QUALITY MEASURES FOR POST ACUTE CARE

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Worcester, MA
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Principles Guiding Measure Selection

- PAC quality measures need to
  - Reflect the primary goals for the population receiving care,
  - Be meaningful to the consumer and provider,
  - Risk adjust for differences in patient populations and acuity,
  - Be more heavily weighted for patient outcome measures than structure or process measures, and
  - Help achieve better outcomes (e.g. are timely and can be used in quality improvement efforts)
  - Be readily available for use now or under development to be used in the near future.
Primary Purpose of PAC Care

• Assist individuals return to their prior living situation as quickly as possible
• Avoid rehospitalization
• Improve the individual’s function related to mobility, self-care (e.g. ADLs), and speech
• Improve their clinical condition (e.g. wounds)
• Complete course of skilled nursing medical care
  • (e.g. IV medications such as antibiotics),
• Learn to manage their disease illness better
  • (e.g. how to administer medications)
Framework for Measure Portfolio

- Grouped measures into those that apply to
  - “short stay” individuals seeking post-acute care
  - “long stay” individuals requiring long term care
- Classify measures using Donabedian’s classic framework
  - Structure (e.g. staffing, equipment, etc)
  - Processes (e.g. treatments, meds, tests, etc)
  - Outcomes (function, disease, satisfaction, etc)
Measuring Quality of Care

**Structure**
- Access
- Equipment
- Providers
- Regulations
- Community

**Process**
- Medication
- Procedures
- Tests
- Symptoms
- Interaction

**Outcome**
- Clinical Status
- Function
- Satisfaction
- Quality of Life
- Mortality
Goal of Quality Improvement

- Improve outcomes
  - clinical outcomes
  - quality of life outcomes
- Improve processes of care that can effect outcomes
- Improve structure and environment that can lead to improved outcomes
Short Stay: **Structural Measures**

- CMS-State Survey Inspection score
- Staffing component on CMS Five Star
- Baldrige recipient
  - e.g. AHCA Quality Award silver/gold recipients
- Nurse Staff turnover
- Nursing presence
  - e.g., 24 hr RN or Nurse Practitioner available
- Staff satisfaction
Short Stay: Process Measures

- CMS nursing home compare QMs
  - % immunized for both influenza and pneumovax
  - Antipsychotics started during first 100 days
Short Stay: **Outcome Measures**

- 30d risk-adjusted rehospitalization following admission
- Risk-adjusted % discharged to community
- Improvements in function:
  - self-care and mobility – risk adjusted (based on CARE tool)
  - speech/communication based on NOMs
- CMS nursing home compare QMs
  - % new pressure ulcers
  - % with untreated pain
- Resident/Family Satisfaction
Commonly Used PAC Measures

- **Five Star**
  - Compliance with Medicare requirement of participation (3 yr avg)
  - Staffing levels
    - Total nursing hours per resident day (RN + LPN + nurse aide hours)
    - RN hours per resident day
  - Quality measures (9 measures; only 2 apply to PAC population)
    - Pain (rated moderate or severe)
    - Pressure ulcer (new or worse)

- **Nursing Home Compare**
  - 18 Quality measures (13 long stay & 5 PAC);
    - 9 used in Five Star; 3 of 5 PAC not included in Five Star:
      - Influenza vaccination
      - Pneumococcal vaccination
      - Antipsychotic use (newly prescribed following admission)
CMS FIVE STAR
Trend in OVERALL ratings
Overall Scoring Methodology

Step 1 Initial star rating based on Survey Score
Step 2 Add or subtract a 1 Star based on Staffing component rating relative to survey rating
Step 3 Add or subtract 1 additional Star based on QM component rating
Nursing Facility Survey Star Rating

Percent of Facilities Survey Star Rating Ranked within each State

- Bottom 20 percent within a State
- Top 10 percent (facilities with lowest survey score) within a State

Percentiles:
- <20
- ≥20 and <43.33
- ≥43.33 and <66.67
- ≥66.7 and <90
- ≥90
MA Trends in Total Survey Deficiencies

AHCA Members

Survey Cycle

Nation

Massachusetts

4th Prior Survey

3rd Prior Survey

2nd Prior Survey

1st Prior Survey

Current Survey

8.9

8.6

8.5

8.4

8.1

5.9

6.0

5.1

5.0

5.4
MA Trends in IJ Deficiencies

AHCA Members

Survey Cycle

- 4th Prior Survey: Nation 5.5%, Massachusetts 1.6%
- 3rd Prior Survey: Nation 5.5%, Massachusetts 2.3%
- 2nd Prior Survey: Nation 5.7%, Massachusetts 0.3%
- 1st Prior Survey: Nation 5.1%, Massachusetts 2.8%
- Current Survey: Nation 5.1%, Massachusetts 1.1%

Nation
Massachusetts
MA Trends in SQC Deficiencies

AHCA Members

Survey Cycle

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<thead>
<tr>
<th>Survey Cycle</th>
<th>Nation (%)</th>
<th>Massachusetts (%)</th>
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</thead>
<tbody>
<tr>
<td>4th Prior Survey</td>
<td>6.4%</td>
<td>2.2%</td>
</tr>
<tr>
<td>3rd Prior Survey</td>
<td>6.6%</td>
<td>2.9%</td>
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<tr>
<td>2nd Prior Survey</td>
<td>6.8%</td>
<td>2.1%</td>
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<tr>
<td>1st Prior Survey</td>
<td>5.9%</td>
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<tr>
<td>Current Survey</td>
<td>5.8%</td>
<td>2.5%</td>
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</table>

Nation | Massachusetts
Staffing Component Rating Methodology

Step 1 Calculate risk adjusted staffing RN and Total Staff levels

Step 2 Compare risk adjusted to cut-points to assign stars, in theory 100% SNFs can achieve 5 Star or 1 Star

<table>
<thead>
<tr>
<th>RN rating and hours</th>
<th>Total staffing rating and hours (RN, LPN and aide)</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>&lt;0.283</td>
<td>1-star</td>
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<tr>
<td>0.283 – 0.378</td>
<td>1-star</td>
</tr>
<tr>
<td>0.379 – 0.512</td>
<td>2-stars</td>
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<tr>
<td>0.513 – 0.709</td>
<td>2-stars</td>
</tr>
<tr>
<td>≥0.710</td>
<td>3-stars</td>
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</tbody>
</table>

Note: Adjusted staffing values are rounded to three decimal places before the cut points are applied.
Trends in Staffing Ratings
Quality Measures Component Rating Methodology

- Based on 9 quality measures
- Facility receives 0 - 100 points for each measure
  - Overall scores can range from 0 to 900
  - Stars assigned based on cut-points set in July 2012, in theory 100% SNFs can achieve 5 Star or 1 Star

<table>
<thead>
<tr>
<th>Table 7</th>
<th>Star Cutpoints for MDS Quality Measure Summary Score (updated July 2012)</th>
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</thead>
<tbody>
<tr>
<td>1 star</td>
<td>2 stars lower</td>
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<tr>
<td>&lt;355</td>
<td>356</td>
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</table>
Historical Trends in QM component
Historical Trends in OVERALL ratings
President’s Executive Order
Five Star Directs CMS

• Quality Measures
  • Add additional quality measures to Five-Star (claims based suggested)
    • Rehospitalizations
    • Discharge back to community
    • Antipsychotic use.
  • Expand auditing of MDS data from five states to all states effective 01/01/15

• Implications Regarding Changes for Quality Measures
  • Antipsychotics nursing home compare (AHCA Focus)
  • Rehospitalization (AHCA OnPoint 30 vs CMS Claims vs MedPAC)
  • Discharge to community (AHCA vs MedPac Claims)
  • Revise scoring QM component, CMS establish new cut points (rebasing)
President’s Executive Order
Five Star Directs CMS

• Staffing Data
  • Use payroll data, as mandated in ACA, reported quarterly
  • Add turnover and retention
  • Validate staffing information
  • Phase in use of electronic data to begin 01/15/15

• Implications:
  • AHCA has supported electronic collection of staffing data
  • Design of methodology by CMS, has proven difficult
  • AHCA will need to work closely with CMS to support design and implementation.
President’s Executive Order

Five Star Directs CMS

- Continue and expand giving higher weight to quality and staffing measures that independent sources have verified;
- Improve linkages to state-based websites for improved access to information that is uniquely reported by states;
- Ensure the survey inspections in each state are completed as required by statute (12-15 months, more timely manner)
SAMPLE SIZE ISSUES IN PAC MEASUREMENT
Sample size

• NQF & CMS and basic statistics requires a minimum denominator size for most measures of 25-30 people
  • Smaller sample sizes result in large fluctuations over time due to sample size and patient population rather than changes in care delivery
• Sample size precludes most measures being stratified by
  • Diagnoses
  • Payor
  • Patient characteristics
Variation in SNF QM score by sample size
# of Facilities vs # of Part A Admissions

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<tr>
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<th>2009</th>
<th>2010</th>
<th>2011</th>
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<tr>
<td></td>
<td>Number of Facilities</td>
<td>% of Total</td>
<td>Number of Facilities</td>
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<tr>
<td>TOTAL</td>
<td>15,453</td>
<td>15,449</td>
<td>15,395</td>
</tr>
<tr>
<td>Low volume (≤ 100 stays/ year)</td>
<td>6,766</td>
<td>44%</td>
<td>6,744</td>
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<tr>
<td>Moderate volume (101-200 stays/ year)</td>
<td>4,678</td>
<td>30%</td>
<td>4,591</td>
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<tr>
<td>High volume (201-300 stays/ year)</td>
<td>2,061</td>
<td>13%</td>
<td>2,103</td>
</tr>
<tr>
<td>Very high volume (&gt;300 stays/ year)</td>
<td>1,948</td>
<td>13%</td>
<td>2,011</td>
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</tbody>
</table>
### Part A admissions for Top 15 Hospital DRGs by Facility’s annual admission volume

<table>
<thead>
<tr>
<th>DRG Categories</th>
<th>Low Vol (&lt;100/yr)</th>
<th>Mod Vol (100-200/yr)</th>
<th>High Vol (200-300/yr)</th>
<th>Very High Vol &gt;300/yr</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>SNF stays 2009</td>
<td>% of All SNF Stays</td>
<td>SNF stays 2009</td>
<td>% of All SNF Stays</td>
</tr>
<tr>
<td>SNF stays 2009</td>
<td>451,119</td>
<td>2,230,389</td>
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<td></td>
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<tr>
<td>SNF stays 2009</td>
<td>637,920</td>
<td>2,230,389</td>
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<tr>
<td>SNF stays 2009</td>
<td>437,273</td>
<td>2,230,389</td>
<td></td>
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<tr>
<td>SNF stays 2009</td>
<td>704,077</td>
<td>2,230,389</td>
<td></td>
<td></td>
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<tr>
<td>TOTAL</td>
<td>1,723,339</td>
<td>7,791,157</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Orthopedic surgery on lower extremity</td>
<td>55,309</td>
<td>2.5%</td>
<td>81,156</td>
<td>3.6%</td>
</tr>
<tr>
<td>2. Respiratory</td>
<td>67,714</td>
<td>3.0%</td>
<td>83,167</td>
<td>3.8%</td>
</tr>
<tr>
<td>3. Cardiac surgery</td>
<td>9,884</td>
<td>0.4%</td>
<td>15,817</td>
<td>0.7%</td>
</tr>
<tr>
<td>4. Cardiac medical management</td>
<td>37,728</td>
<td>1.7%</td>
<td>54,067</td>
<td>2.4%</td>
</tr>
<tr>
<td>5. GI hospitalizations (surgical and medical)</td>
<td>31,422</td>
<td>1.4%</td>
<td>44,580</td>
<td>2.0%</td>
</tr>
<tr>
<td>6. Renal failure</td>
<td>11,820</td>
<td>0.5%</td>
<td>17,963</td>
<td>0.8%</td>
</tr>
<tr>
<td>7. Amputations</td>
<td>3,704</td>
<td>0.2%</td>
<td>5,228</td>
<td>0.2%</td>
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<tr>
<td>8. Spinal surgery</td>
<td>2,663</td>
<td>0.1%</td>
<td>4,258</td>
<td>0.2%</td>
</tr>
<tr>
<td>9. Other major musculoskeletal surgery</td>
<td>4,916</td>
<td>0.2%</td>
<td>8,181</td>
<td>0.4%</td>
</tr>
<tr>
<td>10. Other musculoskeletal medical mgmt</td>
<td>23,126</td>
<td>1.0%</td>
<td>34,940</td>
<td>1.6%</td>
</tr>
<tr>
<td>11. Multiple significant trauma</td>
<td>1,242</td>
<td>0.1%</td>
<td>1,797</td>
<td>0.1%</td>
</tr>
<tr>
<td>12. Infections &amp; parasitic dis. (plus sepsis)</td>
<td>52,428</td>
<td>2.4%</td>
<td>74,247</td>
<td>3.3%</td>
</tr>
<tr>
<td>13. Psychiatric</td>
<td>6,146</td>
<td>0.3%</td>
<td>7,509</td>
<td>0.3%</td>
</tr>
<tr>
<td>14. Stroke and related conditions</td>
<td>18,863</td>
<td>0.8%</td>
<td>26,840</td>
<td>1.2%</td>
</tr>
<tr>
<td>15. Other</td>
<td>124,154</td>
<td>5.6%</td>
<td>177,642</td>
<td>8.0%</td>
</tr>
</tbody>
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% of All SNF Stays
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<tr>
<th>DRG Categories</th>
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<th>Very High Vol &gt;300/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td># of SNFs (%)</td>
<td>7,773 (50%)</td>
<td>4,449 (29%)</td>
<td>1,784 (12%)</td>
<td>1,389 (9%)</td>
</tr>
<tr>
<td>TOTAL</td>
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<td>3.6%</td>
</tr>
<tr>
<td>Avg # of Medicare Admissions per year</td>
<td>7.1</td>
<td>18.2</td>
<td>36.7</td>
<td>96.6</td>
</tr>
</tbody>
</table>
AHCA DEVELOPED
PAC QUALITY MEASURES
AHCA PAC Measures

- PointRight Pro 30 Rehospitalization (now available)
- Discharge Back to the Community (now available)
- Length of Stay (Dec 2014)
- Improvement in Functional Status (Jan 2015)
  - Mobility (based on CARE tool)
  - Self-Care (based on CARE tool)
- Customer Satisfaction (Jan 2015)
Use of AHCA PAC Measures

- AHCA PointRight Pro 30 Rehospitalization measure under review by NQF
- ACOs/MCOs currently using this measure
  - 3 MA Pioneer ACOs (Rehosp & Satisfaction)
  - 1 MA dual-eligible MCO (Rehosp & Satisfaction)
  - 1 NJ ACO (Rehosp & Discharge to Community)
  - 1 SC Care Management Co (Rehosp)
Rehospitalization Measures

• All measures have the same format

\[
\% = \frac{\text{Numerator}}{\text{Denominator}} = \frac{\# \text{ of persons sent to hospital}}{\# \text{ of persons admitted to SNF}}
\]

• National measures based on claims
  • Excludes ER visits & observation stays
  • Excludes Medicare Advantage & private insurance

• Most measures
  • Fail to risk adjust for differences in patients
  • Claims allow for limited clinical information to risk adjust
PointRight 30 Pro Rehospitalization

• **Numerator:**
  
  # of individuals sent back to any hospital (excluding ER-only visits) for any reason from your facility within 30 days of admission based on info from the MDS discharge assessment

• **Denominator:**
  
  All residents admitted from an acute hospital to your facility who have an MDS admission assessment during the prior 12 months

• **Risk adjustment:**
  
  Adjusts for 33 different clinical variables (see next slide)
  
  Compares your observed rate to your expected rate

• **Data Source:**
  
  MDS 3.0 admission assessments & MDS discharge assessments
Risk Adjustment Variables Used

- **Demographic**
  - Age >65
  - Male
  - Medicare as Primary Payor

- **Functional Status**
  - Total Bowel Incontinence
  - Eating dependent
  - Needs 2 person assistance in ADLs
  - Cognitive Impairment (Dementia)

- **Prognosis**
  - End Stage prognosis poor
  - Recently rehospitalized
  - Hx of Respiratory Failure
  - Receiving Hospice Care

- **Clinical Conditions**
  - Daily pain
  - Pressure Ulcer Stage >2 (split into 4 variables)
  - Venous Arterial Ulcer
  - Diabetic Foot Ulcer

- **Diagnoses**
  - Anemia
  - Asthma
  - Diabetes Mellitus
  - Hx of Viral Hepatitis
  - Hx of Septicemia
  - Hx of Heart Failure
  - Hx of Internal bleeding

- **Services & treatments**
  - Dialysis
  - Insulin prescribed
  - Ostomy care
  - Cancer Chemotherapy
  - Receiving Radiation Therapy
  - Continue to receive IV Medication
  - Continue to receive oxygen
  - Continued tracheostomy care
Risk Adjustment Method

\[
\left( \frac{\text{Actual Rehospitalization}}{\text{Expected Rehospitalization}} \right) \times \text{National Average} = \text{Risk Adjusted Rate}
\]

Actual to Expected Ratio >1 you rehospitalized more people than expected
Example

- Two Centers A & B
  - With the same actual rehospitalization rate (20%)
  - But B takes care of much sicker patients than A
  - National average is 18%

- Center A: Actual > Expected
  - \[ \frac{\text{actual} \ 20.0}{\text{expected} \ 15.0} = 1.33 \times 18.0 = 24.0 \]

- Center B: Actual < Expected
  - \[ \frac{\text{actual} \ 20.0}{\text{expected} \ 30.0} = 0.66 \times 18.0 = 12.0 \]

Actual to Expected Ratio >1 you rehospitalized more people than expected
# LTC Trend Tracker Report

## Rehospitalization Rate AHCA Measure Report

| Org: Center 09065 | Geographic Market: Custom | Peer Type: All peer types |

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<td>My Centers</td>
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|                                |                                    |                     |                     |                     |                     |
MA vs Nation Rehospitalization Rates

AHCA Members

<table>
<thead>
<tr>
<th>Year Ending</th>
<th>Nation</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1-2013</td>
<td>17.7%</td>
<td>15.7%</td>
</tr>
<tr>
<td>Q2-2013</td>
<td>17.6%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Q3-2013</td>
<td>17.5%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Q4-2013</td>
<td>15.9%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Q1-2014</td>
<td>15.7%</td>
<td>14.0%</td>
</tr>
</tbody>
</table>
DISCHARGE BACK TO COMMUNITY
New Measure Available

Discharge Back to Community

**Numerator:** # of admissions who were discharged back to the community and remained out of any SNF for at least 30 days.

**Denominator:** # of all individuals admitted to a center from a hospital (regardless of payor or diagnosis) and who were not in a center in the prior 100 days

**Data Source:** MDS 3.0

**Risk Adjusted:** Logistic Regression
State Avg DC to Community Rate

Nat Avg 57.9
Distribution of Discharge Back to Community Rates

National Avg 57.9
MA vs Nation DC Back to Community

AHCA Members

Year Ending

<table>
<thead>
<tr>
<th>Year</th>
<th>Nation</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4-2012</td>
<td>58.0%</td>
<td>57.7%</td>
</tr>
<tr>
<td>Q1-2013</td>
<td>58.1%</td>
<td>57.9%</td>
</tr>
<tr>
<td>Q2-2013</td>
<td>58.2%</td>
<td>58.2%</td>
</tr>
<tr>
<td>Q3-2013</td>
<td>60.0%</td>
<td>59.9%</td>
</tr>
<tr>
<td>Q4-2013</td>
<td>60.5%</td>
<td>60.2%</td>
</tr>
</tbody>
</table>
CUSTOMER SATISFACTION
CoreQ - Short Stay Discharge

“The following four questions are part of a national initiative to measure the quality of Skilled Nursing Facilities”.

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
Administration & Measure

• Within 2 weeks of discharge
• Need minimum # of respondents (>30 respondents)
• Need minimum response rate >25%
• Can be added to existing survey vendor’s questionnaire

• CoreQ: Quality Measure Specifications
  • Aggregate each person’s responses to 4 questions
  • Transform to 0-100 scale
  • Sum all respondents to create aggregate score
  • Divide by number of respondents
  • Average overall satisfaction
CoreQ Short stay Discharge Measure

- % of patients whose average rating is >3.0 across the four questions
LENGTH OF STAY (LOS)
Issues impacting Length of Stay Measures

• Population to be included
  • Data Source
  • Exclude certain patients (e.g. deaths)

• Start and end date
  • How do you handle interruption of services (e.g. rehospitalizations)

• Calculating LOS (average vs median)

• Stratification by
  • clinical condition
  • payor status
### Medicare Part A Claims LOS

<table>
<thead>
<tr>
<th>Reason for discharged from Part A</th>
<th>2009</th>
<th>2010</th>
<th>2011**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stays</td>
<td>LOS</td>
<td>Stays</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,516,351</td>
<td>27.3</td>
<td>2,551,153</td>
</tr>
<tr>
<td>Alive; no interruptions</td>
<td>1,847,310</td>
<td>30.4</td>
<td>1,886,002</td>
</tr>
<tr>
<td>Inpatient Discharge</td>
<td>550,882</td>
<td>19.0</td>
<td>551,903</td>
</tr>
<tr>
<td>Died</td>
<td>118,159</td>
<td>17.6</td>
<td>113,248</td>
</tr>
</tbody>
</table>

Based on SNF Part A claims analysis by Moran.
Start date = admission to Part A care and end Date is end of Part A stay

**In order to avoid including stays that would be truncated because they started in 2011 and continued into 2012, any stay for which claims had an admission date on or after September 23, 2011 were not included in the analysis. This will cause the counts for SNF stays in that year to appear artificially lower.

***Due to the above exclusion criteria, out of a total 2,562,018 SNF stays with an admission date in 2011, 663,456 (26%) SNF stays were not included in the ALOS analysis.
Three Groups on Same Scale

No interrupted stay

Interrupted by Inpatient Stay

Interrupted by Death

Number of SNF stays

Avg Medicare Covered Length of Stay (in Days)

Avg Medicare Covered Length of Stay (in Days)

Average Medicare Covered Length of Stay (in Days)
AHCA LOS measures

- Median LOS for all new admissions from a hospital
- Proportion of new admissions who have stays of
  - 7 days or fewer,
  - 14 days or fewer,
  - 20 days or fewer and
  - 45 days or fewer
- Based on MDS 3.0 Data
  - Uses admission and discharge assessment
LOS Calculation

- Each person’s LOS is based on the number of days between their admission and discharge date.
  - If they are not discharged within 120 days from admission, they are assigned a LOS of 120 days.
- When an individual has an interruption in service that is 10 days or less (e.g. hospitalized), their LOS related to their subsequent readmission to the SNF will be counted with the prior admission’s LOS.
- All deaths are excluded from the Median LOS and
  - from the four other metrics only when the death occurs before the cut point (e.g. deaths occurring on day 16 are included in the 7 and 14 day metric but not in the 20 and 45 days or fewer metrics.)
Risk adjusted median LOS

Risk Adjusted Median LOS
26.5 days
<table>
<thead>
<tr>
<th>LOS &lt;=7 days</th>
<th># SNFs</th>
<th>Avg % Patients</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,407</td>
<td>0.112</td>
<td>0.063</td>
<td></td>
</tr>
<tr>
<td>LOS &lt;=14 days</td>
<td>11,754</td>
<td>0.243</td>
<td>0.094</td>
</tr>
<tr>
<td>LOS &lt;=20 days</td>
<td>11,731</td>
<td>0.393</td>
<td>0.116</td>
</tr>
<tr>
<td>LOS &lt;=45 days</td>
<td>11,647</td>
<td>0.676</td>
<td>0.120</td>
</tr>
</tbody>
</table>
Using Measurement isn’t enough

“You can’t fatten a cow by weighing it.”
Contact Information

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Mass Senior Care Annual Meeting:

Introduction to the CoreQ surveys

Nicholas G. Castle, Ph.D.
CastleN@Pitt.edu
Department of Health Policy and Management, Graduate School of Public Health, University of Pittsburgh
87% of the 56% who completed more than 23% of the survey thought it was a waste of time.
WHICH SURVEYS

- The Consumer Assessment of Healthcare Providers and Systems (CAHPS®)
  - family of survey instruments
- CAHPS® Nursing Home Surveys
WHICH SURVEYS

- CAHPS® Nursing Home Surveys
  - 3 Nursing home survey instruments
    - Resident
    - Short-Stay
    - Family
WHICH SURVEYS

- Has considerable relevance
  - More than half of all elders cared for in nursing homes are now discharged home (CMS, 2009).
  - Satisfaction information from current residents is different from those elders discharged home.
    - i.e., short-stay vs. long-stay differences.
    - Different populations with different needs in the nursing home.

- > 50 ITEMS
HELLO, THIS IS CUSTOMER SATISFACTION SURVEY,
ARE YOU SATISFIED?
IF YOU SAY NO, YOU WILL HAVE TO ANSWER TOO MANY QUESTIONS...
SO SUIT YOURSELF...
SURVEY ISSUES

- Cost (?)
  - More facilities could use satisfaction surveys if lower cost (?)
- Number of items (CAHPS n=54)
  - Influences response rate
  - Influences cost
- Identical items needed to
  - Benchmark
  - Use on report cards
  - Possible adjuvant items for other vendors

- Multi-organizational entities
  - SNF / AL
Problems
Strengths
Comparison to others
Describe performance
Problems

Strengths

Comparison to others

Describe performance

Need Detailed Information
Problems

Strengths

Comparison to others

Describe performance

Need Detailed Information

Not Needed in Detail?

On DOMAINS?
Qsat and CoreQ: PILOT

- AHCA partnership with the University of Pittsburgh
- Develop “Core” items to be used across settings and for parsimonious reporting
  - SNF Residents
  - SNF Short-Stay Residents
  - SNF Family
  - AL Residents
  - AL Family
STEP 1

- The researcher team examined 12 commonly used satisfaction surveys and reports to determine the most valued domains when looking at satisfaction. These surveys were identified by completing internet searches in PubMed and Google.
- Key terms that were searched included: resident satisfaction, long-term care satisfaction, and elderly satisfaction.
STEP 1
- The researcher team examined the surveys and reports to identify the different domains that were included.
- The researcher team scored the domains by simply counting if an instrument included the domain.
- Table (below) gives the domains that were found throughout the search, as well as a score.
- An example is the domain FOOD, this was used in 11 out of the 12 surveys. An interpretation of this finding would be that items addressing FOOD are extremely important in satisfaction surveys.
<table>
<thead>
<tr>
<th>Domain</th>
<th>Score out of 12</th>
<th>Domain</th>
<th>Score out of 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>11</td>
<td>Spiritual</td>
<td>4</td>
</tr>
<tr>
<td>Activities</td>
<td>10</td>
<td>Confidence in Caregivers</td>
<td>3</td>
</tr>
<tr>
<td>Administration</td>
<td>10</td>
<td>Language and Communication</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Care</td>
<td>10</td>
<td>Personal Suite</td>
<td>3</td>
</tr>
<tr>
<td>Staff Interaction</td>
<td>10</td>
<td>Therapy</td>
<td>3</td>
</tr>
<tr>
<td>Choice and Decision Making</td>
<td>9</td>
<td>Care Access</td>
<td>2</td>
</tr>
<tr>
<td>Facility Environment</td>
<td>9</td>
<td>Case Manager</td>
<td>2</td>
</tr>
<tr>
<td>Security and Safety</td>
<td>9</td>
<td>Comfort</td>
<td>2</td>
</tr>
<tr>
<td>Overall</td>
<td>8</td>
<td>Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>Staff Overall</td>
<td>7</td>
<td>Move In</td>
<td>2</td>
</tr>
<tr>
<td>Autonomy and Privacy</td>
<td>6</td>
<td>Non-Clinical Staff Services</td>
<td>2</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>6</td>
<td>Transitions</td>
<td>2</td>
</tr>
<tr>
<td>Personal Care</td>
<td>6</td>
<td>Transportation</td>
<td>2</td>
</tr>
<tr>
<td>Recommend facility</td>
<td>6</td>
<td>Emergency Response</td>
<td>1</td>
</tr>
<tr>
<td>Resident to Resident Friendships</td>
<td>5</td>
<td>Finances</td>
<td>1</td>
</tr>
<tr>
<td>Family Involvement</td>
<td>4</td>
<td>Time</td>
<td>1</td>
</tr>
<tr>
<td>Resident to Staff Friendships</td>
<td>4</td>
<td>Trust</td>
<td>1</td>
</tr>
</tbody>
</table>
Qsat and CoreQ: PILOT

STEP 2
- Cognitive Testing
- The research team gained permission from several local assisted living facilities and nursing homes to validate the questions by talking with personal care aides (PCAs), nurse aides (NAs), family members, and residents.
AHCA Satisfaction Survey: PILOT

STEP 2
- Each respondent was asked each of the potential survey questions (items).
- Then each respondent was asked questions about the survey items based on an interview template. All comments and suggestions were recorded by the research team.

<table>
<thead>
<tr>
<th>For each Item</th>
<th>Understand the question?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Repeat the question in your own words.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Any other words used?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rate the importance of this question from 1-10.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## AHCA Satisfaction Survey: CORE Q

### Personal Care Aides Top Questions and Average Scores

<table>
<thead>
<tr>
<th>Personal Care Aides Top Questions</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. What number would you use to rate the food?</td>
<td>9.8</td>
</tr>
<tr>
<td>Q18. What number would you use to rate how confident you are in your caregivers at this facility?</td>
<td>9.5</td>
</tr>
<tr>
<td>Q10. Overall, what number would you use to rate the staff?</td>
<td>9.13</td>
</tr>
<tr>
<td>Q20. What number would you use to rate the therapy you receive at this facility?</td>
<td>9</td>
</tr>
<tr>
<td>Q21. What number would you use to rate your access to care when you need it?</td>
<td>9</td>
</tr>
<tr>
<td>Q32. What number would you use to rate how often the facility staff handle issues or concerns in a way that is acceptable to you?</td>
<td>9</td>
</tr>
</tbody>
</table>
1. What number would you use to rate the food?

0  1  2  3  4  5  6  7  8  9  10
Worst  Best
Possible  Possible

1. Overall, how would you rate this facility?

1  2  3  4  5
Poor  Average  Good  Very  Excellent
Good
## Qsat and CoreQ: PILOT

### Questionnaire Results

<table>
<thead>
<tr>
<th>Question</th>
<th>Poor (%)</th>
<th>(N)</th>
<th>Average (%)</th>
<th>(N)</th>
<th>Good (%)</th>
<th>(N)</th>
<th>Very Good (%)</th>
<th>(N)</th>
<th>Excellent (%)</th>
<th>(N)</th>
<th>Not Involved / NA (%)</th>
<th>(N)</th>
<th>Overall Score+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you rate this facility?</td>
<td>3%</td>
<td>(33)</td>
<td>12%</td>
<td>(202)</td>
<td>31%</td>
<td>(534)</td>
<td>33%</td>
<td>(555)</td>
<td>21%</td>
<td>(359)</td>
<td>-----</td>
<td>-----</td>
<td>3.58</td>
</tr>
<tr>
<td>2. How would you rate the staff?</td>
<td>2%</td>
<td>(202)</td>
<td>10%</td>
<td>(161)</td>
<td>32%</td>
<td>(543)</td>
<td>33%</td>
<td>(564)</td>
<td>23%</td>
<td>(388)</td>
<td>-----</td>
<td>-----</td>
<td>3.66</td>
</tr>
<tr>
<td>3. How would you rate the food?</td>
<td>14%</td>
<td>(233)</td>
<td>23%</td>
<td>(379)</td>
<td>37%</td>
<td>(622)</td>
<td>19%</td>
<td>(311)</td>
<td>8%</td>
<td>(127)</td>
<td>-----</td>
<td>-----</td>
<td>2.83</td>
</tr>
<tr>
<td>4. How would you rate how happy you are?</td>
<td>7%</td>
<td>(115)</td>
<td>16%</td>
<td>(268)</td>
<td>34%</td>
<td>(579)</td>
<td>27%</td>
<td>(450)</td>
<td>16%</td>
<td>(268)</td>
<td>-----</td>
<td>-----</td>
<td>3.29</td>
</tr>
</tbody>
</table>

### # Responses

- Short Stay Residents: 853
- SNF Residents: 1811
- SNF Family: 1651
- AL Family: 430
- AL Residents: 411

CONTINUED TESTING >15,000 responses
Q2. How would you rate the staff?

- Excellent (5): 23%
- Very Good (4): 33%
- Good (3): 32%
- Average (2): 10%
- Poor (1): 2%

Overall Score for this item = 3.66 (on a 1-5 scale)
Q1. How would you rate this facility?

- Excellent (5): 21%
- Very Good (4): 33%
- Good (3): 31%
- Average (2): 12%
- Poor (1): 3%

Overall Score for this item = 3.58 (on a 1-5 scale)
Q3. How would you rate the food?

- Excellent (5): 8%
- Very Good (4): 19%
- Good (3): 37%
- Average (2): 23%
- Poor (1): 14%

Overall Score for this item = 2.83 (on a 1-5 scale)
Qsat

- Short Stay Resident Instrument (with 22 items and 8 demographic items)
- SNF Resident Instrument (with 18 items and 8 demographic items)
- SNF Family Instrument (with 19 items and 8 demographic items)
- ALF Family Instrument (with 20 items and 8 demographic items)
- ALF Resident Instrument (with 20 items and 8 demographic items)
**Factor Analysis**
Using all items in the instruments (excluding the global items) exploratory factor analysis (EFA) was used. The Eigenvalues from the principal factors (unrotated) are presented. Sensitivity analyses using principal factors and rotating provide highly similar findings.

This analysis shows that one factor explains the common variance of the items. This may be expected since the items were chosen to represent known areas of quality (satisfaction) concern in nursing homes.

<table>
<thead>
<tr>
<th></th>
<th>Nursing Home</th>
<th></th>
<th>Assisted Living</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resident</td>
<td>Short-stay</td>
<td>Family</td>
</tr>
<tr>
<td>Factor 1</td>
<td>9.61</td>
<td>14.69</td>
<td>11.73</td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.37</td>
<td>0.65</td>
<td>0.61</td>
</tr>
</tbody>
</table>

Resident | Family | Resident | Family
• Correlation Analysis (Items)

Using all items in the instruments (excluding the global items) a correlation analyses was used. The highest correlations are shown in the table. Items with the highest correlation are potentially providing similar satisfaction information.

<table>
<thead>
<tr>
<th></th>
<th>Nursing Home</th>
<th>Assisted Living</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resident</td>
<td>Short-stay</td>
</tr>
<tr>
<td>Highest Correlation</td>
<td>Q9-Q8 (.744)</td>
<td>Q8-Q6 (.841)</td>
</tr>
<tr>
<td>Next highest Correlation</td>
<td>Q9-Q6 (.696)</td>
<td>Q10-Q9 (.842)</td>
</tr>
</tbody>
</table>
• SUMMARY
The instrument (approx. 18 items) has the following characteristics:
  Items are all of known importance
  Items do not overlap in information provided
  Global items do not overlap in information provided
  Parsimonious
• **Correlation Analysis (With Global Items)**
Using all items in the instruments. Global item Q1 used. Lowest correlations shown. These are items that potentially provide more information when combined with the global item.

<table>
<thead>
<tr>
<th></th>
<th>Nursing Home</th>
<th>Assisted Living</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resident</td>
<td>Short-stay</td>
</tr>
<tr>
<td><strong>Correlation of 2 global items</strong></td>
<td>Q1-Q18 (.605)</td>
<td>Q1-Q22 (.747)</td>
</tr>
<tr>
<td><strong>Lowest Correlation</strong></td>
<td>Q1-Q3 (.477)</td>
<td>Q1-Q3 (.568)</td>
</tr>
<tr>
<td><strong>Next lowest Correlation</strong></td>
<td>Q1-Q7 (.508)</td>
<td>Q1-Q18 (.589)</td>
</tr>
<tr>
<td><strong>Next lowest Correlation</strong></td>
<td>Q1-Q11 (.517)</td>
<td>Q1-Q20 (.662)</td>
</tr>
</tbody>
</table>
**Factor Analysis (With Global Items)**

Using all items in the instruments. Global items are used. The Cronbach’s Alpha of adding the “best” additional item is shown. The additional item(s) is best in the sense that it is most highly correlated with the existing item(s), and therefore provide additional information about the same construct.

<table>
<thead>
<tr>
<th></th>
<th>Nursing Home</th>
<th>Assisted Living</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resident</td>
<td>Short-stay</td>
</tr>
<tr>
<td>Q1 + last satisfaction item</td>
<td>Q6 (.854)</td>
<td>Q10 (.941)</td>
</tr>
<tr>
<td>ADD</td>
<td>Q10 (.852)</td>
<td>Q6 (.937)</td>
</tr>
<tr>
<td></td>
<td>Q9 (.847)</td>
<td>Q2 (.931)</td>
</tr>
<tr>
<td>Q1 + ADD</td>
<td>Q2 + Q6 (.853)</td>
<td>Q2 + Q6 (.934)</td>
</tr>
<tr>
<td>ADD</td>
<td>Q9 + Q6 (.850)</td>
<td>Q10 + Q9 (.930)</td>
</tr>
<tr>
<td></td>
<td>Q10 + Q6 (.847)</td>
<td>Q9 + Q8 (.921)</td>
</tr>
</tbody>
</table>

- CoreQ
CoreQ: Discharge to Community

Correlation of 4 item CORE with overall satisfaction (using all data)

= 0.94

CoreQ SUMMARY SCORE adequately represents the overall satisfaction of the facility

The measure is the percentage of residents discharged from the nursing facility within 100 days of admission from a hospital to the SNF who were satisfied (using a 0-100% scale).
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 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: Discharge to Community

Summary Score

Scale

20 40 60 80 100

Summary Score

Scale

20 40 60 80 100
CoreQ: Discharge to Community

**SUMMARY**
- Very parsimonious
- Represents overall satisfaction
- Good distribution of scores
- Little ceiling / basement influences
CoreQ: Discharge to Community

**WHICH FACILITIES?**

1. Facilities that just want to use the CoreQ
2. Facilities that want the CoreQ PLUS the other items
3. Facilities that want the CoreQ PLUS their own items
4. Facilities that use a vendor (included as first 4 items).
CoreQ: Discharge to Community

PATIENT POPULATION?

- Any patient admitted to a nursing facility regardless of payor status for post-acute care
- Discharged within 100 days from admission back to community or to another nursing facility.
DATA COLLECTION?

- The data is collected over a maximum 6 month time window.
  - A shorter period can be used if the sample size meets the specifications (described below).
- The questionnaire will be mailed to patients discharged within 2 weeks of the discharge date.
- After a 2 week period a reminder invitation to complete the survey can be mailed.
- The time period for residents to respond will be within 2 months of receiving a questionnaire.
EXCLUSIONS?

- (1) Patients who died;
- (2) patients discharged to a hospital;
- (3) patients with Durable Power of Attorney for all decisions;
- (4) patients with hospice; and
- (5) patients who left the nursing facility against medical advice (AMA).
CoreQ: Discharge to Community

EXCLUSIONS?

- (1) Patients who died;
- (2) patients discharged to a hospital;
- (3) patients with Durable Power of Attorney for all decisions;
- (4) patients with hospice; and
- (5) patients who left the nursing facility against medical advice (AMA).
SPECIFIC PARAMETERS?

- No more than 6 months but continuously for all eligible discharges
- Minimum response rate (30%)
- Minimum numerator size (125)
- Minimum number of usable surveys must be 20
- All surveys sent and received (minus appropriate exclusions) should be used in the calculations of the response rate, patient scores, and facility scores.
SCORING?

- Respondents answering poor are given a score of 1, average = 2, good =3, very good =4 and excellent =5.
- For the 4 questionnaire items the average score for the patient is calculated.
- The facility score represents the percent of patients with average scores of 3.0 or above.
- That is, the facility score represents the number of respondents with an average score of =>3.0 divided by the total number of respondents (multiplied to make a percentage score).
“While doing the research, keep in mind there are only two kinds of facts... those that support my position... and inconclusive.”
I will now take questions from the floor

“I will now take questions from the floor”