Using Data to Motivate Hospital Improvement

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Quality Improvement Medical Director
Goal:
• Stimulate improvements in quality and safety within hospitals and provide members with information to assist them in selecting hospitals

Approach:
• Measure diverse indicators of health care quality and patient safety and report them to hospitals in the BCBSIL Hospital Profile
• Use results to support contracting process and build foundation for pay-for-performance reimbursement
• Provide information on hospital performance to members using the Blue StarSM Hospital Report

Hospital Profile Indicators
- Leapfrog
- Reporting on Near Misses
- Hospital Member Survey
- Utilization Efficiency and Administrative Efficiency
- AHRQ Patient Safety Indicators and Inpatient Quality Indicators
- Physician Survey
- Hospital Quality Alliance Indicators
- Structural Indicators: Board Certification and Accreditation
- Participation in State & National Quality Improvement Initiatives (Extra Credit)
Among the recognized programs are participation in:

- AHA Mission Lifeline
- American Heart Association (AHA) Get With the Guidelines Programs: Action, Heart Failure, Stroke
- ACC National Cardiovascular Data Registry (ACC Database)
- Door to Balloon (D2B) Alliance
- Society of Thoracic Surgeons National Database (STS Database)
- Society of Chest Pain Centers accreditation
The Blue Star Hospital Report helps consumers make informed decisions about where to seek medical care

- Information sent to hospitals in the Profiles is summarized for the public in the Blue Star Hospital Report
- 94 urban Illinois hospitals were included in the 2009 report
- Hospital performance is reported annually by BCBSIL in accordance with defined levels of performance
- Results are then made available to all consumers, publicly reported at www.bcbsil.com
Hospitals may earn up to ten “Blue Stars”

- **Structural**
  - Structural Indicators
  - Participation in State and National QI Initiatives
- **Process**
  - Leapfrog
  - Hospital Quality Alliance Indicators
- **Outcomes**
  - AHRQ Inpatient Quality Indicators
  - AHRQ Patient Safety Indicators
- **Member Satisfaction**
  - Overall Satisfaction
  - Education and Coordination of Care
- **Efficiency**
  - Utilization Efficiency
  - Administrative Efficiency
Blue Star Hospital Report

Physician and member perception of the Blue Star Hospital Report:

2008 HMO PCP and PPO Practitioner Survey Results
- Are you familiar with the Blue Star Hospital Report? (% Yes)
  - HMO: 33.6% (291/866)
  - PPO: 9.2% (303/3281)
- How would you rate the Blue Star Hospital Report? (Excellent, Very Good, or Good)
  - HMO: 96.1% (274/285)
  - PPO: 89.3% (259/290)

2008 Hospital Patient Survey Results
- Have you seen the Blue Star Hospital Report? (% Yes)
  - 7.2% (943/13,062)
- Was the information useful? (% Yes)
  - 95.2% (853/896)
Administrative Efficiency

- Administrative Efficiency is the percentage of claims submitted by the hospital to BCBSIL that are submitted electronically.
- For both the hospital and the health plan, electronic claims are more efficient to process than paper claims. Claims submitted electronically are received more promptly and finalized sooner after the date of service.

2009 Profile

(n = 176)

Mean = 94.75%

Data Source: BCBSIL claims received from 1/1/2008 to 12/31/2008.
**Overall satisfaction composite rate includes:**

- Quality of Care received rated as Top 2 Box Score (Excellent or Very Good)
- Definitely or probably would return to hospital for future care, and
- Definitely or probably would recommend hospital to a friend/relative

### BCBSIL Survey of Members with a Hospital Admission

#### 2006-2008 Overall Satisfaction Composite

<table>
<thead>
<tr>
<th>Year</th>
<th>Satisfaction Composite Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>88.1%</td>
</tr>
<tr>
<td>2007</td>
<td>89.2%</td>
</tr>
<tr>
<td>2008</td>
<td>88.9%</td>
</tr>
</tbody>
</table>
2010 BCBSIL Hospital Profile Scores

2010 BCBSIL Hospital Profile Scores For Hospitals In Peer Groups 1 to 5

Score (%)

Hospitals

(n = 93)
### BCBSIL 2006-2008 Survey of Members with a Hospital Admission

<table>
<thead>
<tr>
<th>Question</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement with decision making about care while hospitalized</td>
<td>76.7%</td>
<td>78.5%</td>
<td>77.6%</td>
</tr>
<tr>
<td>Education given about the medical condition being treated</td>
<td>75.1%</td>
<td>77.0%</td>
<td>76.3%</td>
</tr>
<tr>
<td>Education received on medications administered</td>
<td>70.4%</td>
<td>72.3%</td>
<td>69.2%</td>
</tr>
<tr>
<td>Explanation of what would happen during diagnostic tests/treatments</td>
<td>74.3%</td>
<td>76.4%</td>
<td>75.3%</td>
</tr>
<tr>
<td>procedures received</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education on the purpose and risks of surgical procedures received</td>
<td>85.5%</td>
<td>87.4%</td>
<td>86.6%</td>
</tr>
<tr>
<td>Understanding of discharge instructions received</td>
<td>86.5%</td>
<td>89.6%</td>
<td>89.2%</td>
</tr>
<tr>
<td>Received a complete list of medications</td>
<td>NA</td>
<td>88.5%</td>
<td>89.5%</td>
</tr>
<tr>
<td>Received education about new meds prescribed at discharge</td>
<td>86.0%</td>
<td>87.5%</td>
<td>87.7%</td>
</tr>
<tr>
<td>Received instructions for follow-up with the doctor</td>
<td>96.3%</td>
<td>96.7%</td>
<td>96.6%</td>
</tr>
</tbody>
</table>
Hospital Quality Alliance Indicators

Process of care measures for which hospitals collect and submit data to CMS.

Data Source:
- Hospital Compare Web site (www.hospitalcompare.hhs.gov)
- Results reported are for the twelve month time period publicly available at the time BCBSIL produced the Hospital Profile during the listed year.

Indicators
- Heart Attack/Acute Myocardial Infarction
- Heart Failure
- Surgical Infection Prevention
### Hospital Quality Alliance Indicators: Acute Myocardial Infarction

<table>
<thead>
<tr>
<th>Acute Myocardial Infarction</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Attack Patients Given Aspirin at Arrival</td>
<td>91%</td>
<td>93%</td>
<td>93%</td>
<td>92%</td>
<td>94%</td>
</tr>
<tr>
<td>Heart Attack Patients Given Aspirin at Discharge</td>
<td>89%</td>
<td>89%</td>
<td>91%</td>
<td>90%</td>
<td>92%</td>
</tr>
<tr>
<td>Heart Attack Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD)</td>
<td>76%</td>
<td>80%</td>
<td>80%</td>
<td>86%</td>
<td>89%</td>
</tr>
<tr>
<td>Heart Attack Patients Given Beta Blocker at Arrival</td>
<td>84%</td>
<td>87%</td>
<td>87%</td>
<td>89%</td>
<td>NA</td>
</tr>
<tr>
<td>Heart Attack Patients Given Beta Blocker at Discharge</td>
<td>87%</td>
<td>88%</td>
<td>88%</td>
<td>93%</td>
<td>93%</td>
</tr>
<tr>
<td>Heart Attack Patients Given PCI Within 90 Minutes Of Arrival</td>
<td>60%</td>
<td>66%</td>
<td>52%</td>
<td>67%</td>
<td>77%</td>
</tr>
<tr>
<td></td>
<td>120 mins</td>
<td>120 mins</td>
<td>90 mins</td>
<td>90 mins</td>
<td>90 mins</td>
</tr>
<tr>
<td>Heart Attack Patients Given Smoking Cessation Advice/Counseling</td>
<td>75%</td>
<td>83%</td>
<td>88%</td>
<td>90%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Reported rates are the Illinois average, as reported on the Hospital Compare website during the listed year.
### Hospital Quality Alliance Indicators: Heart Failure

<table>
<thead>
<tr>
<th>Heart Failure</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Failure Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD)</td>
<td>80%</td>
<td>83%</td>
<td>84%</td>
<td>87%</td>
<td>89%</td>
</tr>
<tr>
<td>Heart Failure Patients Given an Evaluation of Left Ventricular Systolic Function (LVS)</td>
<td>84%</td>
<td>88%</td>
<td>90%</td>
<td>92%</td>
<td>93%</td>
</tr>
<tr>
<td>Heart Failure Patients Given Discharge Instructions</td>
<td>54%</td>
<td>66%</td>
<td>70%</td>
<td>77%</td>
<td>79%</td>
</tr>
<tr>
<td>Heart Failure Patients Given Smoking Cessation Advice/Counseling</td>
<td>68%</td>
<td>82%</td>
<td>85%</td>
<td>92%</td>
<td>93%</td>
</tr>
</tbody>
</table>

Reported rates are the Illinois average, as reported on the Hospital Compare website during the listed year.
### Hospital Quality Alliance Indicators: Surgical Infection Prevention

<table>
<thead>
<tr>
<th>Surgical Infection Prevention</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery Patients Who Received Preventative Antibiotic(s) One Hour Before Incision</td>
<td>67%</td>
<td>75%</td>
<td>79%</td>
<td>86%</td>
<td>88%</td>
</tr>
<tr>
<td>Surgery Patients Whose Preventative Antibiotic(s) are Stopped Within 24 hours After Surgery</td>
<td>60%</td>
<td>66%</td>
<td>72%</td>
<td>81%</td>
<td>87%</td>
</tr>
<tr>
<td>Surgery Patients Who Received the Appropriate Preventative Antibiotic(s) for Their Surgery</td>
<td>NA</td>
<td>NA</td>
<td>91%</td>
<td>93%</td>
<td>94%</td>
</tr>
<tr>
<td>Surgery Patients Who Received Treatment To Prevent Blood Clots Within 24 Hours Before or After Selected Surgeries</td>
<td>NA</td>
<td>NA</td>
<td>79%</td>
<td>80%</td>
<td>83%</td>
</tr>
<tr>
<td>Surgery Patients Whose Doctors Ordered Treatments to Prevent Blood Clots For Certain Types of Surgeries</td>
<td>NA</td>
<td>NA</td>
<td>82%</td>
<td>84%</td>
<td>86%</td>
</tr>
</tbody>
</table>

Reported rates are the Illinois average, as reported on the Hospital Compare website during the listed year.
Mortality rates (risk-adjusted)
- Among the reported mortality rates are rates for Heart Attack, Inpatient Heart Attack, Stroke, Congestive Heart Failure, Inpatient CABG

Utilization indicators: examine procedures whose use varies significantly across hospitals and for which questions have been raised about overuse, underuse, or misuse.
- One measure assesses the number of hospital-level bilateral cardiac catheterizations per 100 discharges with procedure code of heart catheterization.

Infections
- Central-line associated bloodstream infections

Volume and charges: Number of admissions, median length of stay, median charge for
- Heart Failure
- Heart Failure and Shock with Complications
- Heart Failure and Shock with Major Complications
- Outpatient PTCA

Nursing hours per patient day (Med-Surg, Critical Care): Number of hours/patient/day and % of hours that are RN hours
In the past, it was assumed that CLABSIs were an inevitable part of ICU care.

However, in recent years, hospitals that focus on the details of optimal central line care have demonstrated that CLABSIs can be eliminated, or nearly eliminated.

Are there other similar opportunities?
Readmissions

- Readmissions are an area of particular concern from both a cost perspective and a quality perspective.
- For BCBSIL, hospital-specific readmission rates are as high as 18%.
  - Measurement of readmissions is challenging: how many were appropriately planned readmissions, such as a readmission for surgery or scheduled chemotherapy?
- Some cardiovascular condition-specific readmission rates seem high. Is this an area of opportunity similar to CLABSI?
  - Heart Failure: 13.6%
  - Acute MI: 12.4%
  - Arrhythmias: 7.5%
  - Vascular surgery: 9.6%
Ambulatory care sensitive admissions (ASCAs) are admissions “for which good outpatient care can potentially prevent the need for hospitalization, or for which early intervention can prevent complications or more severe disease."

While not every ASCA is preventable, and patient factors also play a role, ASCA rates are outcome measures reflecting the quality of ambulatory care delivery in preventing medical complications. In best practice healthcare systems, about 40% of ASCAs are avoided.

Cardiovascular ASCAs are:

- Angina
- Heart failure
- Hypertension
Ambulatory Care Sensitive Admissions

ASCA rates per 1000 Medicare patients/year
(Source: Milliman analysis)
• Heart Failure: 16.5
• Hypertension: 0.9
• Angina 0.7
A New Opportunity:
Surgical Safety Checklist

The 1/29/09 New England Journal of Medicine reported the positive impact of using a 19-item surgical safety checklist designed to improve team communication and consistency of care.

The checklist was tested in eight hospitals in eight countries; data was collected on 3733 consecutive patients undergoing noncardiac surgery prior to the checklist and 3955 after implementation of the checklist.

Results:

- Mortality decreased from 1.5% to 0.8% (P=0.003)
- Inpatient complications decreased from 11.0% to 7.0%

In response to this new data, the Institute for Healthcare Improvement set a goal of having every hospital in the country test the Surgical Safety Checklist at least one time with one operating room team.

NEJM article: http://content.nejm.org/cgi/reprint/360/5/491.pdf
Checklist: http://content.nejm.org/cgi/data/NEJMsa0810119/DC1/1
IHI Sprint: http://www.ihi.org/IHI/Programs/ImprovementMap/WHOSSurgicalSafetyChecklist.htm
## Surgical Safety Checklist

### SIGN IN
- **Patient has confirmed:**
  - Identity
  - Site
  - Procedure
  - Consent

- Site marked: Not applicable
- Anaesthesia safety check completed
- Pulse oximeter on patient and functioning

### TIME OUT
- Confirm all team members have introduced themselves by name and role
- Surgeon, anaesthesia professional and nurse verbally confirm
  - Patient
  - Site
  - Procedure

### SIGN OUT
- Nurse verbally confirms with the team:
  - The name of the procedure recorded
  - That instrument, sponge and needle counts are correct (or not applicable)
  - How the specimen is labelled (including patient name)
  - Whether there are any equipment problems to be addressed

- Surgeon, anaesthesia professional and nurse review the key concerns for recovery and management of this patient

#### Anticipated Critical Events
- Surgeon reviews: What are the critical or unexpected steps, operative duration, anticipated blood loss?
- Anaesthesia team reviews: Are there any patient-specific concerns?
- Nursing team reviews: Has sterility (including indicator results) been confirmed? Are there equipment issues or any concerns?

#### Additional Checks
- Has antibiotic prophylaxis been given within the last 60 minutes?
  - Yes
  - Not applicable
- Is essential imaging displayed?
  - Yes
  - Not applicable