Introduction to CALNOC
The Collaborative Alliance for Nursing Outcomes

CALNOC Mission

Advance global patient care excellence, outcomes and performance measurement efforts by:

- Leveraging a dynamic nursing outcomes database and reporting system
- Providing actionable data to guide decision making, performance improvement, and public policy
- Conducting research to optimize patient care excellence
- Building leadership expertise in the use of practice-based evidence
### The CALNOC Advantage

- **Leadership and Innovation**
  - Over 19 years of leadership and innovation in actionable information & research
  - Created the 1st database registry of nursing sensitive indicators
  - Contributed to the development of the National Quality Forum (NQF) measures for pressure ulcer and restraint use
  - 1st to introduce medication administration safety measure

- **Regulatory Compliance & Accreditation**
  - CALNOC assists hospitals in demonstrating compliance
    - Centers for Medicare and Medicaid Services (CMS)
    - The Joint Commission (TJC)
    - Magnet Qualification

- **Best Practices for Excellence in Patient Care**
  - Delivering benchmarks and best practices research

- **Industry Leader in Nursing Registry Reporting—Comprehensive, User Friendly, Customizable & Flexible Reporting**
  - Web-based tool for easy access
  - Flexible and customizable reports by Unit, Unit Type, Facility, State, Hospital System, etc.
CALNOC Measurement Development: Nursing Sensitive Measure Evolution

2004

2006-08

2009

NQF

TJC

CMS

Implementation Guide for the NQF Endorsed Nursing-Sensitive Care Measure Set

Nurse Sensitive Database Registry

Nursing Measure Development & Research

Indicator Development & Research

Practice Based Analysis

Industry Best Practices

Advocacy & Public Policy

Patient Care Excellence

CALNOC ADVANTAGE
NQF 2009 Re-Endorsed 12 of the 2004 Nursing Sensitive Measures

1. Death Among Surgical Inpatients with Treatable Serious Complications
2. Pressure Ulcer Prevalence**
3. Patient Falls **
4. Falls with Injury **
5. Restraint Prevalence (vest and limb) **
6. Urinary Catheter-Associated Urinary Tract Infection Rate (NHSN) **
7. Central Line-Associated Bloodstream Infection Rate (NHSN) **
8. Ventilator-Associated Pneumonia Rate (NHSN)
9. Skill Mix **
10. Nursing Care Hours per Patient Day **
11. Practice Environmental Scale- Nursing Work Index
12. Voluntary Turnover **

**CALNOC Indicators

Publishing Benchmarks to Improve the Industry


Table 4 Medical Surgical Benchmarks: Staffing Variables and Patient Characteristics (Percentiles)

<table>
<thead>
<tr>
<th>Staffing</th>
<th>Mean</th>
<th>SD</th>
<th>10%</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>90%</th>
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<tbody>
<tr>
<td>Total Hours of Care per Patient Day</td>
<td>9.21</td>
<td>1.3</td>
<td>7.72</td>
<td>8.37</td>
<td>8.16</td>
<td>8.93</td>
<td>10.90</td>
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<tr>
<td>RN Hours of Care per Patient Day</td>
<td>6.55</td>
<td>1.1</td>
<td>5.05</td>
<td>5.88</td>
<td>6.61</td>
<td>7.19</td>
<td>7.81</td>
</tr>
<tr>
<td>Licensed Hours of Care per Patient Day</td>
<td>7.93</td>
<td>1.0</td>
<td>6.16</td>
<td>6.42</td>
<td>6.98</td>
<td>7.68</td>
<td>8.28</td>
</tr>
<tr>
<td>Ratios</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Number of Patients per RN</td>
<td>3.81</td>
<td>0.7</td>
<td>3.08</td>
<td>3.37</td>
<td>3.66</td>
<td>4.09</td>
<td>4.87</td>
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<td>Number of Patients per Licensed Staff</td>
<td>3.52</td>
<td>0.5</td>
<td>2.94</td>
<td>3.15</td>
<td>3.46</td>
<td>3.77</td>
<td>4.20</td>
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<tr>
<td>Skill Mix</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Percent of Care Hours by RN</td>
<td>71.51</td>
<td>9.5</td>
<td>56.84</td>
<td>66.11</td>
<td>71.80</td>
<td>77.69</td>
<td>82.06</td>
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<tr>
<td>Percent of Care Hours by LVN</td>
<td>5.21</td>
<td>8.1</td>
<td>3.75</td>
<td>3.95</td>
<td>4.37</td>
<td>5.00</td>
<td>5.83</td>
</tr>
<tr>
<td>Percent of Care Hours by Other Staff</td>
<td>23.28</td>
<td>8.2</td>
<td>13.48</td>
<td>18.90</td>
<td>22.99</td>
<td>29.08</td>
<td>33.50</td>
</tr>
<tr>
<td>Percent of Care Hours by Contract Staff</td>
<td>6.25</td>
<td>8.9</td>
<td>0.13</td>
<td>2.19</td>
<td>4.39</td>
<td>8.20</td>
<td>12.83</td>
</tr>
<tr>
<td>Sitter Hours as Percent of Total Care Hours</td>
<td>3.55</td>
<td>4.1</td>
<td>0.0</td>
<td>0.55</td>
<td>2.46</td>
<td>5.23</td>
<td>8.07</td>
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<tr>
<td>Unit &amp; Patient Characteristics</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Workload Intensity as PCU of Total Pt Days</td>
<td>38.36</td>
<td>10.3</td>
<td>28.95</td>
<td>44.29</td>
<td>52.37</td>
<td>61.92</td>
<td>69.28</td>
</tr>
<tr>
<td>RN Voluntary Turnover</td>
<td>1.13</td>
<td>1.1</td>
<td>0.34</td>
<td>0.48</td>
<td>0.84</td>
<td>1.37</td>
<td>2.30</td>
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<tr>
<td>Total Voluntary Turnover</td>
<td>1.13</td>
<td>1.3</td>
<td>0.26</td>
<td>0.47</td>
<td>0.81</td>
<td>1.35</td>
<td>2.23</td>
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<tr>
<td>Percent Medical Patients</td>
<td>70.96</td>
<td>12.1</td>
<td>55.77</td>
<td>65.79</td>
<td>72.62</td>
<td>79.62</td>
<td>84.33</td>
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<tr>
<td>Patient Age</td>
<td>85.75</td>
<td>4.47</td>
<td>67.60</td>
<td>61.25</td>
<td>64.15</td>
<td>67.18</td>
<td>69.25</td>
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<tr>
<td>Percent Male (patient gender)</td>
<td>41.22</td>
<td>10.3</td>
<td>40.00</td>
<td>42.40</td>
<td>45.11</td>
<td>48.89</td>
<td>53.42</td>
</tr>
</tbody>
</table>
Participating Hospitals Generate Business Intelligence Reports

- Customized reports that examine patient outcomes that influence costs and reimbursement and the resources deployed to achieve outcomes.
- Benchmark performance against like hospitals, hospitals in the same state, other facilities in a system, Magnet hospitals and more.
- Compare unit-based performance within service lines.
- Drill down to the unit level to understand processes that affect patient safety and quality to better understand where to prioritize improvements.
- Identify other hospitals that are doing better – to learn from their best practice.

CALNOC Unit Level Data

- Adult Acute Care:
  - Critical Care
  - Step Down
  - Telemetry
  - Medical/Surgical
- Pediatrics:
  - Level 3-4 NICU
  - Level 2 Special Care Nursery
  - Critical Care
  - Step Down
  - Medical/Surgical
- Post Acute:
  - Hospital-Based Skilled Nursing (SNF)
  - Acute Rehabilitation
- Emergency Department
- Maternal/Child Care
Benchmarking Measures

At a unit level within a hospital, or the service line, or at the hospital level, or for entire health systems...........

**Structural Measures**
- Hours per Patient Day
- Skill Mix
- Ratios of patients to licensed staff
- Use of Contract Staff
- Sitter Utilization
- Nurse education, certification, and years of experience
- Staff voluntary turnover
- Maternal/Child Deliveries
- ED Encounters/Boarders

**Process Measures**
- Risk Assessment for Falls, Pressure Ulcers, and Skin
- Protocol Implementation for Fall and Pressure Ulcer Prevention
- Restraint Use
- Medication Safe Practices
- Patient/Bed Turnover
- ED Patient Flow

**Outcome Measures**
- Fall Rates
- Injury Fall Rates
- Hospital Acquired Pressure Ulcers Prevalence
- Medication Error Rates
- NHSN HAI
- HCAHPS

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**CUSTOM REPORT CARDS**

CALNOC Benchmarking Report Card

- You pick which groups to compare with.
- You determine the time frame to report.
- You determine the measures to report (up to 20).

CALNOC Toolkit

1-Page Custom Report Card

Your Hospital and Service Line of Interest
**Example Report Card: Structural Measures**

**CALNOC Benchmarking Report Card**

**ICN: YOUR FACILITY**

**Service Line(s): Adult Acute Care**

**From JANUARY 2013 To MARCH 2013**

**Report Groups: California**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Your Facility All Units</th>
<th>Benchmark Mean</th>
<th>Benchmark Percentiles: All Units</th>
<th>Facility Percentile Rank **</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent RN Hours of Care</td>
<td>72.88</td>
<td>79.59</td>
<td>70.17</td>
<td>74.62</td>
<td>79.71</td>
</tr>
<tr>
<td>Percent Contract Hrs of Care</td>
<td>12.07</td>
<td>4.23</td>
<td>0.00</td>
<td>0.25</td>
<td>2.44</td>
</tr>
<tr>
<td>Total Hrs per Pt Day</td>
<td>10.67</td>
<td>11.29</td>
<td>9.11</td>
<td>10.07</td>
<td>11.05</td>
</tr>
<tr>
<td>No of Pts per RN</td>
<td>3.15</td>
<td>2.76</td>
<td>2.25</td>
<td>2.42</td>
<td>2.68</td>
</tr>
<tr>
<td>Sitter Hrs as Percent of Total Care Hours</td>
<td>2.31</td>
<td>4.11</td>
<td>0.00</td>
<td>1.17</td>
<td>3.16</td>
</tr>
<tr>
<td>RN Voluntary Turnover as % of Total RN Employee</td>
<td>0.77</td>
<td>0.85</td>
<td>0.00</td>
<td>0.00</td>
<td>0.42</td>
</tr>
</tbody>
</table>

* Facility Percentile Rank shows the percent of hospitals with results numerically LOWER than yours. Your percentile rank may not match the Benchmark Group Percentiles exactly because of differences in calculation methods.

**Compare to Selected Groups**

**Individual Hospital to Group Comparison Report by Total Facility**

**Service Line: Adult Acute Care**

**Medians: % of Pts with Hospital Acq. Press. Ulcers All Categories, % of Pts with Hospital Acq. Press. Ulcers Category II+, Falls per 1000 Pt Days**

**From JANUARY 2011 To DECEMBER 2011**

**Graph Showing Comparison of % of Pts with Hospital Acq. Press. Ulcers All Categories, % of Pts with Hospital Acq. Press. Ulcers Category II+, Falls per 1000 Pt Days**

**Graph Legend**

- Your Hospital
- CALNOC
- Magnet
- UHC (Univ HealthSys)
Trend reports with control limits for quality control
Determine kind of variation over time or identify that a clinical process is not stable

Trend by Unit - Quarterly (Magnet)
Service Line: Adult Acute Care
Measure: Falls per 1000 Patient Days
Unit: Med-Tech SSE
Quarter: Between Jan - Mar 2010 and Oct - Dec 2011
Unit Type: Med - Med-Surgical

Trend Report with Control Limits by Unit - Monthly
Percent Contract Hrs of Care
From January 1996 to September 2010
4: Unit Type = Medical/Surgical
Benchmarking Reports: Understand Ranking (Percentiles)

If the 2000 rate of 10.3 had continued into 2013, 10,300 of 100,000 CALNOC patients would have had HAPU.

But with a 2013 rate of 0.4 HAPU --- sparing 9,900 pain and suffering.

EXAMPLE That CALNOC Hospitals improve what they measure!
Health care providers should be relentless in their efforts to reduce the risk for injury from care, aiming for zero harm whenever possible and striving to create a system that reliably provides high-quality health care for everyone.

National Strategy for Quality Improvement in Healthcare

"Health care providers should be relentless in their efforts to reduce the risk for injury from care, aiming for zero harm whenever possible and striving to create a system that reliably provides high-quality health care for everyone."

National Strategy for Quality Improvement in Healthcare

Target “Zero” SUSTAINED by half of CALNOC Hospitals!

Corporate System Comparison Report by Total Facility

BUT OPPORTUNITY REMAINS:
Great variation between hospital systems in HAPU rates.
National Focus on Quality, Safety, Cost, Efficiency and Effectiveness Must Include Nursing’s Contribution

- “Nursing sensitive” quality measures are rapidly moving into healthcare public reporting and pay for performance.
  - Nursing sensitive defined as processes and outcomes that are affected, provided, and/or influenced by nursing personnel, but for which nursing is not exclusively responsible. (National Quality Forum)
- Nursing care in hospitals is a huge contribution to acute care health status.
- Nursing care must also be measured and benchmarked across transitions in care and settings.
  - Post-acute care needs collaborative champions to move forward.
  - Ambulatory care is diverse.

How Can IOM Help?

- **Synthesize Measurements**: Gather the evidence and review with expert panels to determine what are the very FEW measures we should consider?
- **Champion Meaningful Measurement**: Outside the walls of the hospital is challenging for measurement development of nursing care value and impact on health status.
- **Link Measurement and Policy**: Healthcare providers can not spare resources to measure for the sake of measurement.
- **Assure Industry Resources**: New measurement development and benchmark capacity
Selected CALNOC Publications

- 2013 Spetz, J., Mark, B.A., Herrera, C.N., Harless, D.W. Using Minimum Nurse Staffing Regulations to Measure the Relationship Between Nursing and Hospital Quality of Care.. Medical Care Research and Review, 70(1).
Selected CALNOC Publications


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