Translating Institutional Goal-Setting and Benchmarking to the Bedside: Dashboards, Clinical Service Groups and Goal Sheets

The Quality Colloquium
on the Campus of
Harvard University

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Overview

I. Prioritizing Organizational Goals

II. Developing a Quality Structure to Achieve Organizational Goals

III. Translating Organizational Goals into Action: Utilizing Dashboards to Drive Change

IV. Integrating Performance Improvement into Daily Activities: Daily Goal Sheets

Prioritizing Organizational Goals

- Patient Safety
- Congruent with the mission, vision, values, and strategic plan of the institution
- High-volume diagnoses, procedures, processes
- High-cost diagnoses, procedures, processes
- Problem-prone procedures, processes
- Input from external sources (licensing, regulatory agencies)

Barriers To Effective Integration

- Hospital
  - Diversity of patient populations
  - Diversity of healthcare populations
  - Crisis management/Day-to-day imperatives
  - Fiscal constraints
  - Physician culture
- Academic Medical Center
  - Lack of alignment between School of Medicine and Hospital
  - Clinical service chiefs are academic department heads
  - Hospital physicians are primarily faculty

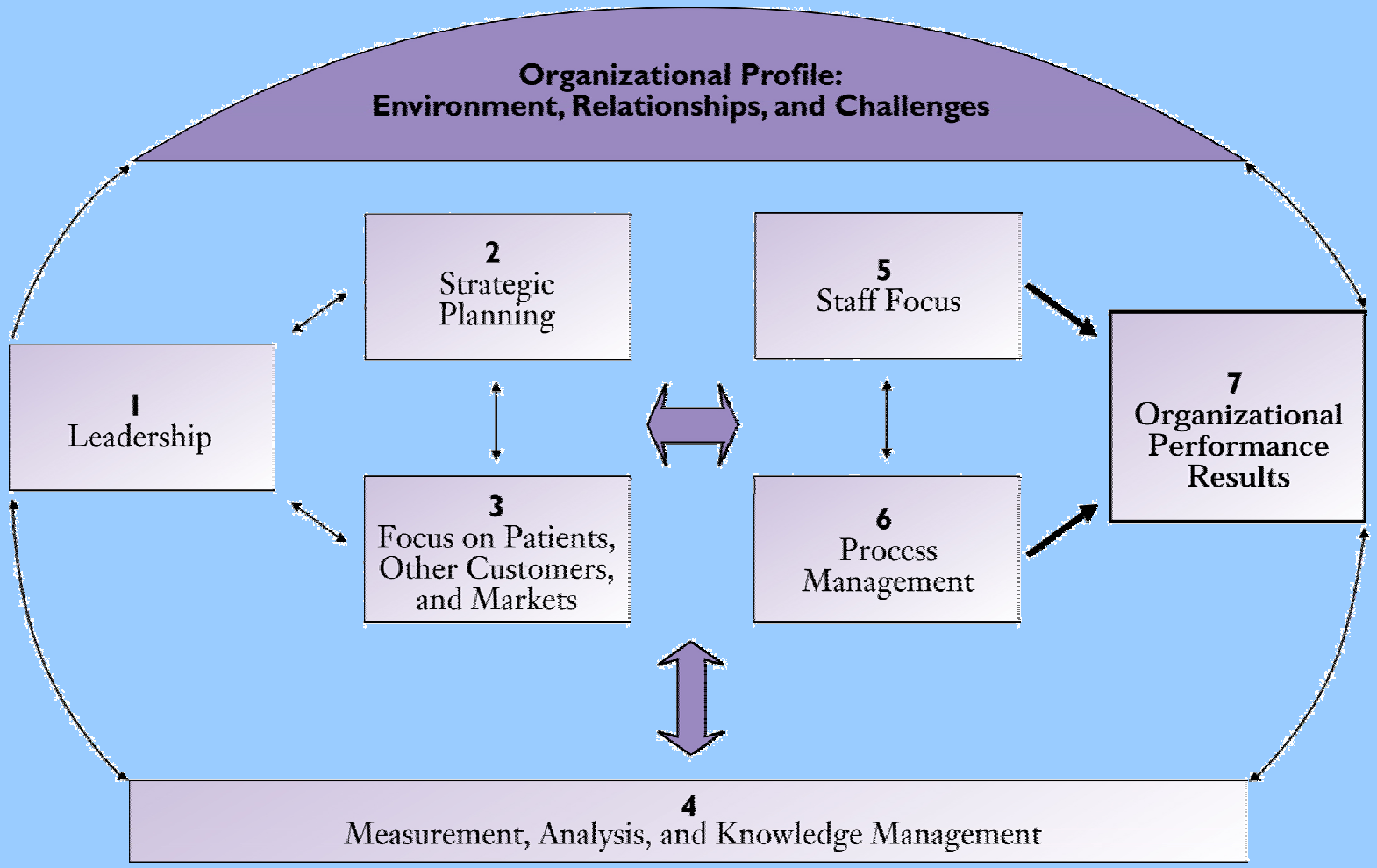
Integration of Performance Improvement

- Public Reporting Data/JCAHO & CMS: Heart, Medicine, Emergency Medicine, Obstetrics, Pediatrics
- Internal Reporting/Hospital Dashboards for Clinical Ser Groups and other Services/Departments

- Patient Safety
- IHI's 100,000 Lives Saved Campaign
- Surviving Sepsis Campaign
- Heart/Cancer Services
- Perinatal Services
- Patient Satisfaction
- Required Measures
- CARE effort

Performance Standards
- Enhance Quality Program
- Implement Electronic Patient Recor
- Implement Strategic Plan
- Improve Satisfaction
- Meet Financial Targets

Malcolm Baldrige National Quality Award
A System Perspective



Developing a Quality Structure to Achieve Organizational Goals

- **What didn't work**:
  - Hospital-Within-Hospital (HWH) Structure
    - Led by administrative triad (Physician, Nurse, Operations Administrator)
    - Quality structure supported HWH Quality Councils led by administrative triad
    - HWH Quality Councils overseen by Executive Quality Council
- **Why it didn't work:**
    - Those closest to operational processes not involved in performance improvement efforts and measurement
    - Not enough specificity in terms of indicator development and measurement to identify relevant opportunities for improvement
    - Disparate databases not conducive to obtaining readily available data for performance improvement (Solution: Create Decision Support Services Dept)
    - Attempting to measure "the universe" for all patient populations rather than using Pareto principle (80/20 rule)

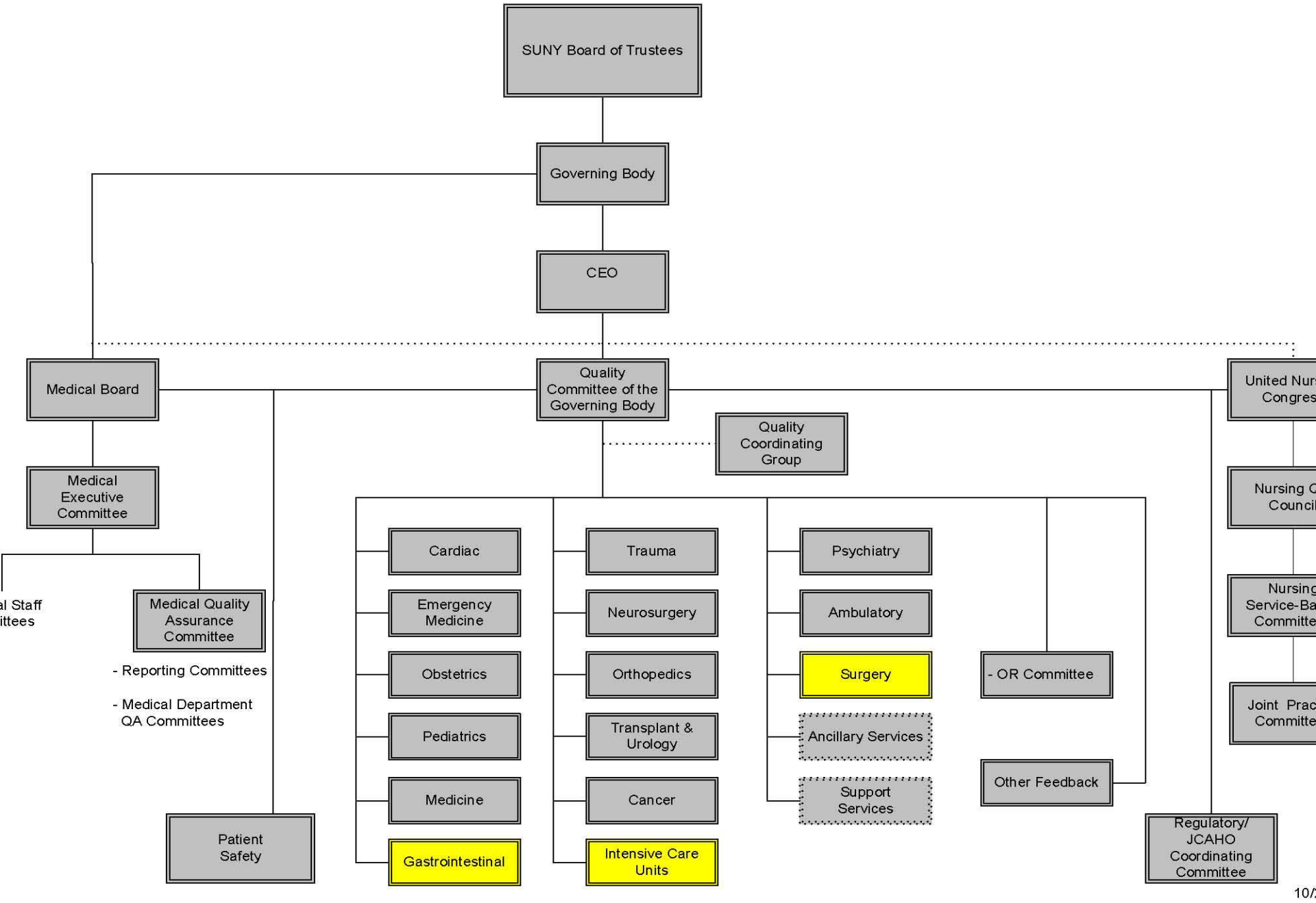
Modalities to Overcome Barriers

- Structure
- Measurement
- Expression of Measurement
- Dissemination
- Consistency
- Feedback
- Response

Developing a Quality Structure to Achieve Organizational Goals

- Executive Leadership Changes Led to Structural Changes
  - Administrative Table of Organization
  - Quality Management Structure
    - Formation of Quality Committee of the Governing Body
    - Formation of Quality Coordinating Group
      - Reviews organizational data
      - Identifies opportunities for improvement
      - Delegates responsibility to appropriate quality committee for follow-up and improvement
    - Formation of Clinical Service Groups
    - Development of Institutional and Clinical Service Group Dashboards
    - Evolution to identify relevant indicators for key processes through service groups

Stony Brook University Hospital
Quality Management Structure



Measurement: Expectations for Clinical Service Groups

- Ownership
- Derivation
- Iteration
- Feedback
- Response

Clinical Service Groups (CSGs)

- Interdisciplinary service group consisting of physicians, nurses, administrators, ancillary, support staff, clinical educators and additional health care professionals, as necessary
- Focused on quality, operations, service, utilization, and financial improvement
- Performance elements reflect the above areas for improvement

Expression of Measurement: Dashboards

- Elements derived from Clinical Service Groups/Regulatory requirements
- Clarity/Focus (green, yellow, red)
- Explicit trending
- Benchmarks
- Data dictionary
  - Numerator definitions
  - Denominator definitions
  - Target sources

Expression and Dissemination of Measurement Through Quality Dashboards

- JCAHO/ORYX Core Measures
- CMS Public Reporting Project
- Service Group Specific Indicators
- Other Indicators and Opportunities for Improvement Prioritized Using the Following Criteria
  - Quality focus
  - Patient Safety
  - Meets mission and strategic goals of the hospital
  - High-risk
  - Problem-Prone
  - High Volume
  - High-cost
- **Intranet Access/Direct E-mail**

Expression of Measurement Through Quality Dashboards

- **JCAHO/ORYX Core Measures Sets**
  - Acute Myocardial Infarction
  - Pregnancy and Related Conditions
  - Community Acquired Pneumonia

- **CMS Public Reporting Project:**
  - Acute Myocardial Infarction
  - Community Acquired Pneumonia
  - Congestive Heart Failure
  - Future Emphasis
    - Patient Satisfaction
    - Surgical Care Improvement
    - Linkage to Pay for Performance (Pay for Quality)

Translating Organizational Goals Into Action: Utilizing Dashboards to Drive Change

- What works:
  - Involving those closest to processes that are being improved
  - Multiple disciplines involved in key indicator development
  - Access to multiple databases using one source (Decision Support Services)
  - Collecting “actionable” data
  - Demonstrating value to improve organizational performance and gain buy-in
  - Recognize and celebrate successes

Translating Organizational Goals Into Action: Utilizing Consistent Dashboards to Drive Change

- Roadmap to Developing Dashboards
  - Utilized “Value Compass” Approach
    - Clinical Outcomes
    - Functional Outcomes
    - Patient/Employee/Customer Satisfaction
    - Administrative/Financial Outcomes
  - Aligned strategic goals with quality goals
  - Identified key metrics associated with strategic quality goals using prioritization mechanism through service group structure
    - Top-down and bottom-up approach for identifying key metrics by service
    - Utilized benchmarking and evidence-based literature to identify key metrics and targets

Translating Organizational Goals Into Action: Utilizing Consistent Dashboards to Drive Change

- **How do we populate dashboards?**
  - Data collected:
    - Manually
    - Electronically
    - Hybrid
  - Data submitted to Quality Management Department or Decision Support Services Department as data repository
  - Key individuals responsible for dashboard population
- **How is dashboard information shared?**
  - Clinical Service Group liaisons (Quality Management representatives) bring updated dashboards to Clinical Service Group meetings
  - Participants at Clinical Service Group meetings share and distribute dashboards at Joint Practice meetings, staff meetings, team meetings and other relevant forums
  - Distributed electronically to clinical chairs, executive staff and “C” Suite
  - Data are posted on performance improvement boards on the units
  - Shared at Quality Committee of the Governing Body meetings as well as w the Governing Body itself.

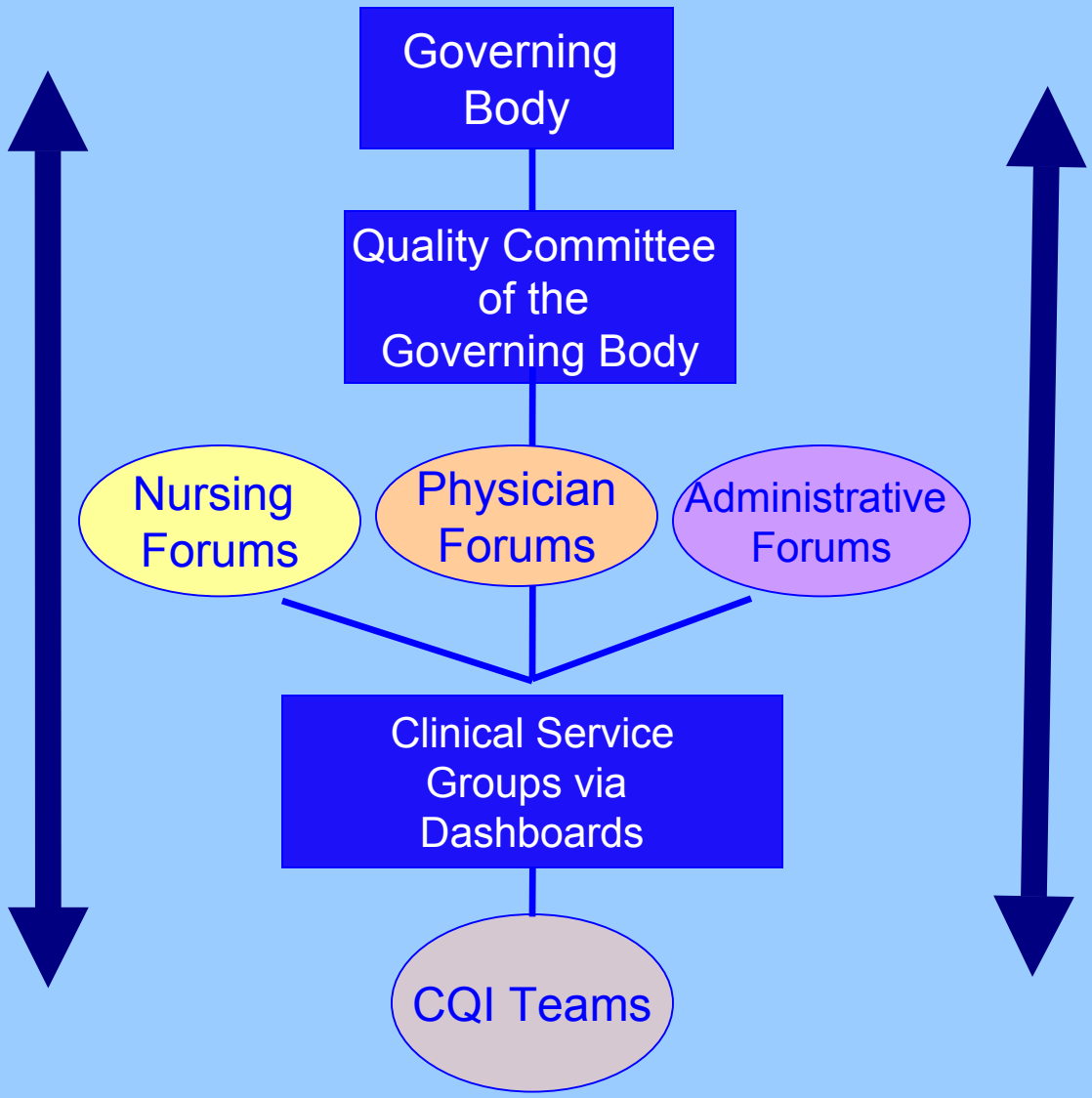
Decision Support Services: "One Stop Shop" for Consistent Data and Analysis

- **Access to all relevant databases**
  - University Healthsystem Consortium (UHC)
  - Healthshare 2
  - Solucient
  - Press Ganey
  - Patient Complaints
  - Patient Safety Net
  - Service-Specific
    - Surgery: National Surgical Quality Improvement Program
    - Trauma Registry
    - Cardiology Databases
- **Future State**
  - Data warehouse with distributed access

Decision Support Services

- **Assists to Support Quality-Driven Initiatives**
  - Performance Standards/Dashboard elements
  - Clinical Resource Management
    - Identifying areas for potential improvement
    - Focused “drill downs” for follow-up analyses
  - Critical Care
    - SICU, PICU, MICU: IHI Collaborative project
    - MICU: Data collection/analyses; data manager
  - Physician Feedback Reports (for quality review and recredentialing
  - Ad-hoc analyses for Clinical Service Groups, CQI Teams, Hospital Initiatives

Data/Information Feedback and Communication



Stony Brook University Hospital - Executive Summary Dashboard

"Confidential and required to be collected and maintained pursuant to Public Health Law Sections 2805 - j,k,l and m."

Operations	Target	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06
Discharges	>=2377	2263	2283	2430	2289	2256	2280	2253	2291	2206	2593	2271	2462	
Occupancy rate	>=87.2%	85.2%	87.8%	85.9%	88.2%	85.8%	86.3%	81.0%	86.9%	96.4%	92.3%	85.4%	88.6%	
ALOS - Discharged Days	<=5.54	6.19	5.97	5.77	5.98	5.69	5.59	6.04	5.57	5.56	6.09	5.45	5.65	
Case Mix Index (all patients)	>=1.788	1.897	1.825	1.797	1.810	1.798	1.821	1.794	1.773	1.750	1.926	1.868	1.917	
Case Mix Index (all Medicare patients)	>=1.820	1.728	1.855	1.641	1.699	1.574	1.658	1.716	1.737	1.753	1.814	1.699	1.809	
Case Mix Index (all non-Medicare patients)	>=1.779	1.979	1.821	1.850	1.867	1.881	1.885	1.816	1.790	1.749	1.937	1.933	1.949	
Volume - Surgical Procedures	Target	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06
Surgical Procedures - Total	>=1475	1578	1472	1594	1343	1390	1412	1299	1405	1434	1650	1450	1602	
Main OR - Total	>=887	891	912	933	800	838	835	758	823	853	962	828	937	
Ambulatory Surgery Center	>=588	687	560	661	543	552	577	541	582	581	688	622	665	
Volume - Cardiac Procedures	Target	Average Rate – SBUH Q2 2003	Average Rate – SBUH Q3 2003	Average Rate – SBUH Q4 2003	Average Rate – SBUH Q1 2004	Average Rate – SBUH Q2 2004	Average Rate – SBUH Q3 2004	Average Rate – SBUH Q4 2004	Average Rate – SBUH Q1 2005	Average Rate – SBUH Q2 2005	Average Rate – SBUH Q3 2005	Average Rate – SBUH Q4 2005	Average Rate – SBUH Q1 2006	
CABG					113	114	120	89	83	88	77	91		
Other Open Heart					60	43	34	46	44	52	38	34		
Percutaneous Coronary Intervention							353	396	408	433	470	459	502	
Diagnostic Catheterization							722	694	733	699	695	716	940	
Volume - Oncology Discharges	Target	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06
Adults - Total														
Adults - Surgical Oncology														
Adults - Medical Oncology														
Adults - Radiation Oncology														
Pediatrics - Total														
Pediatrics - Surgical Oncology														
Pediatrics - Medical Oncology														
Pediatrics- Radiation Oncology														
Patient Satisfaction - Press Ganey Percentile Rank in UHC Peer Group	Target	Average Rate – SBUH Q2 2003	Average Rate – SBUH Q3 2003	Average Rate – SBUH Q4 2003	Average Rate – SBUH Q1 2004	Average Rate – SBUH Q2 2004	Average Rate – SBUH Q3 2004	Average Rate – SBUH Q4 2004	Average Rate – SBUH Q1 2005	Average Rate – SBUH Q2 2005	Average Rate – SBUH Q3 2005	Average Rate – SBUH Q4 2005	Average Rate – SBUH Q1 2006	
Overall Hospital Rating	>=75	27	32	26	43	22	27	23	31	32	57	27	35	
Emergency Department - Overall Facility Ranking	>=75	80	52	54	60	54	73	72	29	59	48	30	21	
Ambulatory Surgery Center - Overall Facility Ranking	>=75								97	97	99	99	97	
Ambulatory Services - Overall Facility Ranking	>=75	15	17	29	29	21	31	13	38	25	41	37	18	
Human Resources - Turnover	Target	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06
Hospital-wide	<=1.41%	1.09% (53)	1.28% (55)	1.60% (69)	0.90% (39)	0.92% (39)	0.73% (32)	0.75% (33)	1.09% (48)	0.86% (40)	0.86% (38)	0.52% (23)	1.37% (61)	
Nursing	<=1.41%	1.65% (33)	1.37% (29)	1.45% (31)	1.11% (25)	0.88% (20)	0.65% (15)	0.74% (17)	1.14% (27)	0.91% (22)	0.64% (16)	0.52% (13)	1.38% (35)	

Updated 7/24/06

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Core Measures - Acute Myocardial Infarction	Target	Average Rate – SBUH Q2 2003	Average Rate – SBUH Q3 2003	Average Rate – SBUH Q4 2003	Average Rate – SBUH Q1 2004	Average Rate – SBUH Q2 2004	Average Rate – SBUH Q3 2004	Average Rate – SBUH Q4 2004	Average Rate – SBUH Q1 2005	Average Rate – SBUH Q2 2005	Average Rate – SBUH Q3 2005	Average Rate – SBUH Q4 2005	Average Rate – SBUH Q1 2006
Time to thrombolysis	<30 minutes	N/A	N/A	N/A	N/A	N/A	N/A	67	110	N/A	N/A	N/A	
Time to PTCA	<120 minutes	274	882	109	113	103	110	97	109	110	78.3	82.8	
Adult cessation advice	100%	66.7%	77.2%	62.3%	81.6%	98.8%	96.4%	91.8%	92.5%	96.3%	91.0%	96.3%	
Aspirin at arrival	100%	96.3%	97.7%	98.9%	98.1%	100%	98.9%	100%	97.0%	97.0%	98.1%	97.2%	
Aspirin prescribed at discharge	100%	93.4%	96.0%	99.5%	97.9%	100%	100%	99.6%	99.2%	99.1%	99.2%	99.6%	
ACEI or ARB* for LVSD *ARB's not included in measure prior to 1/1/05	100%	75.7%	81.0%	73.9%	72.7%	84.8%	87.9%	90.9%	87.5%	75.0%	68.1%	89.3%	
Beta blocker prescribed at discharge	100%	91.8%	96.1%	98.4%	98.3%	99.6%	99.5%	100%	100%	97.8%	97.3%	97.1%	
Inpatient mortality		9.4%	8.8%	7.4%	6.4%	5.1%	7.2%	9.5%	10.2%	5.3%	5.8%	7.5%	
Beta blocker at arrival	100%	90.4%	93.2%	98.7%	99.0%	98.9%	100%	100%	100%	98.9%	99.0%	97.0%	
Core Measures - Congestive Heart Failure													
Discharge Instructions	100%	5.3%	14.1%	13.8%	4.4%	21.0%	33.8%	32.5%	26.1%	33.8%	24.20%	17.1%	
LVF Assessment	100%	95.7%	70.0%	87.9%	89.0%	94.7%	96.7%	97.8%	100%	98.9%	100%	97.6%	
ACEI or ARB* for LVSD *ARB's not included in measure prior to 1/1/05	100%	70.4%	81.3%	91.7%	71.7%	78.9%	97.0%	100%	95.0%	97.2%	97.10%	100%	
Adult Smoking Cessation Advice / Counseling	100%	42.9%	81.8%	42.9%	40.0%	100%	93.3%	92.3%	90.9%	70.0%	61.50%	58.8%	
Core Measures - Community Acquired Pneumonia													
Antibiotic timing (minutes)	<240 minutes	255	297	229	248	236	209	284	207	224	292	192	
Oxygenation assessment	100%	98.0%	99.0%	99.2%	100%	100%	100%	100%	100%	100%	98.1%	100%	
Pneumococcal screen/vaccination	100%	54.1%	46.9%	34.9%	64.9%	60.0%	64.3%	77.8%	44.8%	54.2%	55.6%	77.4%	
Blood cultures prior to first antibiotic	100%	93.1%	93.0%	93.2%	92.5%	97.2%	91.2%	82.6%	87.2%	80.6%	82.2%	80.9%	
Blood cultures within 24 hours	100%										90.9%	80.0%	
Adult smoking cessation advice	100%	16.7%	47.6%	30.0%	36.0%	75.0%	83.3%	71.4%	57.1%	81.8%	27.3%	35.3%	
Initial ABX within 8 hours							95.3%	85.7%	97.3%	87.9%	85.0%	93.1%	
Initial ABX within 4 hours							67.4%	57.1%	75.7%	72.7%	62.5%	75.9%	
Initial ABX selection - ICU							57.1%	14.3%	50.0%	25.0%	66.7%	100%	
Initial ABX selection - Non-ICU							76.7%	80.6%	77.8%	75.0%	90.9%	87.9%	

Consistency

- Measurement expression (dashboards)
- Overlap of measurements on separate dashboards when performance is shared
- Dashboard elements consistent over time
- Data dictionary is explicit
- Ownership

ratories - TAT Studies - Clinical ology	Target	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Se
n Stain - Spinal Fluid complete <=60 tes receipt to result	>=95%	85%	97%	96%	93%	94%	97%	99%	97%	98%	97%	95%	99%	9
n Stain - All Other Specimens plete <=150 minutes receipt to result	>=95%	97%	98%	98%	98%	97%	98%	98%	98%	94%	96%	97%	92%	9
ient CBC - STAT complete <=60 tes receipt to result	100%	97%	97%	95%	97%	97%	98%	98%	96%	97%	97%	97%	96%	9
ient CBC - Routine complete <=240 tes receipt to result	>=95%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	10
ient CHEM 8 - STAT complete 0 min.- receipt to result	100%	84%	85%	82%	83%	89%	89%	89%	86%	85%	83%	84%	83%	8
ient CHEM 8 - Routine complete 40 min.- receipt to result	>=95%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%	99%	100%	10
Troponin I complete <=60 minutes pt to result	100%	51%	47%	41%	47%	60%	65%	64%	62%	60%	56%	55%	62%	5
ology - Inpatients	Target	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Se
- Order to Exam	<=8 hours	14.6	17.6	15.8	10.0	13.1	13.6	12.1	11.9	9.6	8.7	12.9	6.0	1
- Exam to Dictation	<=8 hours	18.3	19.3	15.5	15.4	17.4	14.5	15.3	16.8	14.8	14.6	20.2	16.0	1
- Dictation to Final Report	<=8 hours	6.6	7.2	8.2	8.2	6.9	6.7	7.4	5.3	4.4	4.7	5.3	4.2	5
- Order to Final Report	<=24 hours	44.1	53.5	42.5	37.7	38.3	39.1	36.9	38.1	32.5	31.3	40.1	35.4	4
	Target	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Se
Order to Exam	<=8 hours	2.3	2.1	3.0	2.3	2.7	2.9	2.5	2.1	2.6	2.8	2.6	2.4	3
Exam to Dictation	<=8 hours	13.5	14.2	13.7	14.2	14.4	13.4	13.0	13.4	13.1	14.1	15.4	14.2	1
Dictation to Final Report	<=8 hours	3.7	6.8	5.3	7.4	4.6	6.1	3.3	4.1	4.6	1.5	2.7	3.2	2
Order to Final Report	<=24 hours	21.2	25.9	25.4	26.5	25.6	24.9	21.2	23.0	24.8	20.6	22.74	21.1	2
	Target	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Se
- Order to Exam	<=8 hours	19.36	6.51	9.31	0.01	4.05	2.0	1.9	1.4	1.6	2.0	1.7	1.7	2
- Exam to Dictation	<=8 hours	10.8	12.0	10.5	10.3	9.9	10.3	9.6	10.5	10.0	10.2	11.53	10.7	1
- Dictation to Final Report	<=8 hours	4.66	5.98	5.8	6.7	5.28	5.8	5.5	3.3	3.7	3.6	3.54	4.1	5
- Order to Final Report	<=24 hours	18.7	21.4	19.2	17.2	18.1	19.2	18.4	16.7	17.2	16.9	18.4	18.1	1

ort Services - Performance Metrics	Target	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Au
eliness of Assessments-for high-risk hin 24 hours)	>=90%	98% (46/47)	N/A	98% (45/46)	N/A	96% (55/57)	N/A	81% (81/100)	N/A	98% (55/56)	N/A	98% (55/56)	N/A	10 (43
n cleaning turnaround time on harge	<=60 min	61	59	57	56	58	58	57	57	58	56	59	59	
ndonment rate for telephone ators (total number of calls)	<=10%	N/A	7% (157,284)	6.8% (155,698)	8.1% (155,158)	6.9% (144,431)	7% (153,622)	7% (145,054)	9.54% (170,122)	7.12% (151,998)	7.43% (156,501)	6.53% (155,776)	5.21 (149,261	6. (152
hasing - Commodities	Target	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Au
entage of orders (under $75,000) pleted within 5 days	>=85%	90.76%	93.09%	90.90%	87.36%	91.75%	92.38%	92.04%	91.93%	88.91%	89.91%	86.72%	87.61%	90.
entage of orders (under $75,000) pleted same day the requistion went ystem	>=20%	16.85%	22.96%	26.9%	20.98%	22.52%	23.46%	24.40%	22.98%	29.69%	23.24%	21.24%	23.38%	21
entage of orders (under $75,000) pleted in longer than 5 days	<=10%	9.24%	6.91%	9.91%	12.64%	8.25%	7.62%	7.96%	8.07%	11.09%	10.09%	13.28%	12.39%	9.
entage of approved Local Purchase horizations approved versus number ested	100%	67% (2/3)	100% (10/10)	100% (5/5)	100% (8/8)	100% (1/1)	83% (5/6)	78% (7/9)	89% (8/9)	91.6% (11/12)	100% (2/2)	100% (5/5)	100% (2/2)	9 (11
entage of Non-Contract Equipment rs (over $20,000) that were essed within 7 weeks or less	>=85%										75% (3/4)	100% (3/3)	100% (4/4)	10 (3
rmation Technology - Cerner	Target	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Au
lication uptime: percentage of ability based on a 24/7 operation	>=99.0%	98.79%	99.86%	99.87%	99.72%	99.87%	99.82%	100%	100%	99.72%	98.39%	100%	99.19%	10
anned downtime: number of anned downtime occurrences	0	0	0	1	0	0	0	0	0	1	1	0	2	
rmation Technology - Help Desk	Target	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Au
Abandoned Rate: percentage of doned calls to total received calls	<=15%	13.2%	11.0%	14.9%	15.1%	10.4%	14.9%	13.9%	9.7%	10.8%	8.9%	8.7%	8.6%	11
ine (problem) ticket resolution around time: percentage of routine ts closed on the same day	>=98.0%	92.3%	95.0%	85.8%	83.1%	84.2%	Under review	99.4%	99.5%	99.8%	99.7%	99.8%	99.8%	99

Dashboard Development

- **Clinical Service Group Dashboards**
  - Heart
  - Emergency Medicine
  - Obstetrics
  - Pediatrics
  - Medicine
  - Trauma
  - Neurosurgery
  - Orthopedics
  - Transplant & Urology
  - Cancer
  - Psychiatry
  - Operating Room
  - Surgery
  - GI Medicine/Surgery
  - ICU
- **Departmental Dashboards**
  - Laboratories
  - Radiology
  - Physical Therapy/Occupational Therapy
  - Support Services
- **Non-Clinical Dashboards**
  - Admitting
  - Patient Accounts
  - Time & Attendance
  - Cost & budget
  - Purchasing
  - Labor Relations
  - Human Resources
  - Facilities
  - Information Technology
- **Miscellaneous**
  - Medical Quality Assurance
    - Nutrition Committee
    - Pharmacy & Therapeutics Committee
    - Surgical Review Committee
    - Medical Record Committee
    - Infection Control Committee
  - Patient Satisfaction

Response: Modalities of Change Management

- Consensus building
- Dashboard expression
- CQI efforts
- Benchmarking/collaborative projects
- Regulatory initiatives

Response: CQI Activities

- **Facilitation**
  - **Clinical Service Groups**
    - Dashboard development/maintenance
    - Coordinate performance improvement activities
  - **CQI Teams**
    - IHI Collaborative: Reducing Complications in the SICU, PICU, MICU, and NICU
    - Code H Team
    - Rapid Response Team
    - Mislabeled/Unlabeled Specimens Team
    - Deep Vein Thrombosis Prophylaxis Team
    - ED Patient Satisfaction Steering Committee
    - UHC Surgical Services Initiative
      - Supply expenses
      - Facility utilization
  - **Root Cause Analyses/Failure Mode and Effects Analyses**
    - Resident to Resident Communication: Patient Handoffs on Medicine Service

Response: CQI Activities

- **Institute for Healthcare Improvement's 100,000 Lives Saved Campaign**
  - Deployment of rapid response teams (RRTs)
  - Delivery of reliable, evidence-based care for acute myocardial infarction (AMI)
  - Prevention of adverse drug events
  - Prevention of central line infections
  - Prevention of ventilator associated pneumonia
  - Prevention of surgical site infections

Response: CQI Team Efforts For AMI Care

- AMI: ED Door to Balloon Team
  - ACS guideline development/implementation
  - Developed/implemented Code “H” process

Acute Myocardial Infarction	Target	Average Rate – SBUH Q2 2003	Average Rate – SBUH Q3 2003	Average Rate – SBUH Q4 2003	Average Rate – SBUH Q1 2004	Average Rate – SBUH Q2 2004	Average Rate – SBUH Q3 2004	Average Rate – SBUH Q4 2004	Average Rate – SBUH Q1 2005	Average Rate – SBUH Q2 2005	Average Rate – SBUH Q3 2005	Avera Rate SBU Q4 20
Time to PTCA	<120 minutes	274	882	109	113	103	110	97	109	110	78.3	82.8

Response: Benchmarking/Collaborative Projects

- Institute for Healthcare Improvement's Reducing Complications in the ICU Collaborative
- Institute for Healthcare Improvement's Saving 100,000 Lives Campaign
- Institute for Healthcare Improvement's Critical Care Collaborative

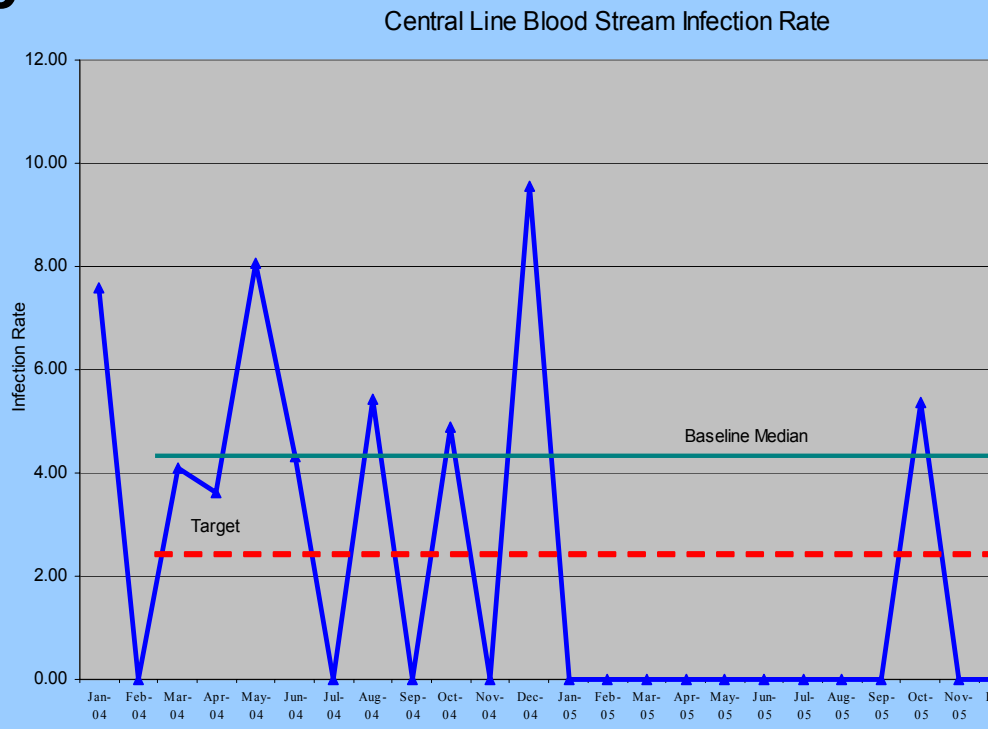
CQI Team Efforts: Benchmarking/ Collaborative Projects

Implementing an Idealized Model for Critical Care: Preventing Harm and Promoting Healing – November 2005 Collaborative

- Communication and Collaboration of a Multi-disciplinary team (continued)
- Reducing Complications from Ventilators (continued)
- Reducing Complications from Central Lines (continued)
- Improved Glucose Control
- Reducing Mortality due to Severe Sepsis in collaboration with the Surviving Sepsis Campaign

Prevent Central Line Infections

- **Hospital-wide standardized central line kit includes:**
  - Gown
  - Cap
  - Mask
  - Full Body Drape 55" x 77" w/ 4" Fenestration
  - CHG Prep
  - Biopatch Dressing
  - Tegaderm Dressing 10cm x 12cm
  - Central Line Audit Tool
  - Description of the Bundle
- **Early removal**
- **Daily review of necessity**
- **Insertion audits**
- **Feedback regarding compliance**



Integrating Performance Improvement Into Bedside Activities: Daily Goal Sheets

- Change Management at the Bedside:
  - IHI Reducing Complications in the ICU – Collaborative September 2004
    - Daily Goal Sheets (at bedside)
    - Multidisciplinary Rounding (at bedside)
    - Team Meetings

Establish Daily Goals

- Establish appropriate, explicit daily goals for patients
  - DVT/PUD prophylaxis
  - Head of bed ≥ 30°
  - Nutritional goals
- Use daily goal sheet to document and communicate
  - Used in conjunction with rounding
- Use daily goal sheet to evaluate patient safety risks
  - Assessment to wean
  - Assessment of need for central line (early removal)
  - Sedation vacation
  - Sepsis screen

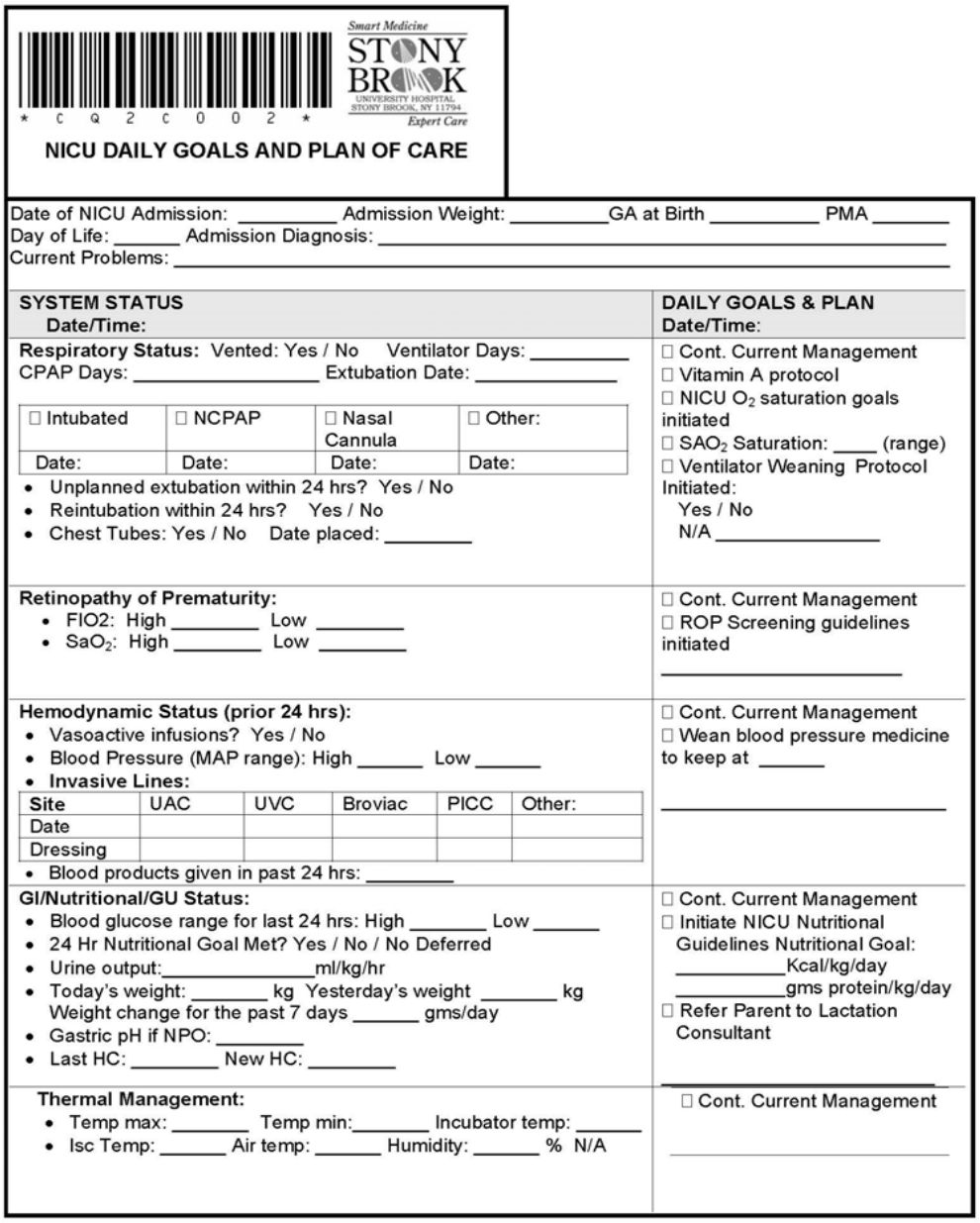
Modified from 2004 Institute for Healthcare Improvement

Daily Goals

- Daily goals and plan of care form utilization:
  - SICU
  - MICU
  - PICU
  - NICU
  - Neurosurgical Service
  - Orthopedic Service
- Plan for spread of forms to non-critical care units

Daily Goal Sheet Completion

- Status Section (left column) is completed by the night RN, reporting on the patient's medical status over the past 24 hours
- Patient is presented by the bedside RN to the team at IHI lightning rounds the following morning using the daily goal sheet as a rounding tool
- Team members identify the goals for the patient for that day
- Bedside RN writes the goals identified by the team for their patient in the goal section (right column)
- Multi-disciplinary team members sign the bottom of the form



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NICU DAILY GOALS AND PLAN OF CARE

Date of NICU Admission: _____ Admission Weight: _____ GA at Birth _____ PMA _____
Day of Life: _____ Admission Diagnosis: _____
Current Problems: _____

SYSTEM STATUS Date/Time:	DAILY GOALS & PLAN Date/Time:
Respiratory Status: Vented: Yes / No Ventilator Days: _____ CPAP Days: _____ Extubation Date: _____ ☐ Intubated ☐ NCPAP ☐ Nasal Cannula ☐ Other: Date: Date: Date: Date: • Unplanned extubation within 24 hrs? Yes / No • Reintubation within 24 hrs? Yes / No • Chest Tubes: Yes / No Date placed: _____	☐ Cont. Current Management ☐ Vitamin A protocol ☐ NICU O_2 saturation goals initiated ☐ SAO_2 Saturation: ____ (range) ☐ Ventilator Weaning Protocol Initiated: Yes / No N/A _____
Retinopathy of Prematurity: • FIO2: High _____ Low _____ • SaO_2: High _____ Low _____	☐ Cont. Current Management ☐ ROP Screening guidelines initiated _____
Hemodynamic Status (prior 24 hrs): • Vasoactive infusions? Yes / No • Blood Pressure (MAP range): High _____ Low _____ • **Invasive Lines:** Site | UAC | UVC | Broviac | PICC | Other: Date Dressing • Blood products given in past 24 hrs: _____	☐ Cont. Current Management ☐ Wean blood pressure medicine to keep at _____ _____
GI/Nutritional/GU Status: • Blood glucose range for last 24 hrs: High _____ Low _____ • 24 Hr Nutritional Goal Met? Yes / No / No Deferred • Urine output:_____ml/kg/hr • Today's weight: _____ kg Yesterday's weight _____ kg Weight change for the past 7 days _____ gms/day • Gastric pH if NPO: _____ • Last HC: _____ New HC: _____	☐ Cont. Current Management ☐ Initiate NICU Nutritional Guidelines Nutritional Goal: _____Kcal/kg/day _____gms protein/kg/day ☐ Refer Parent to Lactation Consultant _____
Thermal Management: • Temp max: _____ Temp min:_____ Incubator temp: _____ • Isc Temp: _____ Air temp: _____ Humidity: _____ % N/A	☐ Cont. Current Management _____

SIDE 1 OF 2 (4/15/06)

NICU Daily Goals and Plan of Care Form

Goal: To optimize respiratory parameters to decrease retinopathy, bronco-pulmonary dysplasia; and to optimize nutritional growth

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NICU DAILY GOALS AND PLAN OF CARE

SYSTEM STATUS CONT. Date/Time:	DAILY GOALS & PLAN Date/Time:
Infectious Disease/Medications Antibiotic/Antifungal | Day # | Site/organism **Medication Issues:**	☐ Cont. Current Management ☐ Medication levels checked ☐ IV changed to PO: _____
Comfort • Pain score range: _____NPASS • Patient pain goals met? Yes / No • Number of PRNs over the past 24 hrs: _____	☐ Cont. Current Management ☐ Initiate NICU pain protocol
Psychosocial Status/Issues: • Date of social work screen: _____ • Primary language: _____ • CPS referral: Yes/No Date:_____ • Mother/Father attended bedside rounds: Yes / No • Mother/Father updated on Plan of Care: Yes / No Barriers to parent learning:_____ Parental concerns: _____	☐ Cont. Current Management ☐ PT consulted ☐ SW consulted ☐ Schedule Family meeting ☐ Refer to Parent Support Group
Discharge Plan: Parent Teaching sheet reviewed? Yes / No	☐ Refer Parent to Classes: ☐ CPR ☐ Discharge ☐ Infant message

System Status:	Daily Goals and Plan
RN Signature: **ID#:**	**RN Signature:** **ID#**

Interdisciplinary Team Members Present:

RN _____ **MD** _____
NP _____ **RT** _____
Pharmacist _____ **Nutritionist** _____
Psych Liaison _____ **SW** _____
PT/OT _____ **Other** _____

Scale Definitions: NPASS: Neonatal Pain, Agitation and Sedation Score

SIDE 2 OF 2 (4/15/06)

NICU Daily Goals and Plan of Care Form

Goal: To optimize respiratory parameters to decrease retinopathy, bronco-pulmonary dysplasia; and to optimize nutritional growth

Institute Multi-Disciplinary Rounds

- Include physicians in multi-disciplinary rounds
- Include family in rounds as appropriate
- Include representatives from palliative care, pharmacy, respiratory, nutrition, case management, social work, chaplaincy and other key care team members as needed
- Use rounding sheet and prep sheets for clinical services
- Reflect on patients' progress of attainment of daily goals

Modified from 2004 Institute for Healthcare Improvement

Multi-disciplinary Rounding

- Multi-disciplinary rounds occurring in critical care units:
  - MICU
  - PICU
  - SICU
  - NICU
  - Neurosurgery
  - Orthopedics
- Plan for spread of multi-disciplinary rounding to non-critical care units

Multi-disciplinary Rounding

- Multi-disciplinary team meets to identify patients' goals for the day
- Disciplines involved in the rounds:
  - Bedside RN
  - Attending
  - Respiratory Care
  - Pharmacist
  - Nutritionist
  - Social Worker
  - Care Coordinator
  - Chaplain

Lessons Learned

- Timely, credible data acquisition is required to provide continual feedback to teams
- Make bundle elements the “default” in the process
- Cultivate champions on the unit to keep the “ball rolling”
- Change is hard , but small tests of change are the key to success
- “Perfect” is the enemy of “good”, but good is better than nothing

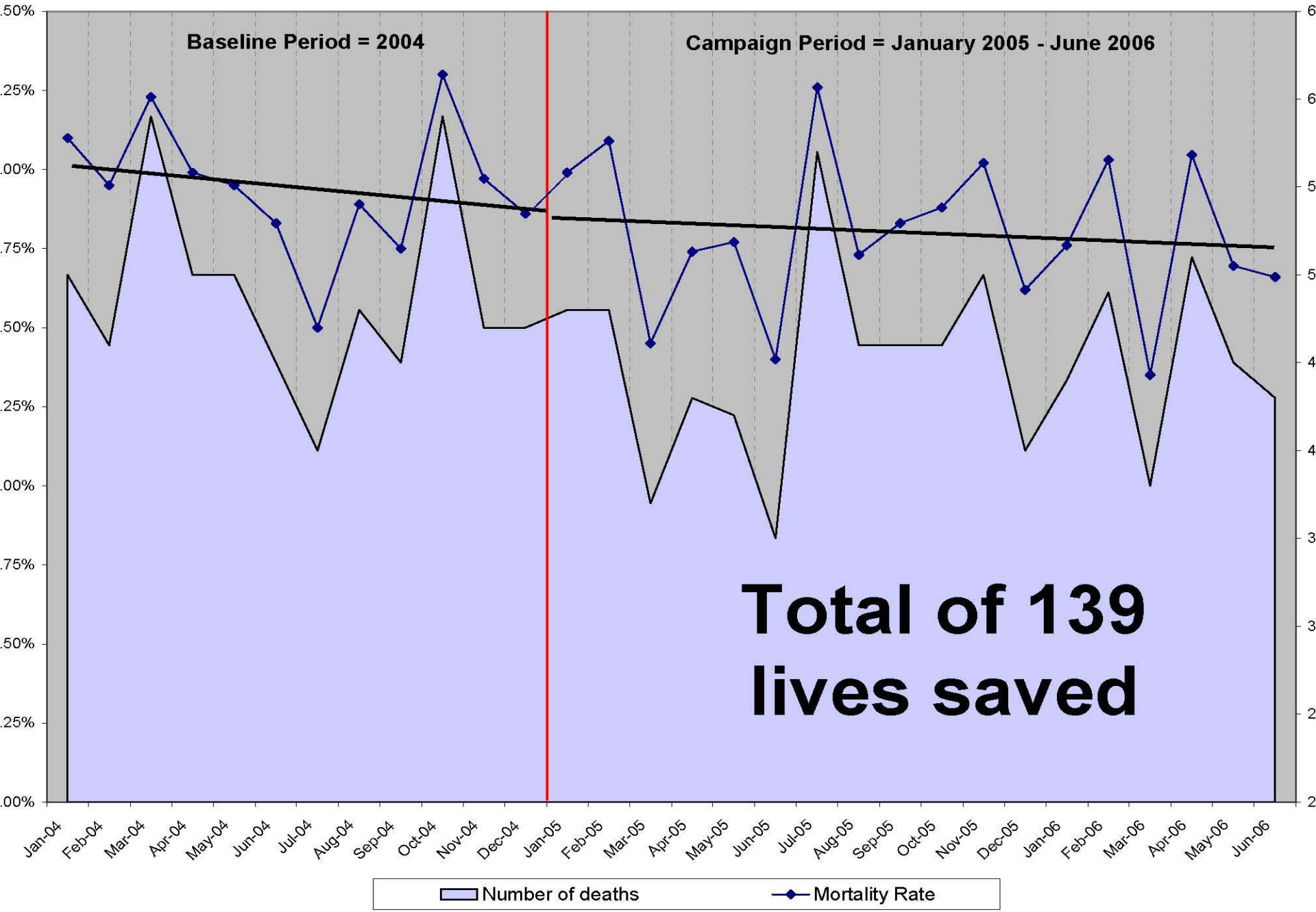
Lessons Learned

- Institutional goals for change can be translated into bedside behavior change
- Quality goals must be actionable
- Measurement of actions must be fed back in close to “real” time
- Physicians can be driven by data

Achievements

- **Code H Team**
  - 2005 HANYS Pinnacle Award, Honorable Mention, for Improving ED Door-To-Balloon Times
  - Institute for Healthcare Improvement Poster Presentation at "Redesigning Healthcare" conference in San Diego, June 2005
  - Published article in July/August 2005 issue of *Patient Safety & Quality Healthcare "Faster Time to PTCA: Improving Safety, Communication, and Satisfaction".*
  - Poster submitted to GNYHA for IHI Best Practices
- **Institute for Healthcare Improvement's Reducing Complications in Ventilator-Associated Pneumonia and Central Line Infections**
  - Poster presentations at the University Healthsystem Consortium's 2005 Fall Form Institute for Healthcare Improvement's Annual Conference in December 2005
  - Submitted poster to GNYHA for IHI Best Practices; awaiting approval
- **Conducting study to determine CQI team effectiveness; Collaborative effort with Harvard and Stony Brook University**
- **SBUH ranked in the 96th percentile nationally for core measure indicator performance (outperforming other well-known institutions such as New York Presbyterian and UCLA).**

Stony Brook University Hospital - IHI Savings 100,000 Lives Campaign
Inpatient Mortality January 2004 - June 2006



Data Source = University HealthSystem Consortium (UHC) Clinical Database

Prepared by the CQI Department 7/06

Conclusion

- Baldrige framework is applicable to quality and safety
- Strategic plan translates into institutional goals
- Institutional goals translate into quality structure, process and function
- Quality structure is built on:
  - Quality Committee of the Governing Body
  - Quality Coordinating Group
  - Clinical Service Groups
  - CQI teams
  - Decision Support Services

Conclusion

- Quality outcomes are derived from measurement and expression of measurement
- Local ownership of data and outcomes drives the value of feedback
- Quality outcomes translate into behavior change
  - Consensus building
  - Team meetings
  - Daily goal sheets
  - Consistent feedback
- Consistent behavior changes results in culture change