Outline

- Review Changes that CMS is making effective July 19th, 2012 to
  - Nursing Home Compare
  - Five STAR
  - New Quality Measures (detail specifications provided but not covered in today’s presentation)
Nursing Home Compare

New Version July 19th will include:

- Statement of Deficiencies (i.e., survey results; copy of form 2567)
- Physical Therapist staffing levels
- Ownership
- New Quality Measures
  - Plus antipsychotic measures

Statement of Deficiencies

- CMS will post the full text from Form 2567 reports
- Reports from calendar year 2011 will be posted initially, with new reports added as they become available until three years of reports are posted, matching the three years for which summary information on health inspection results are reported
- Reports will be de-identified to remove references to potentially identifiable information (e.g., gender, age, race, less common medication names and medical conditions, room number)
- Facility’s plans of correction will not be posted
# Statement of Deficiencies

<table>
<thead>
<tr>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brookview</td>
<td>123 Brook Rd, City, St, zip</td>
</tr>
<tr>
<td>Streamview</td>
<td>123 Stream Rd, City, St, zip</td>
</tr>
<tr>
<td>Riverview</td>
<td>123 Pond Rd, City, St, zip</td>
</tr>
<tr>
<td>Overall Rating</td>
<td>★★★★★ Much Below Average</td>
</tr>
<tr>
<td>Health Inspection Rating</td>
<td>★★★★★ Average</td>
</tr>
<tr>
<td>Total Number of Health Deficiencies</td>
<td>15</td>
</tr>
<tr>
<td>Date of Last Standard Health Inspection</td>
<td>03/04/2011</td>
</tr>
<tr>
<td>Average Number of Health Deficiencies in Virginia</td>
<td>15</td>
</tr>
<tr>
<td>Health Inspection Details</td>
<td>Health Inspection Details</td>
</tr>
<tr>
<td>Number of Complaints</td>
<td>12</td>
</tr>
</tbody>
</table>

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# Form 2567 Report on Nursing Home Compare

**Survey Report**

[Survey Report Preview]
Physical Therapist Staffing Levels

CMS will report physical therapist hours per resident day

- Based on data from Form 671
- Data will not be reported for extreme outliers
  - Top 1% in terms of therapist staffing levels; or
  - Facilities with large changes in therapist hours over time
- Does not include physical therapy aides
- No case-mix adjustment
Ownership (starting in Oct 2012)

- Name of the owner of the nursing home
  - Data source is the CMS Provider Enrollment, Chain and Ownership System (PECOS) (form 855A)
  - Information on ownership type and chain status will continue to be reported
- Nursing facilities will be required to report additional ownership information in the future but not yet specified

New Quality Measures

- CMS will begin to report quality measures based on MDS 3.0 assessments
  - These will replace the MDS 2.0-based quality measures currently posted on Nursing Home Compare
  - Facilities can view their new QM scores through the provider previews on QIES system
- CMS will use a subset of these measures for the five-star system
SHORT Stay Measures (6)

- % with decrease in pain
- % who had moderate/severe pain*
- % new or worsening pressure ulcer*
- % received influenza vaccine
- % assessed or given pneumococcal vaccine
- % who have antipsychotic started

* Used in Five Star

SHORT Stay Measures (Nat Avg)

<table>
<thead>
<tr>
<th></th>
<th>Q4 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease in pain</td>
<td>63%</td>
</tr>
<tr>
<td>Moderate/severe pain</td>
<td>23%</td>
</tr>
<tr>
<td>New/worsening PU</td>
<td>2%</td>
</tr>
<tr>
<td>Influenza vaccine</td>
<td>81%</td>
</tr>
<tr>
<td>Pneumococcal vaccine</td>
<td>81%</td>
</tr>
<tr>
<td>Antipsychotic meds</td>
<td>3%</td>
</tr>
</tbody>
</table>
LONG Stay Measures (13)

- % who had moderate/severe pain*
- % with pressure ulcer among high-risk residents*
- % who had UTI*
- % who lose control of bowel or bladder among low risk residents
- % who had catheter inserted & left in their bladder*
- % who with one or more falls with major injury*
- % who physically restrained*
- % who lose too much weight
- % who need help with daily activities has increased*
- % who are more depressed or anxious
- % received influenza vaccine
- % assessed or given pneumococcal vaccine
- % who receive an antipsychotic

* Using in Five Star

LONG Stay Measures (Nat Avg)

<table>
<thead>
<tr>
<th></th>
<th>Q4 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls with injury</td>
<td>3%</td>
</tr>
<tr>
<td>Moderate/severe pain</td>
<td>13%</td>
</tr>
<tr>
<td>Pressure Ulcers</td>
<td>7%</td>
</tr>
<tr>
<td>Influenza vaccine</td>
<td>91%</td>
</tr>
<tr>
<td>Pneumococcal vaccine</td>
<td>94%</td>
</tr>
<tr>
<td>Restrained</td>
<td>2%</td>
</tr>
<tr>
<td>Weight Loss</td>
<td>7%</td>
</tr>
</tbody>
</table>
LONG Stay Measures (Nat Avg)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Q4 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary tract infection</td>
<td>8%</td>
</tr>
<tr>
<td>Incontinence</td>
<td>42%</td>
</tr>
<tr>
<td>Indwelling Catheter</td>
<td>4%</td>
</tr>
<tr>
<td>ADL assistance</td>
<td>17%</td>
</tr>
<tr>
<td>Depressed</td>
<td>7%</td>
</tr>
<tr>
<td>Antipsychotic Meds</td>
<td>24%</td>
</tr>
</tbody>
</table>

Display of new quality measures

- The Percentage of Residents who Self-Report Moderate to Severe Pain
  - Brookview: 80%
  - Streamview: 90%
  - Riverview: 40%
  - National Average: 80%
  - Virginia Average: 60%

- The Percentage of Residents with Pressure Ulcers that are New or Worsened

- The Percentage of Residents on a Scheduled Pain Medication Regimen on Admission
  - Who Report a Decrease in Pain Intensity or Frequency

- The Percentage of Residents Assessed and Given, Appropriately, the Seasonal Influenza Vaccine

Changes to CMS Five Star

Continue to use three domains
- Survey Results (no change)
- Staffing
  - new regression model results in new risk adjusted cut point
- Quality Measures
  - 9 new measures
  - new scoring methodology with fixed cut offs

Staffing rating uses risk adjusted model

- Staffing ratings in the Five-Star system has always been risk adjusted for case-mix differences
- Case-mix adjusted staffing levels have always been calculated for each provider based on how their reported staffing levels compare to expected staffing
  - Expected staffing levels are based on the distribution of residents within each RUG-III group and measures of nurse staffing levels that are associated with each RUG-III group that was developed from CMS Staff Time Measurement Studies
- The observed to expected ratio is multiplied by the national average to give you your risk adjusted staffing level
New National Average for Five STAR

<table>
<thead>
<tr>
<th>National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Care Staff: 4.0309</td>
</tr>
<tr>
<td>RN staff: 0.7472</td>
</tr>
</tbody>
</table>

Risk Adjusted Staffing = (Observed/Expected) * Nat Avg

Brookview
- Observed staffing = 3.82 hrs per day
- Expected staffing = 3.79 hrs per day
- National average = 4.03 hrs per day

\[
\text{Observed/Expected} = \frac{3.92}{3.79} = 1.0077
\]
\[
[\text{Obs/Exp}] \times \text{Nat Avg} = 1.0077 \times 4.0309 = 4.062
\]

Brookview = 4.062 nursing hrs per day reported in Five Star
Needed new risk adjustment model

- Transition to MDS 3.0 requires new calculations to derive RUG-III groups since differences between MDS 2.0 and MDS 3.0 affect MDS items that are used in calculating RUG-III categories.
- These changes will result in new expected staffing levels even though there are no real changes in resident case mix.
- Therefore the cut points needed to be changed to minimize the impact of the MDS 3.0 transition on the overall distribution of ratings and any individual facility rating.

New Risk Adjusted Staffing Cut Points

Table 4
National Star Cut points for Staffing Measures (updated April 2012)

<table>
<thead>
<tr>
<th>Staff type</th>
<th>1 star</th>
<th>2 stars lower</th>
<th>2 stars upper</th>
<th>3 stars lower</th>
<th>3 stars upper</th>
<th>4 stars lower</th>
<th>4 stars upper</th>
<th>5 stars</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN</td>
<td>&lt; 0.283</td>
<td>&gt;=0.283</td>
<td>&lt; 0.379</td>
<td>&gt;=0.379</td>
<td>&lt; 0.513</td>
<td>&gt;=0.513</td>
<td>&lt; 0.710</td>
<td>&gt;=0.710</td>
</tr>
</tbody>
</table>

Note: Adjusted staffing values are rounded to three decimal places before the cut points are applied.

NOTE: these new risk adjusted cut points while higher than before do NOT represent raising the bar. These new cut points are nearly equivalent operationally to the old cut points because the new risk adjustment results in higher risk adjusted values for each facility.
Comparing % of facilities receiving star rating between old vs new MDS case mix adjustment

<table>
<thead>
<tr>
<th>Staffing Rating</th>
<th>MDS 2.0</th>
<th>MDS 3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>13.1</td>
<td>13.4</td>
</tr>
<tr>
<td>**</td>
<td>16.8</td>
<td>16.1</td>
</tr>
<tr>
<td>***</td>
<td>21.0</td>
<td>20.6</td>
</tr>
<tr>
<td>****</td>
<td>39.7</td>
<td>40.8</td>
</tr>
<tr>
<td>*****</td>
<td>9.3</td>
<td>9.2</td>
</tr>
</tbody>
</table>

RN Staffing Rating

<table>
<thead>
<tr>
<th>Staffing Rating</th>
<th>MDS 2.0</th>
<th>MDS 3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>13.0</td>
<td>13.1</td>
</tr>
<tr>
<td>**</td>
<td>19.4</td>
<td>18.5</td>
</tr>
<tr>
<td>***</td>
<td>27.3</td>
<td>27.4</td>
</tr>
<tr>
<td>****</td>
<td>22.7</td>
<td>23.7</td>
</tr>
<tr>
<td>*****</td>
<td>17.6</td>
<td>17.2</td>
</tr>
</tbody>
</table>

Data are from March 2012.

# of Facilities with a change in their staffing rating comparing old vs new

<table>
<thead>
<tr>
<th>Differences in Staffing Rating</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Down 3 stars</td>
<td>7 (0.0)</td>
</tr>
<tr>
<td>Down 2 stars</td>
<td>133 (9.9)</td>
</tr>
<tr>
<td>Down 1 star</td>
<td>1,530 (10.2)</td>
</tr>
<tr>
<td>No change</td>
<td>11,633 (77.3)</td>
</tr>
<tr>
<td>Up 1 star</td>
<td>1,564 (10.4)</td>
</tr>
<tr>
<td>Up 2 stars</td>
<td>176 (1.2)</td>
</tr>
<tr>
<td>Up 3 stars</td>
<td>2 (0.0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Differences in RN Staffing Rating</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Down 4 stars</td>
<td>1 (0.0)</td>
</tr>
<tr>
<td>Down 2 stars</td>
<td>12 (0.1)</td>
</tr>
<tr>
<td>Down 1 star</td>
<td>1,494 (9.9)</td>
</tr>
<tr>
<td>No change</td>
<td>11,507 (79.1)</td>
</tr>
<tr>
<td>Up 1 star</td>
<td>1,630 (10.8)</td>
</tr>
<tr>
<td>Up 2 stars</td>
<td>1 (0.0)</td>
</tr>
</tbody>
</table>
Changes to Quality Measures in 5 Star

- **New Quality Measures**
  - 9 new measures based on MDS 3.0
  - Scoring sets fixed value for each quality measure to achieve each star rating
  - Each measure counts equal amount toward aggregate QM five star ranking

New Quality Measures used in 5 Star

- **SHORT stay Measures**
  - % who had moderate/severe pain
  - % new or worsening pressure ulcer

- **LONG Stay Measures**
  - % who had moderate/severe pain
  - % with pressure ulcer among high-risk residents
  - % who had UTI
  - % who had catheter inserted & left in their bladder
  - % who with one or more falls with major injury
  - % who physically restrained
  - % who need help with daily activities has increased
Changes to QM rating method in 5 Star

- For each measure, you receive between 1 to 100 points
- Facilities achieving the best possible score on the QM are assigned 100 points
- Remaining facilities are assigned 1 to 99 points, based on their national percentile ranking for each QM, for example,
  - Poorest 1% receive 1 point
  - Facilities with the median score (50th percentile) receive 50 points
  - Facilities in the top 1% scoring receive 99 points

For example, imagine there are 100 facilities each with a different QM score on the pressure ulcer QM
- The 100 facilities are ranked from highest to lowest
- First (highest) score is 1st percentile = 1 point
- Second highest score is the 2nd percentile = 2 points
- Third highest score is the 3rd percentile = 3 points
- etc
- The points are summed across all QMs to create a total score for each facility.
  - Total possible score ranges between 9 and 900 points
  - All of the 9 QMs are given equal weight
### Star Cut points for overall QM score

#### Table 7
**Star Cutpoints for MDS Quality Measure Summary Score (updated July 2012)**

<table>
<thead>
<tr>
<th>1 star</th>
<th>2 stars lower</th>
<th>2 stars upper</th>
<th>3 stars lower</th>
<th>3 stars upper</th>
<th>4 stars lower</th>
<th>4 stars upper</th>
<th>5 stars</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤355</td>
<td>356</td>
<td>435</td>
<td>436</td>
<td>507</td>
<td>508</td>
<td>615</td>
<td>≥616</td>
</tr>
</tbody>
</table>

Note: you need to be **on average** above the:
- 70th percentile on **all** 9 measures to achieve 5 Star
- 55th percentile on **all** 9 measures to achieve 4 Star

### QM values for percentile rankings

#### Percentile/Points

<table>
<thead>
<tr>
<th></th>
<th>50th</th>
<th>60th</th>
<th>70th</th>
<th>80th</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SHORT stay Measures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>moderate/severe pain</td>
<td>22.6</td>
<td>19.7</td>
<td>16.4</td>
<td>13.0</td>
</tr>
<tr>
<td>new/worse pressure ulcer</td>
<td>2.0</td>
<td>1.6</td>
<td>1.3</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>LONG Stay Measures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>moderate/severe pain</td>
<td>11.4</td>
<td>9.2</td>
<td>7.2</td>
<td>5.3</td>
</tr>
<tr>
<td>High-risk w/ pressure ulcer</td>
<td>6.5</td>
<td>5.5</td>
<td>4.6</td>
<td>3.6</td>
</tr>
<tr>
<td>UTI</td>
<td>7.3</td>
<td>6.1</td>
<td>4.9</td>
<td>3.6</td>
</tr>
<tr>
<td>Urinary catheter</td>
<td>4.0</td>
<td>3.4</td>
<td>2.7</td>
<td>2.1</td>
</tr>
<tr>
<td>falls with major injury</td>
<td>3.3</td>
<td>2.7</td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td>physically restrained</td>
<td>2.8</td>
<td>2.1</td>
<td>1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>ADL help increased</td>
<td>State based</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Example QM values & Five Star rating

<table>
<thead>
<tr>
<th>Percentile/Points</th>
<th>50th</th>
<th>60th</th>
<th>70th</th>
<th>80th</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHORT stay Measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>moderate/severe pain</td>
<td>22.6</td>
<td>19.7</td>
<td>16.4</td>
<td>13.0</td>
</tr>
<tr>
<td>new/worse pressure ulcer</td>
<td>2.0</td>
<td>1.6</td>
<td>1.3</td>
<td>0.9</td>
</tr>
<tr>
<td>LONG Stay Measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>moderate/severe pain</td>
<td>11.4</td>
<td>9.2</td>
<td>7.2</td>
<td>5.3</td>
</tr>
<tr>
<td>High-risk w/ pressure ulcer</td>
<td>6.5</td>
<td>5.3</td>
<td>4.6</td>
<td>3.6</td>
</tr>
<tr>
<td>UTI</td>
<td>7.3</td>
<td>5.1</td>
<td>4.9</td>
<td>3.6</td>
</tr>
<tr>
<td>Urinary catheter</td>
<td>4.0</td>
<td>3.4</td>
<td>2.7</td>
<td>2.1</td>
</tr>
<tr>
<td>falls with major injury</td>
<td>3.3</td>
<td>2.7</td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td>physically restrained</td>
<td>2.8</td>
<td>2.1</td>
<td>1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>ADL help increased</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State based (CA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sum Points = (60 + 80 + 60 + 70 + 50 + 60 + 80 + 80 + 70) = 610

Star Cut points for overall QM score

Table 7
Star Cutpoints for MDS Quality Measure Summary Score (updated July 2012)

<table>
<thead>
<tr>
<th>1 star</th>
<th>2 stars lower</th>
<th>2 stars upper</th>
<th>3 stars lower</th>
<th>3 stars upper</th>
<th>4 stars lower</th>
<th>4 stars upper</th>
<th>5 stars</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;355</td>
<td>356</td>
<td>435</td>
<td>436</td>
<td>507</td>
<td>508</td>
<td>615</td>
<td>≥616</td>
</tr>
</tbody>
</table>

Brookview = 610 points (4 stars)
Overview of Quality Measures

Measure Calculations

\[
\% = \frac{\text{Numerator}}{\text{Denominator}} = \frac{\# \text{ of persons with event or disease}}{\# \text{ of persons who are eligible or at risk of being in numerator}}
\]

Example

\[
\# \text{ of persons with pressure ulcer stage II, III or IV} \\
\# \text{ of persons who are long stay residents who are classified as high risk (e.g. impaired bed mobility or transferring, comatose, or malnourished)}
\]
### Understanding the Numerator

- Can ONLY include people from the denominator group
- Pay attention to how the event or disease is defined
  - eg. MDS questions 1 = rating of 3 or 4
- Use of word “AND” or “OR” have significant meaning
  - Eg. MDS question 1 = rating of 3 OR 4 OR question 2 = 1
  - eg MDS question 1 = 4 AND question 2 =1
  - Example,
    - Diabetes OR hypertension = people with either diagnosis
    - Diabetes AND hypertension = people only with both diagnoses

### Understanding the Denominator

- Exclusions ONLY apply to the denominator
  - Most of exclusions are for missing data
- Pay attention to how the event or disease is defined
  - e.g. if restricted to certain types of residents (ie. high risk)
- Pay attention to how the time frame for inclusion is defined (short vs long stay)
- Size of denominator (<20 residents) may excluded a facility’s results from public reporting
**Risk Adjustment**

- **Goal is to make denominator similar between facilities. Three methods:**
  - Exclusions
  - Stratification (e.g. high-risk vs low risk residents)
  - Regression
    - Use a set of resident clinical characteristics (termed “covariates”) to adjust for potential differences in residents between facilities
    - Compare your observed rate to an expected rate, which is based on what an average facility with similar residents to you (based on your covariates) would have
      - Results can be reported as a ratio (observed/expected) or as an adjusted number (observed/expected ratio multiplied by the national average)

**Defining Short vs Long Stay**

Residents are classified as either short stay or long stay using the following steps:

- **Compute each resident’s Cumulative Days In the Facility (CDIF) during an episode**
  - If CDIF is ≤ 100 days, the resident is SHORT-stay
  - If CDIF is ≥ 101 days, the resident is LONG-stay

- **Target period for**
  - Long Stay is 90 days (3 months)
  - Short Stay is 180 days (6 months)
Cumulative Days In the Facility (CDIF)

- CDIF = sum of the number of days within each stay included in an episode.
- If an episode consists of more than one stay separated by periods of time outside the facility (e.g., hospitalizations), only those days within the facility would count towards CDIF. Any days outside of the facility (e.g., hospital, home, etc.) would not count towards the CDIF total.

Episode Definition MDS 3.0 QMs

- Episode STARTS with:
  - An admission entry (A0310F = [01] AND A1700 = [1])
- Episode ENDS with the earliest of the following:
  - A discharge assessment with return not anticipated (A0310F = [10]), OR
  - A discharge assessment with return anticipated (A0310F = [11]) but the resident did not return (A0310F = [10]) within 30 days of discharge, OR
  - A death in facility tracking record (A0310F = [12]), OR
  - The end of the target period
CDIF Example

<table>
<thead>
<tr>
<th>Res 1</th>
<th>45 days</th>
<th>120 days</th>
<th>45 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Res 2</td>
<td>21 days</td>
<td>hospital</td>
<td>80 days</td>
</tr>
<tr>
<td>Res 3</td>
<td>30 days</td>
<td>DC to home</td>
<td>45 days</td>
</tr>
<tr>
<td>Res 4</td>
<td>10 days</td>
<td>40 days</td>
<td>hospital</td>
</tr>
<tr>
<td>Res 5</td>
<td>Begin Target period</td>
<td>90 days</td>
<td>End Target period</td>
</tr>
</tbody>
</table>

CDIF

- Res 1 = 165 Long Stay
- Res 2 = 101 Long Stay
- Res 3 = 30 Short Stay
- Res 4 = 110 Long Stay
- Res 5 = 90 Short Stay
Improving your Quality Measures

- Lower the number of residents in numerator
- Identify residents who trigger quality measure you want to lower
- Conduct root cause analysis – review of each person in numerator for opportunities to prevent
  - Early detection of early signs of problems
  - Systems of care
  - Availability of medical resources
  - Interaction with physician
  - Staffing awareness of policies & protocols

- Improve your MDS coding
Improve your MDS coding

- Make sure the Numerator MDS items are being coded accurately
- Make sure MDS items used for risk adjustment are accurate & complete (e.g. Diabetes)
- Make sure exclusions are accurate (e.g. schizophrenia)
- Check on frequency of missing data for items used in QM calculations
- Make sure you complete the discharge assessment for all residents who leave the facility

Quality Measure Specifications

MDS 3.0 Quality Measures
USER’S MANUAL
(v5.0 03-01-2012)
SHORT Stay Measures (6)

- % with decrease in pain
- % who had moderate/severe pain
- % new or worsening pressure ulcer
- % received influenza vaccine
- % assessed or given pneumococcal vaccine
- % who have antipsychotic medication started

Moderate/Severe Pain (Short Stay)

**Denominator**
- All short-stay residents except those with exclusions.

**Exclusions**
- Pain assessment interview was not completed (J0200=[0, , , ])
- Pain presence item was not completed (J0300=[9, , , ])
- For residents with pain or hurting at any time in the last 5 days (J0300 = [1]) AND any of the following are true:
  - Pain frequency item was not completed (J0400=[9, , , ]).
  - Neither of the pain intensity items were completed (J0600A=[99, , , ] AND J0600B=[9, , , ]).
  - The numeric pain intensity item indicates no pain (J0600A=[00])
Moderate/Severe Pain (Short Stay)

**Numerator**
- Condition #1: resident reports daily pain with at least one episode of moderate/severe pain:
  - Almost constant or frequent pain (J0400=[1,2]) AND
  - At least one episode of moderate to severe pain (J0600A=[05,06,07,08,09] OR J0600B=[2,3])
- OR
- Condition #2: resident reports severe/horrible pain of any frequency (J0600A=[10] OR J0600B=[4])

New Pressure Ulcer (Short Stay)

**Denominator:** All residents short stay residents minus exclusions.

**Exclusions:** Residents if none of the assessments has usable data for M0800A, M0800B, or M0800C defined as:
- 1.1 M0800A is usable if either of the following conditions are true:
  - 1.1.1. M0300B1 = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] and M0800A = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] and M0800A ≤ M0300B1
  - 1.1.2. M0300B1 = [*] and M0800A = [*]
- 1.2 M0800B is usable if either of the following conditions are true:
  - 1.2.1. M0300C1 = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] and M0800B = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] and M0800B ≤ M0300C1
  - 1.2.2. M0300C1 = [*] and M0800B = [*]
- 1.3 M0800C is usable if either of the following conditions are true:
  - 1.3.1. M0300D1 = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] and M0800C = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] and M0800C ≤ M0300D1
  - 1.3.2. M0300D1 = [*] and M0800C = [*]
- 1.4 If none of the three items M0800A, M0800B, and M0800C is usable, then the assessment is not usable and is discarded
New Pressure Ulcer (Short Stay)

**Numerator**
- Short-stay residents with one or more new or worsening Stage II-IV pressure ulcers defined as:
  - Stage II (M0800A) > [0] AND M0800A ≤ M0300B1, OR
  - Stage III (M0800B) > [0] AND M0800B ≤ M0300C1, OR
  - Stage IV (M0800C) > [0] AND M0800C ≤ M0300D1

**Risk Adjustment:**
- Requiring assistance in *bed mobility* self-performance on the initial assessment:
  - Covariate = [1] if G0110A1 = [2, 3, 4, 7, 8]; Covariate = [0] if G0110A1 = [0, 1, -]
- Indicator of bowel *incontinence* at least occasionally on the initial assessment:
  - Covariate = [1] if H0400 = [1, 2, 3]; Covariate = [0] if H0400 = [0, 9, -]
- Have *diabetes* or *peripheral vascular disease* on initial assessment:
  - Covariate = [1] if any of the following are true:
    - c. I8000A through I8000J contains any of the following peripheral vascular disease diagnosis codes: [250.7, 440.20, 440.21, 440.22, 440.23, 440.24, 440.29, 440.31, 440.32, 443.81, 443.9]
  - Covariate = [0] if I0900 = [0, -] AND I2900 = [0, -] AND (I8000A through I8000J) do not contain any of the peripheral vascular disease diagnosis codes listed above.
- Indicator of *Low Body Mass Index*, based on Height (K0200A) and Weight (K0200B):
  - Covariate = [1] if BMI ≥ [12.0] AND ≤ [19.0]; Covariate = [0] if BMI > [19.0] AND ≤ [40.0]
  - Where: BMI = ([weight * 703] / [height2]) = (K0200B * 703) / (K0200A2) and the resulting value is rounded to one decimal
Influenza Vaccine (Short Stay)

**Denominator:** All short-stay residents except those with exclusions

**Exclusions:** O0250C = [1] (resident not in facility during the influenza season)

**Numerator**
- resident received the influenza vaccine during the current or most recent influenza season, either in the facility (O0250A = [1]) or outside the facility (O0250C = [2]);
  - OR
- resident was offered and declined the influenza vaccine (O0250C = [4]);
  - OR
- resident was ineligible due to contraindication(s): (O0250C = [3]) (e.g., anaphylactic hypersensitivity to eggs or other components of the vaccine, history of Guillain-Barre Syndrome within 6 weeks after a previous influenza vaccination, bone marrow transplant within the past 6 months)

Pneumococcal Vaccine (Short Stay)

**Denominator**
- All short-stay residents (no exclusions)

**Numerator**
- PPV status is up to date (O0300A = [1]);
  - OR
- were offered and declined the vaccine (O0300B = [2]);
  - OR
- were ineligible due to medical contraindication(s) (O0300B = [1]) (e.g., anaphylactic hypersensitivity to components of the vaccine, bone marrow transplant within the past 12 months; or receiving a course of chemotherapy within the past two weeks)
Antipsychotic use (Short Stay)

Denominator
- All short-stay residents

Exclusions
- Any resident with
  - Schizophrenia (I600 = 1), or
  - Tourette's Syndrome (I535 = 1), or
  - Huntington's disease (I525 = 1)
- Any resident with initial assessment indicated antipsychotic use
  - NO400A = [1], OR NO410A = [1, 2, 3, 4, 5, 6, or 7]
- Missing data for Numerator variables NO400A OR NO410A = missing

Numerator
- Any resident with at least one assessment indicating antipsychotic use
  - NO400A = [1], OR NO410A = [1, 2, 3, 4, 5, 6, or 7]

LONG Stay Measures (13)

- % who with one or more falls with major injury
- % who had moderate/severe pain
- % with pressure ulcer among high-risk residents
- % who had UTI
- % who lose control of bowel or bladder among low risk residents
- % who had catheter inserted & left in their bladder
- % who physically restrained
- % who lose too much weight
- % who need help with daily activities has increased
- % who are more depressed or anxious
- % received influenza vaccine
- % assessed or given pneumococcal vaccine
- % who are receiving an antipsychotic medication
Falls with injury (Long stay)

**Denominator**
- All long-stay nursing home residents excluding

**Exclusions**
- The occurrence of falls was not assessed \((J1800 = [-])\), OR
- The assessment indicates that a fall occurred \((J1800 = [1])\) AND the number of falls with major injury was not assessed \((J1900C = [-])\)

**Numerator**
- Long-stay residents with an assessment that indicate one or more falls that resulted in major injury \((J1900C = [1, 2])\)

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Pain Moderate/Severe (Long stay)

**Denominator:** All long-stay residents except those with exclusions.

**Exclusions**
- The target assessment is an admission assessment, a PPS 5-day assessment, or a PPS readmission/return assessment \((A0310A=[01] \text{ or } A0310B=[01,06])\)
- The resident is not included in the numerator (the resident did not meet the pain symptom conditions for the numerator) AND any of the following conditions are true:
  - 2.1. The pain assessment interview was not completed \((J0200=[0,*,\^])\)
  - 2.2. The pain presence item was not completed \((J0300=[9,*,\^])\)
  - 2.3. For residents with pain or hurting at any time in the last 5 days \((J0300 = [1])\), any of the following are true:
    - pain frequency item was not completed \((J0400=[9,*,\^])\)
    - Neither of the pain intensity items was completed \((J0600A=[99,*,\^] \text{ and } J0600B=[99,*,\^])\)
    - numeric pain intensity item indicates no pain \((J0600A=[00])\)
Pain Moderate/Severe (Long stay)

**Numerator (condition #1 OR #2)**

- **Condition #1**: resident reports almost constant or frequent moderate to severe pain in the last 5 days:
  - Almost constant or frequent pain ($J0400_0 = [1,2]$), **AND**
  - At least one episode of moderate to severe pain: ($J0600A = [05,06,07,08,09]$ OR $J600B = [2,3]$)


**Risk Adjusted** (see next slide)

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Risk Adjusted for

- Independence or modified independence in daily decision making on the prior assessment defined as:
  - Covariate = 1 if $C1000 = [0, 1]$ **OR** if ($C0500 \geq [13]$ **AND** $C0500 \leq [15]$)
  - Covariate = 0 if $C1000 = [2, 3]$ **OR** if ($C0500 \geq [00]$ **AND** $C0500 \leq [12]$)

- Covariate = missing if **either** of the following are true:
  - No prior assessment is available
### High Risk Pressure Ulcer (Long Stay)

#### Denominator
- All long stay residents defined as high risk defined as:
  - Impaired bed mobility or transfer indicated, by *either* of the following:
    - 1.1. Bed mobility, self-performance \((G0110A1) = [3, 4, 7, 8]\) OR
    - 1.2. Transfer, self-performance \((G0110B1) = [3, 4, 7, 8]\)
  - Comatose \((B0100 = [1])\)
  - Malnutrition or at risk of malnutrition \((I5600 = [1])\) (checked).

#### Exclusions
- If target assessment is an admission assessment \((A0310A = [01])\) or a PPS 5-day or readmission/return assessment \((A0310B = [01, 06])\)
- Missing data for numerator definitions:
  - a. \(M0300B1 = [-]\)
  - b. \(M0300C1 = [-]\)
  - c. \(M0300D1 = [-]\)

#### Numerator
- Stage II-IV pressure ulcers are present, as indicated by *any* of the following:
  - \(M0300B1 = [1, 2, 3, 4, 5, 6, 7, 8, 9]\) or
  - \(M0300C1 = [1, 2, 3, 4, 5, 6, 7, 8, 9]\) or
  - \(M0300D1 = [1, 2, 3, 4, 5, 6, 7, 8, 9]\), or
  - Any additional active diagnoses is a Stage II-IV ulcer ICD-9 \((I8000 = [707.22, 707.23, 707.24])\)
Influenza Vaccine (Long Stay)

**Denominator**: All long-stay residents except those with exclusions.

**Exclusions**: Resident was not in facility during influenza season (O0250C = [1])

**Numerator**:
- Resident received the influenza vaccine during the current or most recent influenza season, either in the facility (O0250A = [1]) or outside the facility (O0250C = [2]); OR
- Resident was offered and declined the influenza vaccine (O0250C = [4]); OR
- Resident was ineligible due to contraindication(s) (O0250C = [3]) (e.g., anaphylactic hypersensitivity to eggs or other components of the vaccine, history of Guillain-Barre Syndrome w/in 6 weeks after a previous influenza vaccination, bone marrow transplant w/in past 6 months)

Pneumococcal Vaccine (Long Stay)

**Denominator**: All long-stay residents

**Exclusions**: none

**Numerator**
- Have an up to date PPV status (O0300A = [1]); OR
- Were offered and declined the vaccine (O0300B = [2]); OR
- Were ineligible due to medical contraindication(s) (e.g., anaphylactic hypersensitivity to components of the vaccine; bone marrow transplant within the past 12 months; or receiving a course of chemotherapy within the past two weeks) (O0300B = [1])
**UTI (Long Stay)**

**Denominator:** All long-stay residents except those with exclusions

**Exclusions**
- Target assessment is an admission assessment (A0310A = [01]) or a PPS 5-day or readmission/return assessment (A0310B = [01, 06])
- Urinary tract infection value is missing (I2300 = [-])

**Numerator**
- Long-stay residents with a selected target assessment that indicates urinary tract infection within the last 30 days (I2300 = [1])

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**Bowel/Bladder incontinence (Long Stay)**

**Denominator:** All long-stay residents except those with exclusions

**Exclusions:**
- Residents who have any of the following high risk conditions:
  - a. Severe cognitive impairment on the target assessment as indicated by (C1000 = [3] and C0700 = [1]) OR (C0500 ≤ [7]).
  - b. Totally dependent in bed mobility self-performance (G0110A1 = [4, 7, 8]).
  - c. Totally dependent in transfer self-performance (G0110B1 = [4, 7, 8]).
  - d. Totally dependent in locomotion on unit self-performance (G0110E1 = [4, 7, 8]).
- missing data for high risk conditions two conditions are true for the target assessment:
  - C0500 = [99, *, -], and C0700 = [*,-] or C1000 = [*,-]. OR
  - G0110A1 = [-] or G0110B1 = [-] or G0110E1E = [-].
- comatose (B0100 = [1]) or comatose status is missing (B0100 = [-]) on the target assessment.
- indwelling catheter (H0100A = [1]) or indwelling catheter status is missing (H0100A = [-])
- ostomy (H0100C = [1]) or ostomy status is missing (H0100C = [-])
- Target assessment is an admission assessment (A0310A = [01]) or a PPS 5-day or readmission/return assessment (A0310B = [01, 06])
Bowel/Bladder incontinence (Long Stay)

**Numerator**
- Long-stay residents frequently or always incontinence of the bladder ($H0300 = [2, 3]$) or bowel ($H0400 = [2, 3]$)

Indwelling catheter (Long Stay)

**Denominator:** All long-stay residents except those with exclusions

**Exclusions**
- Indwelling catheter status is missing ($H0100A = [-]$)
- Neurogenic bladder ($I1550 = [1]$) or neurogenic bladder status is missing ($I1550 = [-]$)
- Obstructive uropathy ($I1650 = [1]$) or obstructive uropathy status is missing ($I1650 = [-]$)

**Numerator**
- Long-stay residents with a selected target assessment that indicates the use of indwelling catheters ($H0100A = [1]$)

**Risk Adjustment:** logistic regression
Indwelling catheter (Long Stay)

Risk Adjustment Variables
1. Frequent bowel incontinence on prior assessment (H0400 = [2, 3]).
   - Covariate = [1] if H0400 = [2, 3]
   - Covariate = [0] if H0400 = [0, 1, 9, -].
2. Pressure ulcers at stages II, III, or IV on prior assessment:
   - Covariate = [1] if any of the following are true:
     - a. M0300B1 = [1, 2, 3, 4, 5, 6, 7, 8, 9], or
     - b. M0300C1 = [1, 2, 3, 4, 5, 6, 7, 8, 9], or
     - c. M0300D1 = [1, 2, 3, 4, 5, 6, 7, 8, 9]
   - Covariate = [0] if M0300B1 = [0, ^] and M0300C1 = [0, ^] and M0300D1 = [0, ^].
   - Covariate = missing if M0300B1 = [-] AND M0300C1 = [-] AND M0300D1 = [-].
3. All covariates are missing if no prior assessment is available

Restraints (Long stay)

- **Denominator:** All residents except those with exclusions.
- **Exclusions:** missing data for any numerator conditions:
  - P0100B = [- ], P0100C = [- ], P0100E = [- ], P0100F=[-], OR P0100G = [- ]
- **Numerator**
  - trunk restraint used in bed (P0100B = [2])
  - limb restraint used in bed (P0100C = [2])
  - trunk restraint used in chair or out of bed (P0100E = [2])
  - limb restraint used in chair or out of bed (P0100F = [2]), OR
  - chair prevents rising used in chair or out of bed (P0100G) = [2])
Increase in ADL (Long Stay)

**Denominator:** All residents except those with exclusions.

**Exclusions**
- All four of the late-loss ADL items indicate total dependence on the prior assessment, as indicated by:
  - Bed Mobility (G0110A1) = [4, 7, 8] AND
  - Transferring (G0110B1) = [4, 7, 8] AND
  - Eating (G0110H1) = [4, 7, 8] AND
  - Toileting (G0110I1) = [4, 7, 8].
- Three of the late-loss ADLs indicate total dependence on the prior assessment, as in #1 AND the fourth late-loss ADL indicates extensive assistance (value 3) on the prior assessment.
- If resident is comatose (B0100 = [1, - ])
- Prognosis of life expectancy is less than 6 month (J1400 = [1, - ])
- Hospice care (O0100K2 = [1, - ])
- Missing data for numerator conditions: Bed Mobility (G0110A1) = [-], Transferring (G0110B1) = [-], Eating (G0110H1) = [-], OR Toileting (G0110I1) = [-]

Increase in ADL (Long Stay)

**Numerator**
- Long-stay residents that indicate the need for help with late-loss Activities of Daily Living (ADLs) has increased when the selected target and prior assessment assessments are compared. The four late-loss ADL items are:
  - self-performance bed mobility (G0110A1)
  - self-performance transfer (G0110B1)
  - self-performance eating (G0110H1)
  - self-performance toileting (G0110I1)
- An increase is defined as an increase in two or more coding points in one late-loss ADL item or one point increase in coding points in two or more late-loss ADL items. Note that for each of these four ADL items, if the value is equal to [7, 8] on either the target or prior assessment, then recode the item to equal [4] to allow appropriate comparison. (see next slide)
Increase in ADL (Long Stay)

**Numerator:** Residents meet the definition of increased need of help with late-loss ADLs if the following are true

1. **At least two** of the following are true (note that in the notation below, \([t]\) refers to the target assessment, and \([t-1]\) refers to the prior assessment):
   - Bed mobility: \([\text{target assessment (G0110A1[t])} - \text{prior assessment (G0110A1[t-1])}] > 0\),
   - Transfer: \([\text{target assessment (G0110B1[t])} - \text{prior assessment (G0110B1[t-1])}] > 0\),
   - Eating: \([\text{target assessment (G0110H1[t])} - \text{prior assessment (G0110H1[t-1])}] > 0\), or
   - Toileting: \([\text{target assessment (G0110I1[t])} - \text{prior assessment (G0110I1[t-1])}] > 0\),

2. **At least one** of the following is true:
   - Bed mobility: \([\text{target assessment (G0110A1[t])} - \text{prior assessment (G0110A1[t-1])}] > 1\),
   - Transfer: \([\text{target assessment (G0110B1[t])} - \text{prior assessment (G0110B1[t-1])}] > 1\),
   - Eating: \([\text{target assessment (G0110H1[t])} - \text{prior assessment (G0110H1[t-1])}] > 1\), or
   - Toileting: \([\text{target assessment (G0110I1[t])} - \text{prior assessment (G0110I1[t-1])}] > 1\).

Weight Loss (Long Stay)

**Denominator**
- Long-stay nursing home residents except those with exclusions.

**Exclusions**
- Target assessment is an OBRA admission assessment (A0310A = [01]) OR a PPS 5-day or readmission/return assessment (A0310B = [01, 06])
- Weight loss item is missing on target assessment (K0300 = [-]).

**Numerator**
- Long-stay nursing home residents with a selected target assessment which indicates a weight loss of 5% or more in the last month or 10% or more in the last 6 months who were not on a physician prescribed weight-loss regimen (K0300 = [2])
Depression (Long Stay)

**Denominator**: All long-stay residents except those with exclusions

**Exclusions**

- Resident is comatose or comatose status is missing (B0100 = [1, -])
- Missing data for numerator conditions when both of the following are true:
  - b. D0500A2 = [^, -] OR D0500B2 = [^, -] OR D0600=[-, ^]

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**Denominator**: All long-stay residents except those with exclusions

**Exclusions**

- Resident is comatose or comatose status is missing (B0100 = [1, -])
- Missing data for numerator conditions when both of the following are true:
  - b. D0500A2 = [^, -] OR D0500B2 = [^, -] OR D0600=[-, ^]

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**Depression (Long Stay)**

**Numerator** (Condition A AND B)

- **CONDITION A** (The resident mood interview must meet Part 1 AND Part 2)
  - **PART 1:**
    - Little interest or pleasure in doing things half or more of the days over the last two weeks (D0200A2 = [2, 3]) OR
    - Feeling down, depressed, or hopeless half or more of the days over the last two weeks (D0200B2 = [2, 3])
  - **PART 2:**
    - The resident interview total severity score indicates the presence of depression (D0300 ≥ [10] and D0300 ≤ [27]).
- **CONDITION B** (The staff assessment of resident mood must meet Part 1 AND Part 2)
  - **PART 1:**
    - Little interest or pleasure in doing things half or more of the days over the last two weeks (D0500A2 = [2, 3]) OR
    - Feeling or appearing down, depressed, or hopeless half or more of the days over the last two weeks (D0500B2 = [2, 3])
  - **PART 2:**
    - The staff assessment total severity score indicates the presence of depression (D0600 ≥ [10] and D0600 ≤ [30]).
Antipsychotic use (Long Stay)

**Denominator**
- All long-stay residents

**Exclusions**
- Any resident with
  - Schizophrenia (I6000 = 1), or
  - Tourette's Syndrome (I5350 = 1), or
  - Huntington's disease (I5250 = 1)
- Missing data for Numerator variables N0400A OR N0410A = missing

**Numerator**
- Any resident with at least one assessment indicating antipsychotic use
  - N0400A = [1], OR NO410A = [1, 2, 3, 4, 5, 6, or 7]

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