

Appendix A

QM/QI REPORTS TECHNICAL SPECIFICATIONS: VERSION 1.0

QM/QI Reports Technical Specifications: Version 1.0

Introduction

The measures contained on the Quality Measure/Indicator (QM/QI) Reports are calculated in two major steps. In the first step, two samples of assessments are selected: a chronic care sample and a post-acute care (PAC) sample. In the second step, logic is applied to the two samples of assessments to produce the chronic care and PAC measures. The purpose of this document is to describe the technical details that are involved in these two steps.

This document is divided into three major sections. The first section describes the logic that is used to calculate each of the measures on the QM/QI Reports. The second and third sections describe the criteria that are used to select the assessment records for the chronic care and post-acute care resident samples.

Calculation Logic

The table below¹ lists all of the measures that are on the QM/QI Reports and describes the logic that is used to calculate each measure. The table contains three columns:

- Measure description
- Measure specifications
- Covariates/Risk adjustment

The contents of these columns are described below.

Measure Description Column

- **Measure number.** Each measure is assigned a number that corresponds to the numbering in the QM/QI Reports.
- **Measure description.** This is a brief description of the measure.
- **Source.** The QM/QI Reports combine the publicly reported Quality Measures (QMs) and the CHSRA Quality Indicator (QI) measures. For QM measures, the “source” indicates “QM” and lists the abbreviation that has been assigned to the measure. For the QI measures, the “source” says QInn where “nn” is a number that corresponds to the measure’s number on the prior CHSRA QI reports. For example, “QI01” refers to QI #1.
- **QI Replaced.** Several CHSRA QI measures were replaced by corresponding QM measures. For these measures, a “QI Replaced” entry indicates the number for the QI measure that has been replaced.

¹ This table is based upon information presented in two documents: (1) *National Nursing Home Quality Measures User’s Manual, November, 2004 (v1.2)*, and (2) *Facility Guide for the Nursing Home Quality Indicators, September 28, 1999*.

Measure Specifications Column

- **Numerator.** The numerator entry gives the logic used to determine whether a resident triggers the QM (if the resident is included in the numerator for the QM rate in the facility).
- **Denominator.** The denominator entry defines whether a resident has the necessary records available to be a candidate for the QM (inclusion of the resident in the denominator for the QM rate for the facility).
- **Exclusions.** The exclusions entry provides clinical conditions and missing data conditions that preclude a resident from consideration for the QM. An excluded resident is excluded from both the numerator and denominator of the QM rate for the facility.
- **Technical comments.** These comments provide additional technical details pertaining to the QM numerator, denominator, and exclusions. Examples of the type of information provided include specific details for calculating scale scores, definition of missing data values for an MDS item, and selection of the value for an MDS item that may come from different assessments for a resident.

Covariates/Risk Adjustment Column

- **Covariates.** The “Covariates” entry defines the calculation logic for covariates. Covariates are always prevalence indicators with a value of 1 if the condition is present and a value of 0 if the condition is not present.
- **High Risk/Low Risk.** A “High Risk” entry defines the calculation logic for a resident who is high risk for the measure. A “Low Risk” entry defines a resident who is low risk.
- **Technical comments.** In some cases, technical comments are provided to define measures or scales that are used to calculate covariates or risk groups.

Notes regarding interpreting the specifications table

- The symbol [t] indicates a target assessment, and [t-1] indicates a prior assessment.
- An MDS item has missing data if that item has an “unable to determine” response (dash in the MDS record), if that item has been skipped (blank), or if that item is not active on the assessment.

Measure Description	Measure Specifications	Covariates/Risk Adjustment
Chronic Care Measures		
Accidents		
<p>1.1 Incidence of new fractures</p> <p>Source: QI01</p>	<p>Numerator: Residents with new fractures on target assessment. New fracture defined as:</p> <ol style="list-style-type: none"> 1. New hip fracture (J4c[t] is checked on target assessment and J4c[t-1] is not checked on prior assessment) <p><u>OR</u></p> <ol style="list-style-type: none"> 2. Other new fractures (J4d[t] is checked on target assessment and J4d[t-1] is not checked on prior assessment) <p>Denominator: All residents with a valid target assessment and a valid prior assessment who did not have fractures on the prior assessment (J4c[t-1] is not checked and J4d[t-1] is not checked).</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The measure did not trigger (resident not included in the numerator) and there is missing data on J4c or J4d on either the target or prior assessment (J4c[t], J4d[t], J4c[t-1], or J4d[t-1] is missing). 	
<p>1.2 Prevalence of falls</p> <p>Source: QI02</p>	<p>Numerator: Residents who had falls within the past 30 days (J4a is checked on the target assessment).</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. J4a has missing data on the target assessment. 	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
Behavior/Emotional Patterns		
<p>2.1 Residents who have become more depressed or anxious</p> <p>Source: QM CMOD03</p>	<p>Numerator: Residents whose Mood Scale scores are greater on target assessment relative to prior assessment (Mood Scale [t] > Mood Scale [t-1]). [The Mood Scale is defined in the Technical Comments.]</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The Mood Scale score is missing on the target assessment [t]. 2. The Mood Scale score is missing on the prior assessment [t-1] and the Mood Scale score indicates symptoms present on the target assessment (Mood Scale [t] > 0). 3. The Mood Scale score is at a maximum (value 8) on the prior assessment. 4. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. <p>Technical Comments</p> <p>Mood Scale Definition: Mood Scale score is defined as the count of the number of the following eight conditions that are satisfied (range 0 through 8) on the target assessment. The mood scale has a missing value if any of the MDS items in the following eight conditions has missing data.</p> <ol style="list-style-type: none"> 1. Any verbal expression of distress (E1a>0, E1c>0, E1e>0, E1f>0, E1g>0, or E1h>0). 2. Shows signs of crying, tearfulness (E1m>0). 3. Motor agitation (E1n>0). 4. Leaves food uneaten (K4c=checked) on target or last full assessment. The K4c value from the last full assessment is only considered if the target assessment is a quarterly assessment and the state quarterly assessment does not include K4c. 5. Repetitive health complaints (E1h>0). 	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
	6. Repetitive/recurrent verbalizations (E1a>0, E1c>0, or E1g>0). 7. Negative statements (E1a>0, E1e>0, or E1f>0). 8. Mood symptoms not easily altered (E2=2).	
<p>2.2 Prevalence of behavior symptoms affecting others</p> <p>2.2-HI High risk 2.2-LO Low risk</p> <p>Source: QI03</p>	<p>Numerator: Residents with behavioral symptoms affecting others on target assessment.</p> <p>Behavioral symptoms affecting others: Verbally abusive (E4bA >0); OR physically abusive (E4cA > 0); OR socially inappropriate /disruptive behavior (E4dA > 0).</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The measure did not trigger (resident not included in the numerator) and there is missing data on E4bA, E4cA, or E4dA. 3. The resident does not qualify as high risk and B2a, B4, I1ff or I1gg has missing data—i.e., the risk group is unknown. <p>Note: Three separate measures are defined: (1) for all residents (overall), (2) for residents defined as high risk, and (3) for residents defined as low risk. The only difference between the three measures is the denominator definition and use of exclusions as follows:</p> <p>Denominator for overall: All residents with a valid target assessment with only the first 2 exclusions applied.</p> <p>Denominator for high risk: All residents with a valid target assessment who are defined as high risk, with all 3 exclusions applied.</p> <p>Denominator for low risk: All residents with a valid target assessment who are defined as low risk, with all 3 exclusions applied.</p>	<p>High Risk:</p> <p>Presence of Cognitive Impairment (see technical note, below) on the target assessment.</p> <p>OR</p> <p>Psychotic disorders (I3a-I3e = ICD-9 295.**-295.**; 297.**-298.** or I1gg schizophrenia is checked) on the target assessment or on the most recent full assessment. The I3a-I3e values from both the target assessment and the last full assessment are always considered. The I1gg value from the last full assessment is only considered if the target assessment is a quarterly assessment and the state quarterly assessment does not include I1gg.</p> <p>OR</p> <p>Manic-depressive (I3 a-I3e =ICD-9 296.**-296.** or I1ff is checked) on the target assessment or on the most recent full assessment. The I3a-I3e values from both the target assessment and the last full assessment are always considered. The I1ff value from the last full assessment is only considered if the target assessment is a quarterly assessment and the state quarterly assessment does not include I1ff.</p> <p>Low Risk: All other residents that are not high risk.</p>

Measure Description	Measure Specifications	Covariates/Risk Adjustment
		<p>Technical Comments</p> <p>Cognitive Impairment Definition. Resident has impairment in daily decision making ability (B4 >0) and has short term memory problems (B2a=1).</p>
<p>2.3 Prevalence of symptoms of depression without antidepressant therapy</p> <p>Source: QI05</p>	<p>Numerator: Residents with symptoms of depression (see technical comments, below) and no antidepressant therapy (O4c=0) on the target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The measure did not trigger (resident not included in the numerator) and the following 2 conditions are both satisfied: (a) there is missing data on any of the following items: B1, E1a, E1g, E1j, E1n, E1o, E1p, E2, E4eA, K3a, N1a, N1b, N1c, N1d, or O4c and (b) the measure could have triggered if there had been no missing data. <p>Technical Comments</p> <p>Symptoms of Depression Definition. Sad mood (E2 = 1 or 2) and at least 2 of the following other symptoms of functional depression:</p> <ol style="list-style-type: none"> 1. Symptom 1 distress (E1a = 1 or 2: resident made negative statements); 2. Symptom 2 agitation or withdrawal (E1n = 1 or 2: repetitive physical movements, or E4eA = 1, 2, or 3: resists care, or E1o = 1 or 2: withdrawal from activity, or E1p = 1 or 2: reduced social activity); 3. Symptom 3 wake with unpleasant mood (E1j = 1 or 2), or not awake most of the day (N1d is checked), or awake 1 period of the day or less and not comatose (N1a+N1b +N1c <= 1 and 	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
	B1 = 0); 4. Symptom 4 suicidal or has recurrent thoughts of death (E1g = 1 or 2); 5. Symptom 5 weight loss (K3a = 1).	
Clinical Management		
3.1 Use of 9 or more different medications Source: QI06	Numerator: Residents who received 9 or more different medications on target assessment: O1 (number of medications) >= 9. Denominator: All residents with a valid target assessment. Exclusions: Residents satisfying any of the following conditions: 1. The target assessment is an admission (AA8a = 01) assessment. 2. O1 has missing data on the target assessment.	
Cognitive Patterns		
4.1 Incidence of cognitive impairment Source: QI07	Numerator: Residents who were cognitively impaired on the target assessment and who were not cognitively impaired on the prior assessment (see technical comment below for definition of cognitive impairment). Denominator: Residents with a valid target assessment and a valid prior assessment who were not cognitively impaired on the prior assessment. Exclusions: Residents satisfying the following condition: 1. The measure did not trigger (resident not included in the numerator) and there is missing data on B4 or B2a on target or prior assessment (B4[t], B2a[t], B4[t-1], or B2a[t-1] is missing). Technical Comments Cognitive Impairment Definition. Resident has any impairment in daily decision making ability (B4 >0) and has short term memory problems (B2a=1).	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
Elimination/Incontinence		
<p>5.1 Low-risk residents who lost control of their bowels or bladder</p> <p>Source: QM CCNT06</p> <p>QI Replaced: QI08 Low Risk</p>	<p>Numerator: Residents who were frequently incontinent or fully incontinent on the target assessment (H1a = 3 or 4, or H1b = 3 or 4).</p> <p>Denominator: All residents with a valid target assessment and not qualifying as high risk.</p> <p>Exclusions:</p> <ol style="list-style-type: none"> 1. Residents who qualify as high risk are excluded from the denominator: <ol style="list-style-type: none"> a. Severe cognitive impairment on the target assessment as indicated by B4 = 3 AND B2a = 1; OR b. Totally dependent in mobility ADLs on the target assessment: G1aA = 4 or 8 AND G1bA = 4 or 8 AND G1eA = 4 or 8. 2. Residents satisfying any of the following conditions are also excluded from the risk group: <ol style="list-style-type: none"> a. The target assessment is an admission (AA8a = 01) assessment. b. The QM did not trigger (resident is not included in the QM numerator) AND the value of H1a or H1b is missing on the target assessment. c. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. d. The resident has an indwelling catheter (H3d = checked) or indwelling catheter status is unknown (H3d = missing) on the target assessment. e. The resident has an ostomy (H3i = checked) or ostomy status is unknown (H3i = missing) on the target assessment. f. The resident does not qualify as high risk and either of the cognitive impairment items (B2a or B4) are missing on the target assessment. 	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
	<p>g. The resident does not qualify as high risk and any of the mobility ADLs (G1aA, G1bA and G1eA) is missing on the target assessment.</p>	
<p>5.2 Residents who have/had a catheter inserted and left in their bladder</p> <p>Source: QM CCAT02</p> <p>QI Replaced: QI10</p>	<p>Numerator: Residents with indwelling catheters on target assessment (H3d = checked).</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. H3d is missing on the target assessment. 	<p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of bowel incontinence on the prior assessment: <p style="margin-left: 40px;">Covariate = 1 if H1a = 4 Covariate = 0 if H1a = 0,1,2, or 3</p> 2. Indicator of pressure sores on the prior assessment: <p style="margin-left: 40px;">Covariate = 1 if M2a = 3 or 4 Covariate = 0 if M2a = 0, 1 or 2</p>
<p>5.3 Prevalence of occasional or frequent bladder or bowel incontinence without a toileting plan</p> <p>Source: QI09</p>	<p>Numerator: Residents with no scheduled toileting plan and no bladder retraining program (neither H3a nor H3b is checked) on the target assessment and either or both of the following conditions on the target assessment:</p> <ol style="list-style-type: none"> 1. Occasional or frequent bladder incontinence (H1b = 2 or 3), OR 2. Bowel incontinence (H1a = 2 or 3). <p>Denominator: Residents with frequent incontinence or occasionally incontinent in either bladder (H1b = 2 or 3) or bowel (H1a = 2 or 3) on target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The measure did not trigger (resident not included in the numerator) and there is missing data on any of the following: H3a, H3b, H1a, H1b. 	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
<p>5.4 Prevalence of fecal impaction</p> <p>Source: QI11</p>	<p>Numerator: Residents with fecal impaction (H2d is checked) on the most recent assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. H2d is missing on the target assessment. 	
Infection Control		
<p>6.1 Residents with a urinary tract infection</p> <p>Source: QM CCNT04</p> <p>QI Replaced: QI12</p>	<p>Numerator: Residents with urinary tract infection on target assessment (I2j = checked).</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. I2j is missing on the target assessment. 	
Nutrition/Eating		
<p>7.1 Residents who lose too much weight</p> <p>Source: QM CWLS01</p> <p>QI Replaced: QI13</p>	<p>Numerator: Residents who have experienced weight loss (K3a=1) of 5 percent or more in the last 30 days or 10 percent or more in the last 6 months.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. K3a is missing on the target assessment. 3. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. The P1ao value from the last full assessment is only considered if the target assessment is a quarterly assessment and the state quarterly assessment does not include P1ao. 	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
<p>7.2 Prevalence of tube feeding</p> <p>Source: QI14</p>	<p>Numerator: Residents with tube feeding (K5b is checked) on target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. K5b is missing on the target assessment. 	
<p>7.3 Prevalence of dehydration</p> <p>Source: QI15</p>	<p>Numerator: Residents with dehydration: output exceeds input (J1c is checked) on the target assessment or I3a-I3e = ICD-9 276.5 on the target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. J1c is missing on the target assessment. 	
Pain Management		
<p>8.1 Residents who have moderate to severe pain</p> <p>Source: QM CPAI0X</p>	<p>Numerator: Residents with moderate pain at least daily (J2a=2 AND J2b=2) OR horrible/excruciating pain at any frequency (J2b=3) on the target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. Either J2a or J2b is missing on the target assessment. 3. The values of J2a and J2b are inconsistent on the target assessment. J2a and J2b are inconsistent if either (a) J2a = 0 and J2b is not blank, or (b) J2a >0 and J2b = blank. 	<p>Covariates:</p> <p>1. Indicator of independence or modified independence in daily decision making on the prior assessment:</p> <p style="padding-left: 40px;">Covariate = 1 if B4 = 0 or 1. Covariate = 0 if B4 = 2 or 3.</p>

Measure Description	Measure Specifications	Covariates/Risk Adjustment
Physical Functioning		
<p>9.1 Residents whose need for help with daily activities has increased</p> <p>Source: QM CADL01</p> <p>QI Replaced: QI17</p>	<p>Numerator: Residents with worsening (increasing MDS item score) in Late-Loss ADL self performance at target relative to prior assessment. Residents meet the definition of Late-Loss ADL worsening when at least two of the following are true:</p> <ol style="list-style-type: none"> 1. Bed mobility – [Level at target assessment (G1aA[t]) – [Level at previous assessment (G1aA[t-1])] > 0, or 2. Transfer - [Level at target assessment (G1bA[t]) – [Level at previous assessment (G1bA[t-1])] > 0, or 3. Eating - [Level at target assessment (G1hA[t]) – [Level at previous assessment (G1hA[t-1])] > 0, or 4. Toileting - [Level at target assessment (G1iA[t]) – [Level at previous assessment (G1iA[t-1])] > 0, <p>OR at least one of the following is true:</p> <ol style="list-style-type: none"> 1. Bed mobility – [Level at target assessment (G1aA[t]) – [Level at previous assessment (G1aA[t-1])] > 1, or 2. Transfer - [Level at target assessment (G1bA[t]) – [Level at previous assessment (G1bA[t-1])] > 1, or 3. Eating - [Level at target assessment (G1hA[t]) – [Level at previous assessment (G1hA[t-1])] > 1, or 4. Toileting - [Level at target assessment (G1iA[t]) – [Level at previous assessment (G1iA[t-1])] > 1. <p>Denominator: All residents with a valid target and a valid prior assessment.</p> <p>Exclusions: Residents meeting any of the following conditions:</p> <ol style="list-style-type: none"> 1. None of the four Late-Loss ADLs (G1aA, G1bA, G1hA, and G1iA) can show decline because each of the four have a value of 4 (total dependence) or a value of 8 (activity did not occur) on the prior assessment [t-1]. 2. The QM did not trigger (resident not included in the numerator) AND there is missing data on any one of the four Late-Loss ADLs 	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
	<p>(G1aA), G1bA, G1hA, or G1iA) on the target assessment [t] or prior assessment [t-1].</p> <ol style="list-style-type: none"> 3. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. 4. The resident has end-stage disease (J5c = checked) or end-stage disease status unknown (J5c = missing) on the target assessment. 5. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. The P1ao value from the last full assessment is only considered if the target assessment is a quarterly assessment and the state quarterly assessment does not include P1ao. 	
<p>9.2 Residents who spend most of their time in a bed or in a chair</p> <p>Source: QM CBFT01</p> <p>QI Replaced: QI16</p>	<p>Numerator: Residents who are bedfast (G6a is checked) on target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents meeting any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. G6a is missing on the target assessment. 3. The resident is comatose (B1=1), or comatose status is unknown (B1= missing) on the target assessment. 	
<p>9.3 Residents whose ability to move in and around their room got worse</p> <p>Source: QM CMOB01</p>	<p>Numerator: Residents whose value for locomotion self performance is greater at target relative to prior assessment ($G1eA[t] > G1eA[t-1]$).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The G1eA value is missing on the target assessment [t]. 2. The G1eA value is missing on the prior assessment [t-1] and the G1eA value shows some dependence on the target assessment ($G1eA[t] > 0$). 3. The G1eA value on the prior assessment is 4 (total dependence) 	<p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of recent falls on the prior assessment: Covariate = 1 if J4a checked or J4b checked Covariate = 0 if J4a not checked AND J4b not checked 2. Indicator of extensive support or more dependence in eating on the prior assessment:

Measure Description	Measure Specifications	Covariates/Risk Adjustment
	<p>or 8 (activity did not occur).</p> <ol style="list-style-type: none"> 4. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. 5. The resident has end-stage disease (J5c = checked) or end-stage disease status is unknown (J5c = missing) on the target assessment. 6. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. The P1ao value from the last full assessment is only considered if the target assessment is a quarterly assessment and the state quarterly assessment does not include P1ao. 	<p>Covariate = 1 if G1hA = 3,4, or 8 Covariate = 0 if G1hA = 0,1, or 2</p> <ol style="list-style-type: none"> 3. Indicator of extensive support or more dependence in toileting on the prior assessment: Covariate = 1 if G1iA = 3,4, or 8 Covariate = 0 if G1iA = 0,1, or 2
<p>9.4 Incidence of decline in ROM</p> <p>Source: QI18</p>	<p>Numerator: Residents with increases in functional limitation in ROM between prior and target assessments. Functional limitation in ROM is defined as the sum of items G4aA through G4f A: G4aA + G4bA + G4cA + G4dA + G4eA + G4fA, as follows:</p> <p style="padding-left: 40px;">SUM(G4aA..G4fA)[t] = functional limitation in ROM on target assessment, and</p> <p style="padding-left: 40px;">SUM(G4aA..G4fA)[t-1] = functional limitation in ROM on prior assessment.</p> <p>Resident triggers if:</p> <p style="padding-left: 40px;">SUM(G4aA..G4fA)[t] > SUM(G4aA..G4fA)[t-1]</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. Residents with maximal loss of ROM on prior assessment: SUM(G4aA..G4fA)[t-1]=12. 2. Residents with missing data on either the target or prior assessment on any of the following items: G4aA, G4bA, G4cA, G4dA, G4eA, or G4fA. 	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
Psychotropic Drug Use		
<p>10.1 Prevalence of antipsychotic use, in the absence of psychotic or related conditions</p> <p>10.1-HI High risk 10.1-LO Low risk</p> <p>Source: QI19</p>	<p>Numerator: Residents receiving anti-psychotics (O4a >= 1) on target assessment</p> <p>Denominator: All residents on target assessment, except those with psychotic or related conditions (see exclusion).</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. Residents with one or more of the following psychotic or related conditions on the target assessment or on the most recent full assessment. The I3a-I3e values from both the target assessment and the last full assessment are always considered. The I1gg value from the last full assessment is only considered if the target assessment is a quarterly assessment and the state quarterly assessment does not include I1gg. <ol style="list-style-type: none"> a. I3a-I3e ICD-9 = 295.** - 295.**; 297.** - 298.**, or b. I1gg schizophrenia is checked, or c. Tourette's (I3a-I3e ICD-9 =307.23), or d. Huntington's (I3a-I3e ICD-9 =333.4 or 333.40). 3. Residents with hallucinations (J1i is checked) on the target assessment. 4. Residents who do not trigger the measure (are not included in the numerator) and who have missing data on any of the following items: O4a, I1gg, or J1i. 5. Residents who are not high risk and the following 2 conditions are both satisfied: (a) there is missing data on any of the following items: B2a, B4, E4bA, E4cA, or E4dA and (b) high risk could have resulted if there had been no missing data. <p>Note: Three separate measures are defined, one for all residents (overall), one for residents defined as high risk, and one for residents defined as low risk. The only difference between the two measures is the denominator definition and use of exclusions as follows:</p> <p>Denominator for overall: All residents with a valid target assessment except those with psychotic or related conditions,</p>	<p>High risk: Cognitive Impairment AND Behavior Problems on target assessment (see technical comments below for definitions).</p> <p>Low Risk: All other residents that are not high risk.</p> <p>Technical Comments</p> <p>Cognitive impairment definition. Any impairment in daily decision making ability (B4 >0) AND has short term memory problems (B2a=1).</p> <p>Behavior problems definition. Behavior problems defined as one or more of the following less than daily or daily: verbally abusive (E4bA > 0), physically abusive (E4cA > 0), or socially inappropriate/disruptive behavior (E4dA > 0).</p>

Measure Description	Measure Specifications	Covariates/Risk Adjustment
	<p>with only the first 4 exclusions applied.</p> <p>Denominator for high risk: All residents with a valid target assessment who are defined as high risk except those with psychotic or related conditions, with all 5 exclusions applied.</p> <p>Denominator for low risk: All residents with a valid target assessment who are defined as low risk except those with psychotic or related conditions, with all 5 exclusions applied.</p>	
<p>10.2 Prevalence of antianxiety/hypnotic use</p> <p>Source: QI20</p>	<p>Numerator: Residents who received antianxiety or hypnotics (O4b or O4d >= 1) on target assessment.</p> <p>Denominator: All residents on target assessment, except those with psychotic or related conditions (see exclusion).</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. Residents with one or more of the following psychotic disorders on the target assessment or on the most recent full assessment. The I3a-I3e values from both the target assessment and the last full assessment are always considered. The I1gg value from the last full assessment is only considered if the target assessment is a quarterly assessment and the state quarterly assessment does not include I1gg. <ol style="list-style-type: none"> a. I3a-I3e ICD-9 = 295.** - 295.**; 297.** - 298.** , or b. I1gg schizophrenia is checked, or c. Tourette's (I3a-I3e ICD-9 =307.23), or d. Huntington's (I3a-I3e ICD-9 =333.4 or 333.40) 3. Residents with hallucinations (J1i is checked) on the target assessment. 4. Residents who do not trigger the measure (are not included in the numerator) and who have missing data on any of the following items: O4b, O4d, I1gg, or J1i. 	
<p>10.3 Prevalence of</p>	<p>Numerator: Residents who received hypnotics more than 2 times in last</p>	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
<p>hypnotic use more than two times in last week</p> <p>Source: QI21</p>	<p>week (O4d > 2) on the target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. O4d is missing on the target assessment. 	
Quality of Life		
<p>11.1 Residents who were physically restrained</p> <p>Source: QM CRES01</p> <p>QI Replaced: QI22</p>	<p>Numerator: Residents who were physically restrained daily (P4c or P4d or P4e = 2) on target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The QM did not trigger (resident is not included in the QM numerator) AND the value of P4c or P4d or P4e is missing on the target assessment. 	
<p>11.2 Prevalence of little or no activity</p> <p>Source: QI23</p>	<p>Numerator: Residents with little or no activity (N2 = 2 or 3) on the target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The resident is comatose (B1=1). 3. N2 or B1 is missing on the target assessment. 	
Skin Care		
<p>12.1 High-risk residents</p>	<p>Numerator: Residents with pressure sores (Stage 1-4) on target</p>	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
<p>with pressure ulcers</p> <p>Source: QM CPRU02</p> <p>QI Replaced: QI24 High Risk</p>	<p>assessment (M2a >0 OR I3a-I3e = ICD-9 707.0*) who are defined as high risk (see denominator definition).</p> <p>Denominator: All residents with a valid target assessment and any one of the following high-risk criteria:</p> <ol style="list-style-type: none"> 1. Impaired in bed mobility or transfer on the target assessment as indicated by G1aA = 3, 4, or 8 OR G1bA = 3, 4, or 8. 2. Comatose on the target assessment as indicated by B1 = 1. 3. Suffer malnutrition on the target assessment as indicated by I3a through I3e = 260, 261, 262, 263.0, 263.1, 263.2, 263.8, or 263.9. <p>Exclusions: Residents satisfying any of the following conditions are excluded:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The QM did not trigger (resident is not included in the QM numerator) AND the value of M2a is missing on the target assessment. 	
<p>12.2 Low-risk residents with pressure ulcers</p> <p>Source: QM CPRU03</p> <p>QI Replaced: QI24 Low Risk</p>	<p>Numerator: Residents with pressure sores (Stage 1-4) on target assessment (M2a >0 OR I3a-I3e = ICD-9 707.0*) who are defined as low risk (see denominator definition).</p> <p>Denominator: All residents with a valid target assessment who are defined as low risk. "Low risk" residents are those who do not qualify as high risk as defined in denominator definition for measure 12.1 above.</p> <p>Exclusions: Residents satisfying any of the following conditions are excluded from all risk groups (high and low):</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The QM did not trigger (resident is not included in the QM numerator) AND the value of M2a is missing on the target assessment. 3. The resident does not qualify as high-risk AND the value of G1aA or G1bA is missing on the target assessment. 4. The resident does not qualify as high-risk AND the value of B1 is 	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
	missing on the target assessment.	
Post-Acute Care (PAC) Measures		
<p>13.1 Short-stay residents with delirium</p> <p>Source: QM PAC-DEL0X</p>	<p>Numerator: Short-stay residents at SNF PPS 14-day assessment with at least one symptom of delirium that represents a departure from usual functioning (at least one B5a through B5f = 2).</p> <p>Denominator: All patients with a valid SNF PPS 14-day assessment (AA8b = 7).</p> <p>Exclusions: Patients satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. Patients who are comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the SNF PPS 14-day assessment. 2. Patients with end-stage disease (J5c = checked) or end-stage disease status is unknown (J5c = missing) on the SNF PPS 14-day assessment. 3. Patients who are receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the SNF PPS 14-day assessment. 4. The QM did not trigger (patient not included in the numerator) AND there is a missing value on any of the items B5a through B5f on the SNF PPS 14-day assessment. 	<p>Covariates:</p> <p>1. Indicator of NO prior residential history preceding the current SNF stay for the patient:</p> <p>Covariate = 1 if there is NO prior residential history indicated by the following condition being satisfied:</p> <ol style="list-style-type: none"> a. There is a recent admission assessment (AA8a = 01) AND AB5a through AB5e are not checked (value 0) and AB5f is checked (value 1). <p>Covariate = 0 if there is prior residential history indicated by either of the following conditions being satisfied:</p> <ol style="list-style-type: none"> a. There is a recent admission assessment (AA8a = 01) AND any of the items AB5a through AB5e are checked (value 1) OR AB5f is not checked (value 0). b. There is no recent admission assessment (AA8a = 01).
<p>13.2 Short-stay residents who had moderate to severe pain</p> <p>Source: QM PAC-PAI0X</p>	<p>Numerator: Short-stay residents at SNF PPS 14-day assessment with moderate pain at least daily (J2a = 2 and J2b = 2) OR horrible/excruciating pain at any frequency (J2b = 3).</p> <p>Denominator: All patients with valid SNF PPS 14-day assessment (AA8b = 7).</p> <p>Exclusions: Patients satisfying any of the following conditions:</p>	

Measure Description	Measure Specifications	Covariates/Risk Adjustment
	<ol style="list-style-type: none"> 1. Either J2a or J2b is missing on the 14-day assessment. 2. The values of J2a and J2b are inconsistent on the 14-day assessment. J2a and J2b are inconsistent if either (a) J2a = 0 and J2b is not blank, or (b) J2a >0 and J2b = blank. 	
<p>13.3 Short-stay residents with pressure ulcers</p> <p>Source: QM PAC-PRU0X</p>	<p>Numerator: Short-stay residents at SNF PPS 14-day assessment who satisfy either of the following conditions:</p> <ol style="list-style-type: none"> 1. On the SNF PPS 5-day assessment, the patient had no pressure sores ($M2a[t-1] = 0$) AND, on the SNF PPS 14-day assessment, the patient has at least a Stage 1 pressure sore ($M2a[t] = 1,2,3, \text{ or } 4$). 2. On the SNF PPS 5-day assessment, the patient had a pressure sore ($M2a[t-1] = 1,2,3, \text{ or } 4$) AND on the SNF PPS 14-day assessment, pressure sores worsened or failed to improve ($M2a[t] \geq M2a[t-1]$). <p>Denominator: All patients with a valid SNF PPS 14-day assessment ($AA8b = 7$) AND a valid preceding SNF PPS 5-day assessment ($AA8b = 1$).</p> <p>Exclusions: Patients satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. M2a is missing on the 14-day assessment [t]. 2. M2a is missing on the 5-day assessment [t-1] and M2a shows presence of pressure sores on the 14-day assessment ($M2a = 1,2,3, \text{ or } 4$). 	<p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of history of resolved pressure sore on the SNF PPS 5-day assessment: Covariate = 1 if M3 = 1 Covariate = 0 if M3 = 0 2. Indicator of requiring limited or more assistance in bed mobility on the SNF PPS 5-day assessment: Covariate = 1 if G1aA = 2,3,4, or 8 Covariate = 0 if G1aA = 0 or 1 3. Indicator of bowel incontinence at least one/week on the SNF PPS 5-day assessment: Covariate = 1 if H1a = 2,3, or 4 Covariate = 0 if H1a = 0 or 1 4. Indicator of diabetes or peripheral vascular disease on the SNF PPS 5-day assessment: Covariate = 1 if I1a checked (value 1) OR I1j checked (value 1) Covariate = 0 if I1a not checked (value 0) AND I1j not checked (value 0).

Measure Description	Measure Specifications	Covariates/Risk Adjustment
		<p>5. Indicator of Low Body Mass Index (BMI) on the SNF PPS 5- day assessment:</p> <p>Covariate = 1 if BMI \geq 12 AND \leq 19 Covariate = 0 if BMI $>$ 19 AND \leq 40</p> <p>Where: BMI = weight (kg)/height² (m²) = ((K2b*0.45)/(K2a*.0254)²)</p> <p>(Note: An implausible BMI value $<$12 or $>$40 will be treated as a missing value on this covariate.)</p>

Selection of the Chronic Care Sample

The chronic care measure calculation sample involves selection of residents with a target assessment in the target period. For a selected resident, three different assessment records are then selected: target assessment, prior assessment and most recent full assessment.

Assessment Selected		Chronic Care Measure Selection Specifications
Target Assessment	Selection period	The QM/QI reports use a default 6 month target period, however the user can change this period if desired.
	Qualifying Reasons for Assessment (AA8a/AA8b)	01/*, 02/*, 03/*, 04/*, 05/*, 10/* (* indicates any value accepted)
	Selection Logic	Latest assessment with qualifying reasons for assessment and assessment reference date (A3a) within selection period.
	Rationale	Select a normal (OBRA) assessment from the target quarter. Normal OBRA assessments that are coupled with a PPS assessment (item AA8b = 1,2,3,4,5,7, or 8) are still selected. Selection ignores whether an assessment is also a PPS assessment or not.
Prior Assessment	Selection period	46 to 165 days before the target assessment
	Qualifying Reasons for Assessment (AA8a/AA8b)	01/*, 02/*, 03/*, 04/*, 05/*, 10/* (* indicates any value accepted)
	Selection Logic	Latest assessment with qualifying reasons for assessment and assessment reference date (A3a) in the window of 46 days to 165 days preceding the target assessment reference date (A3a).
	Rationale	Select a normal (OBRA) assessment in the 4-month window ending 46 days before the target assessment. This window insures that the gap between the prior and target assessment will not be small (gaps of 45 days or less are excluded). A 4-month window is employed to allow sufficient time to find an OBRA assessment. OBRA assessments are required every 3 months. A grace month has been added to yield a window of 4 months to account for late assessments. In the last half of 2000, scheduled OBRA assessments were late about 8 percent of the time. A relative window based on the assessment reference date (A3a) of the target assessment is used to accommodate cases in which scheduled assessments are performed early or a significant change occurs. Normal OBRA assessments that are coupled with a PPS assessment (item AA8b = 1,2,3,4,5,7, or 8) are still selected. Selection ignores whether an assessment is also a PPS assessment or not.

Assessment Selected		Chronic Care Measure Selection Specifications
Most Recent Full Assessment	Selection period	Most recent 18.5 months preceding target assessment
	Qualifying Reasons for Assessment (AA8a/AA8b)	01/*, 02/*, 03/*, 04/* (* indicates any value accepted)
	Selection Logic	Latest assessment with qualifying reasons for assessment and assessment reference date (A3a) in the 18.5-month (or 562- day) period preceding the target assessment reference date (A3a).
	Rationale	<p>Select a normal (OBRA) full assessment.</p> <p>Normal OBRA full assessments that are coupled with a PPS assessment (item AA8b = 1,2,3,4,5,7, or 8) are still selected. Selection ignores whether a full assessment is also a PPS assessment or not.</p> <p>If the target assessment is a quarterly assessment, it will at times be necessary to carry -forward items (not available on the quarterly assessment) from the most recent full assessment to that target assessment. The most recent full assessment will be used to carry forward values to a target quarterly assessment, but only if the most recent full assessment is in the 395 day period (approximately 13 months) preceding the target assessment reference date (A3a). A 13-month look-back period is employed to allow sufficient time to find an earlier OBRA full assessment. OBRA full assessments are required every 12 months. A grace month has been added to yield a look-back period of 13 months to account for late full assessments.</p> <p>If the prior assessment is a quarterly assessment, it will at times be necessary to carry -forward items (not available on the quarterly assessment) from the most recent full assessment to that prior assessment. The most recent full assessment will be used to carry forward values to a prior quarterly assessment, but only if the most recent full assessment is in the 395 day period (approximately 13 months) preceding the prior assessment reference date (A3a). A 13-month look-back period is employed to allow sufficient time to find an earlier OBRA full assessment. OBRA full assessments are required every 12 months. A grace month has been added to yield a look-back period of 13 months to account for late full assessments.</p>

Selection of the Post-acute Care Sample

The post-acute measure calculation sample involves selection of residents with a 14-day SNF PPS assessment in the target period. If a resident has more than one 14-day assessment in the target period, then the latest 14-day assessment is selected. The appropriate 5-day assessment preceding the 14-day assessment is also selected, if available. One additional record is also selected, that record being the most recent admission assessment on the same date or before the selected 14-day assessment.

Assessment Selected		Post-acute Care Measure Selection Specifications
14-Day PPS Assessment	Selection period	The QM/QI reports use a default 6 month target period, however the user can change this period if desired.
	Qualifying Reasons for Assessment (AA8a/AA8b)	*/7 (*indicates any value accepted)
	Selection Logic	Select the latest 14-day assessment (*/7) with assessment reference date (A3a) in the selection period
	Rationale	If there are multiple qualifying assessments, the latest assessment is selected.
5-Day PPS Assessment	Selection period	The interval from 3 to 18 days before the selected 14-day assessment.
	Qualifying Reasons for Assessment (AA8a/AA8b)	*/1 (* indicates any value accepted)
	Selection Logic	Latest 5-day assessment with assessment reference date A3a) in the selection period for the same resident and facility.
	Rationale	Select a 5-day assessment (AA8b = 1) in the selection window preceding the selected 14-day assessment. The selection window (3 to 18 days prior to the 14-day assessment) allows for the 5-day to be completed on day 1 through day 8 of the stay and the 14-day to be completed on day 11 through 19 of the stay, according to the SNF PPS assessment requirements. These requirements indicate that the gap between the 2 assessments should have a minimum of 3 and a maximum of 18 days. If there is more than one qualifying 5-day assessment in the selection window, then select the latest one.
Recent MDS Admission Assessment	Selection period	50-day period ending with the date of the selected 14-day assessment.
	Qualifying Reasons for Assessment (AA8a/AA8b)	01/* (* indicates any value accepted)
	Selection Logic	Select the latest admission assessment with assessment reference date (A3a) in the selection period.

Assessment Selected		Post-acute Care Measure Selection Specifications
	Rationale	<p>This admission assessment is needed to capture the facesheet item AB5 (prior institutional history). The facesheet must be completed on an admission assessment. If no facesheet record is found in the selection period, then assume that AB5a = 1, indicating residence in this facility prior to the SNF stay.</p> <p>The selection period allows sufficient look back to encounter a new resident's admission associated with the SNF covered stay. A SNF covered stay must begin within 30 days of the end of a qualifying hospitalization and the 14-day assessment must be performed by day 19 of the stay. This yields a look back period of 30 days plus 19 days, and this was rounded up 1 day to 50.</p>