quality measure calculations. These include all:

- a. Surveys received outside the time window (two months after the administration date).
- b. Residents' surveys that have missing data (more than one CoreQ question missing should be excluded).
- c. Residents who indicate that someone else answered the questions for the resident should also be excluded or added to the family responses. If a resident had help answering the questions such as reading the questions or writing down their responses should be included in the calculation.

Reporting Results. In order to report results for a center/community, two criteria must be met.

1. Minimum sample size

A center/community must have a minimum of 20 **valid** responses (e.g. the denominator must be ≥ 20); we will accept results for centers/communities with <20 valid responses but will not include them in any aggregate calculations or analyses. A valid response is considered to be from a respondent who:

- a. Has all items answered or only one question missing on the CoreQ; AND
- b. Does not meet any of the exclusion criteria (see exclusion criteria for each CoreQ questionnaire in questionnaire administration); AND
- c. Responses received to the questionnaire within two months of the person being sent the questionnaire.

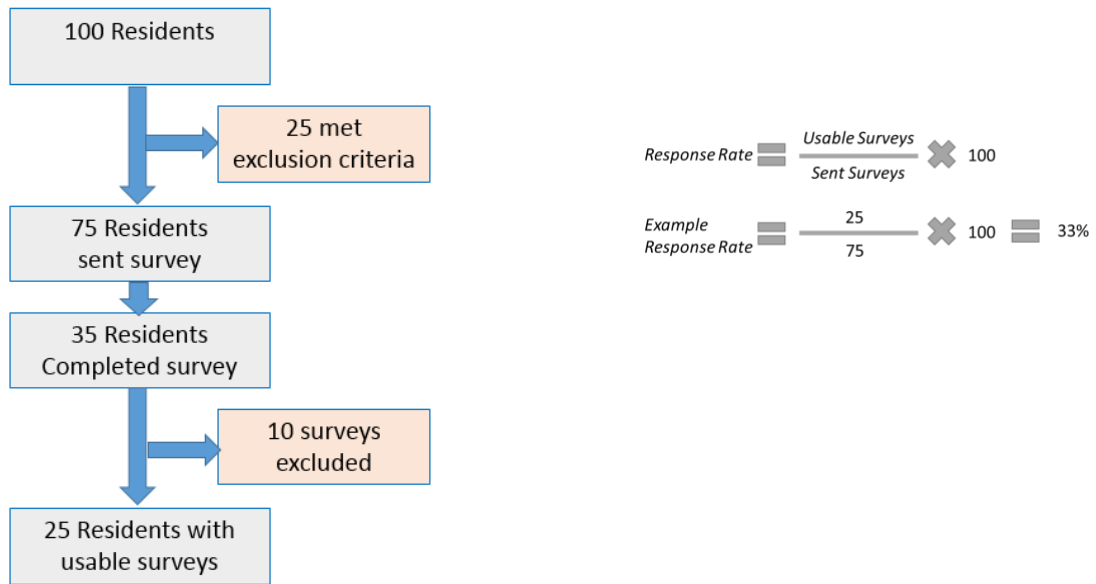
2. Minimum response rate

A center/community must also have a minimum response rate of valid responses of at least 30 percent or greater. The response rate is calculated by counting all the valid responses (see above) divided by the number of people who were given the survey to complete. Figure 5 depicts a typical center with 100 residents, of which 25 meet exclusion criteria (see exclusions above). The remaining 75 are given the survey, of which 35 are completed; however, ten of them are excluded (e.g. left questions blank, completed outside the allowed time window, another person completed the survey for the resident, etc). This leaves 25 usable surveys from the 75 who received the survey. Thus, the response rate will be $25/75$ or 33 percent. We will accept results with response rates less than 30 percent but will exclude those centers/communities in any aggregate analyses or calculations. For vendors utilizing phone surveys, the response rate would be the number of people who completed the survey divided by the number of people they actually reached by phone.

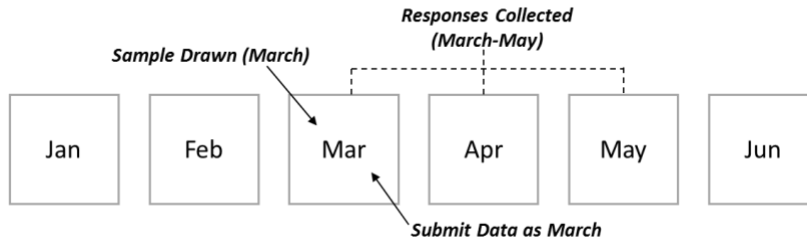
Long-Stay and Assisted Living surveys can be aggregated for up to six months to meet minimum response rate and sample size requirements. When submitting data for a six-

month sampling period, report the month the last survey sample was drawn. For example, if a vendor draws a sample in January and continues drawing samples through June to meet minimum requirements, the month indicated on the upload should be June not January. Surveys should only be used if they are returned within two months of the resident initially receiving the survey. If the vendor is not aggregating data over an extended period to meet sample size and response rate requirements, the month selected should be the month the sample was drawn. For example, if the vendor draws a sample of residents in March and continues to collect responses over the allowed two month period, the month entered on the upload for this sample would be March not May.

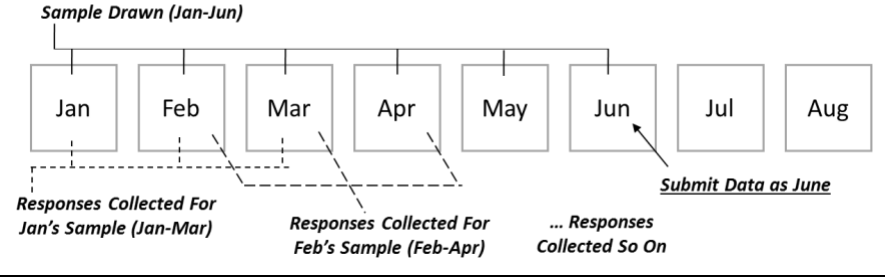
Figure 5. Example to demonstrate calculating response rate



Cross-Sectional Sampling
(Option for Long-Stay and AL Only)



**Six Month Sampling to Meet Response and Sample Requirements
(Option for Long-Stay and AL Only)**



Appendix A: CoreQ questions and rating scales

These questions, when added to a vendor's questionnaire, will always be grouped together with the introduction sentence: ***“The following three/four questions are part of a national initiative to measure the quality of skilled nursing care centers/assisted living communities”***. We recommend that the CoreQ questions appear first on the questionnaire, when used as part of a larger satisfaction questionnaire.

CoreQ – Short-Stay Discharge

1. In recommending this facility to your friends and family, how would you rate it overall?
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent
2. Overall, how would you rate the staff?
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent
3. How would you rate the care you receive?
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent
4. How would you rate how well your discharge needs were met?
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent

CoreQ – Long-Stay Residents & Family Members

1. In recommending this facility to your friends and family, how would you rate it overall?
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent
2. Overall, how would you rate the staff?
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent
3. How would you rate the care you received?¹
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent

Core Q – Assisted Living Residents & Family Members

1. In recommending this facility to your friends and family, how would you rate it overall?
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent
2. Overall, how would you rate the staff?
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent
3. How would you rate the care you receive?¹
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent
4. Overall, how would you rate the food?²
① Poor ② Average ③ Good ④ Very Good ⑤ Excellent

¹ When question #3 is administered to family members, reword the question to say: “How would you rate the care your family member received?” to reflect the person answering the question is not the resident who received care.

² Drop question #4 when administered to family members

Appendix A1. Examples of CoreQ questionnaire with instructions

Ideally, the formatting will be the same in each survey but we understand that it may need to be modified to be consistent with the rest of a vendor's questionnaire. See examples below of different formatted methods that have been used. Regardless of formatting, the wording, ordering and grouping of the questions together needs to be identical across all questionnaires.

Example 1. CoreQ short-stay with rating below question using numbers and words

COREQ: Short-Stay Discharge

The four questions below are part of a national initiative to measure the quality of skilled nursing facilities.

Please answer the questions in this survey about your stay in [SNF name]. Please fill in the corresponding circle next to your response (e.g. ●) or circle the entire word (e.g. Excellent). Any question that does not apply to you, please leave it blank and go on to the next question.

Q1. In recommending this facility to your friends and family, how would you rate it overall?
①Poor ②Average ③Good ④Very Good ⑤Excellent

Q2. Overall, how would you rate the staff?
①Poor ②Average ③Good ④Very Good ⑤Excellent

Q3. How would you rate the care you received?
①Poor ②Average ③Good ④Very Good ⑤Excellent

Q4. How would you rate how well your discharge needs were met?
①Poor ②Average ③Good ④Very Good ⑤Excellent

Example 2. CoreQ long-stay resident using grid format

RESIDENT EXPERIENCE SURVEY

Please answer the questions in the survey about your stay at <Center Name>.
Mark the square next to your response. If a question does not apply to you, please leave it blank and go on to the next question.

	Poor	Average	Good	Very Good	Excellent
In recommending this facility to your friends and family, how would you rate it overall?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, how would you rate the staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How would you rate the care you receive?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Getting to the core of customer satisfaction in skilled nursing and assisted living.

Example 3. CoreQ long-stay family using grid format

FAMILY EXPERIENCE SURVEY
 Please answer the questions in the survey about your stay at <Center Name>.
 Mark the square next to your response. If a question does not apply to you, please leave it blank and go on to the next question.

The three questions below are part of a national initiative to ensure the quality of skilled nursing facilities.	Poor	Average	Good	Very Good	Excellent
In recommending this facility to your friends and family, how would you rate it overall?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, how would you rate the staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How would you rate the care your family member receives?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Example 4. CoreQ assisted living resident using grid format

RESIDENT EXPERIENCE SURVEY
 Please answer the questions in the survey about your stay at {CenterName}.
 Mark the square next to your response. If a question does not apply to you, please leave it blank and go on to the next question.

Please rate your satisfaction with each of the following:	Poor	Average	Good	Very Good	Excellent
In recommending this facility to your friends and family, how would you rate it overall?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, how would you rate the staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How would you rate the care you receive?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, how would you rate the food?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Example 5. CoreQ assisted living family examples using a grid format

FAMILY EXPERIENCE SURVEY
 Please answer the questions in the survey about your family member's stay at {CenterName}.
 Mark the square next to your response. If a question does not apply to you, please leave it blank and go on to the next question.

Please rate your satisfaction with each of the following:	Poor	Average	Good	Very Good	Excellent
In recommending this facility to your friends and family, how would you rate it overall?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, how would you rate the staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How would you rate the care your family member receives?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B: Development of questionnaire and measures

Measurement Development and Testing

Two large national corporations have pilot tested the questionnaire in approximately 250 centers; one for individuals discharged following rehabilitation and the other for long- stay residents and their family members (or person responsible for the resident). We evaluated multiple methods of calculating the measure and recommended the above approach based on the statistical evaluation and review by the CEC workgroup on satisfaction measure development.

The analyses conducted to arrive at this proposed outcome measure can be categorized in the following phases:

- 1) Develop the questionnaire
- 2) Validate the questionnaire
- 3) Develop the quality measures
- 4) Test and validate the proposed measures

1) Development of questionnaire

Focus groups with residents, family members and staff from both skilled nursing and assisted living were conducted. Existing customer satisfaction questionnaires were reviewed. This resulted in a questionnaire with approximately 25 questions using a 5 point Likert rating scale.

2) Validation of questionnaire

The draft questionnaire was administered to over 25,000 skilled nursing, both short-term and long-stay residents, and assisted living residents across several organizations and states with approximately 10,000 responses. Dr. Castle and Dr. Matt O'Connor conducted extensive psychometric testing of all the responses. The results identified three core questions that were reliable and valid across skilled nursing and assisted living. There was one extra question about the discharge process for the short- stay discharges and one extra question for assisted living (see appendix A for the final validated questionnaires). These questions yielded the same information when aggregated together and summed at the center/community level as analyses using additional questions. Additional questions did not change a score or ranking. Additional questions did help identify areas needing improvement but from a quality measure's standpoint – added no additional information.

3) Development of quality measures

The workgroup tested different methods of summing the scores from the questions for each person and aggregating their responses to create a center/community score. All the methods were extremely highly correlated (0.85 to 0.95) and the relative ranking of center/communities to each other did not change between different methods; indicating that each method of calculating a center/community measure was statistically, nearly

identical. We elected to use the method most commonly used in skilled nursing and other health care settings that is familiar to most health care providers and policy makers. We calculated the percentage of respondents who were satisfied, defined as responses that were either 3, 4 or 5. This resulted in an overall score in the 80-90 range, similar to other measures of satisfaction currently in use.

4) Test and validate selected measure

The questionnaire was used in 280 centers in one corporation for all discharges home over a six month period and to 220 centers in another corporation to all long-stay residents and families. The results were calculated for each center and are being correlated with other quality measures such as hospital readmission rate and discharge to community, a requirement of the NQF submission process.