Assuring Data Integrity for Healthcare Public Reporting and Using Results to Evaluate Patient Care Quality

ABSTRACT----------

This presentation describes (1) steps insuring data integrity for public reporting; (2) mechanisms for using those data to evaluate patient care quality.

Examples (1):
incorporation of public reporting data elements in Electronic Patient Record (EPR) implementation and paper medical record documents, data abstractor/analyst training, internal validation of abstraction, review of vendor data quality reports and internally-developed validation reports, comparisons of results generated internally and by vendors/regulatory agencies, pursuit of missing documentation, reviewing clerical staff understanding of electronic data fields.

Examples (2), including three reporting levels:
A) Scorecards: summary data reviewed at executive level. Clinical chairs are held accountable by hospital leadership for meeting targets.
B) Dashboards: quality indicators relevant to a clinical service. Reviewed monthly by service leadership held accountable for quality of care.
C) Detailed reports:
    a. Documenting specifics of noncompliance
    b. Identifying problem units
    c. Demonstrating associations between care and outcomes
    d. Breakdowns of care into intermediate steps.

BIOGRAPHY----------

Elisa L. Horbatuk, MA
Data Manager, Decision Support Services
Stony Brook University Medical Center

Elisa Horbatuk is a data manager in Stony Brook University Medical Center's Decision Support Services, responsible for data processing, submission, and analysis for a variety of public reporting databases, including the Joint Commission core measures, New York State cardiac registries, American College of Cardiology registries, and American Heart Association's Get With The Guidelines Heart Failure registry. Additionally, she prepares a wide array of internal reports including scorecards (executive summary data), quality dashboards, and detailed analytic reports. Ms. Horbatuk has worked in healthcare research for three years and quality for seven years, including four years at New York State's Quality Improvement Organization and External Quality Review Organization.

STONY BROOK UNIVERSITY MEDICAL CENTER

Assuring Data Integrity for Healthcare Public Reporting and Using Results to Evaluate Patient Care Quality

Elisa L. Horbatuk, MA
Data Manager, Decision Support Services
Stony Brook University Medical Center

STONY BROOK UNIVERSITY MEDICAL CENTER

OVERVIEW

STONY BROOK UNIVERSITY MEDICAL CENTER

Overview

- About Stony Brook University Medical Center
- Steps insuring data integrity for public reporting
- Mechanisms for using those data to evaluate patient care quality

STONY BROOK UNIVERSITY MEDICAL CENTER

ABOUT US

STONY BROOK UNIVERSITY MEDICAL CENTER

Stony Brook University Medical Center

- Long Island, New York
- Region's only tertiary care center
  - 540 Acute Inpatient Beds
    - 31,600 discharges in 2008
  - Adult / Pediatric Emergency Room
    - 76,565 visits (FY 07-08)
  - 33 Hospital Based Clinics/Tests
  - Level 1 Trauma Center
  - Level 3 NICU, Regional Perinatal Center
  - Burn Center
  - Renal Transplant Program
  - Autologous/Allogenic Bone Marrow Transplant Program/Unit

STONY BROOK UNIVERSITY MEDICAL CENTER

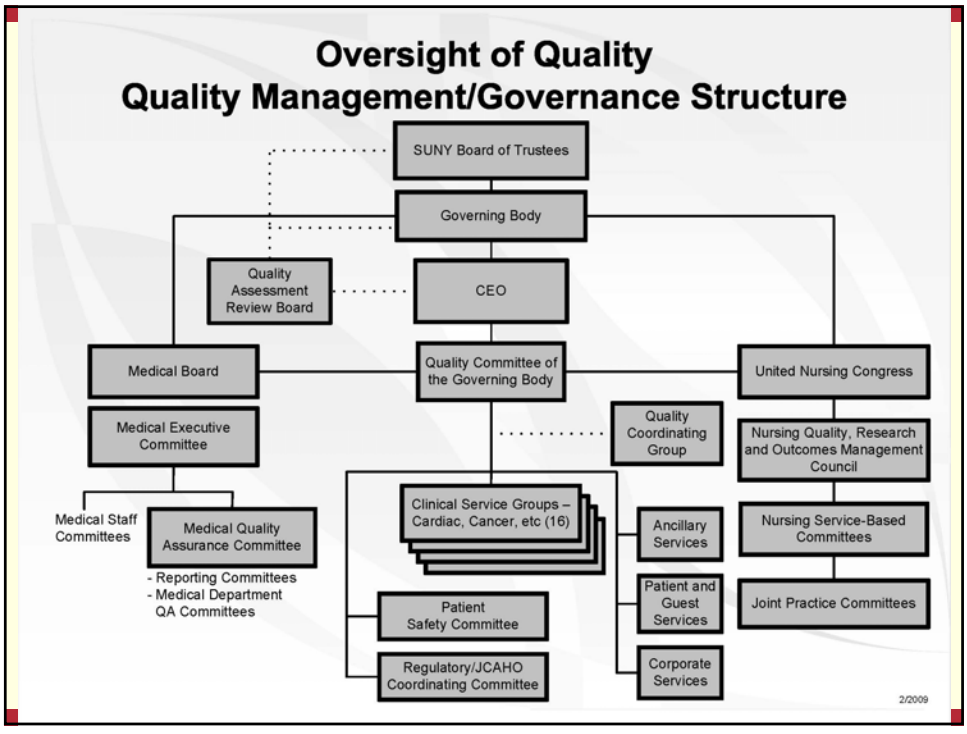
Stony Brook University Medical Center

- Hospital is part of the State University of New York at Stony Brook
- Affiliated with a major academic medical center, including medical, nursing, and health technology management schools
  - 50 accredited training programs with 447 residents
- 465 Full time, 506 Voluntary Physicians
- >4,800 Full-time Employees

STONY BROOK UNIVERSITY MEDICAL CENTER

Quality Management Structure

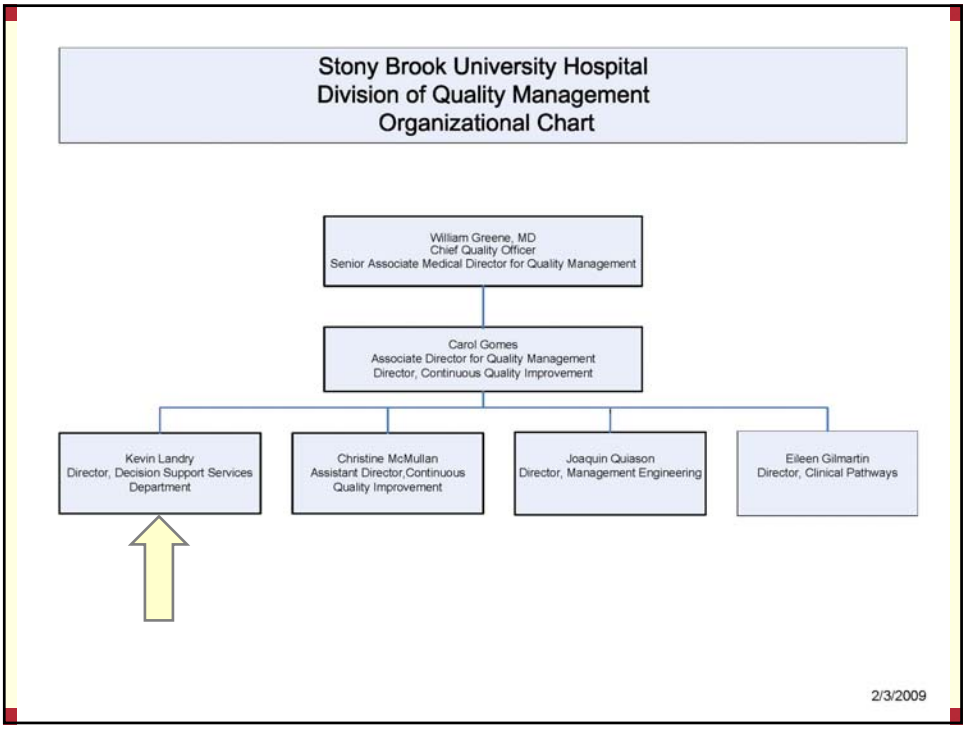
- Hospital strategic goals are designed to achieve the outcome of becoming a high reliability organization (HRO)
- The Quality Committee of the Governing Body sets quality improvement (QI) priorities aligned with strategic goals
  - High level oversight of quality priorities of the Medical Board, Patient Safety, Operating Room Committee, United Nursing Congress, and Clinical Service Groups
- The Quality Coordinating Group oversees QI efforts of Clinical Service Groups
- The Quality division facilitates QI activities for Clinical Service Groups and QI teams, and is also responsible for most public reporting requirements



STONY BROOK UNIVERSITY MEDICAL CENTER

Decision Support Services

- Part of Quality division
- Holds much of the responsibility for public reporting
- Staff includes analysts and nursing staff working closely together
- Collaborates with Continuous Quality Improvement (CQI) department, participating in Clinical Service Group (CSG) meetings and CQI teams (e.g., door-to-balloon, heart failure)



STONY BROOK UNIVERSITY MEDICAL CENTER

Public Reporting (examples)

- The Joint Commission/Centers for Medicare and Medicaid Services (TJC/CMS) Core Measure Requirements
  - Acute Myocardial Infarction (AMI) – Inpatient and Outpatient
  - Heart Failure (HF) – Inpatient
  - Pneumonia (PN) – Inpatient
  - Surgical Care Improvement Program (SCIP) – Inpatient and Outpatient
  - Chest Pain – Outpatient
  - Children's Asthma Care - Inpatient

STONY BROOK UNIVERSITY MEDICAL CENTER

Public Reporting (examples)

- New York State Department of Health (NYSDOH) Requirements
  - Percutaneous Coronary Interventions (PCI)
  - Adult Cardiac Surgeries
- American College of Cardiology National Cardiovascular Data Registries (ACC-NCDR)
  - Implantable Cardioverter Defibrillator (ICD) Registry
  - Carotid Artery Revascularization and Endarterectomy (CARE) Registry
    - Limited to Carotid Artery Stent (CAS) procedures at this time
  - Diagnostic Cardiac Catheterizations and Percutaneous Coronary Interventions (CathPCI) Registry

STONY BROOK UNIVERSITY MEDICAL CENTER

OVERVIEW

STONY BROOK UNIVERSITY MEDICAL CENTER

Overview

- About Stony Brook University Medical Center
- Steps insuring data integrity for public reporting
- Mechanisms for using those data to evaluate patient care quality

STONY BROOK UNIVERSITY MEDICAL CENTER

STEPS INSURING DATA INTEGRITY FOR PUBLIC REPORTING

STONY BROOK UNIVERSITY MEDICAL CENTER

Steps Insuring Data Integrity For Public Reporting

- Interdisciplinary approach
- Training
- Incorporation of public reporting data elements in Electronic Patient Record (EPR) implementation and paper medical record documents
- Data validation
- Indicators of success

STONY BROOK UNIVERSITY MEDICAL CENTER

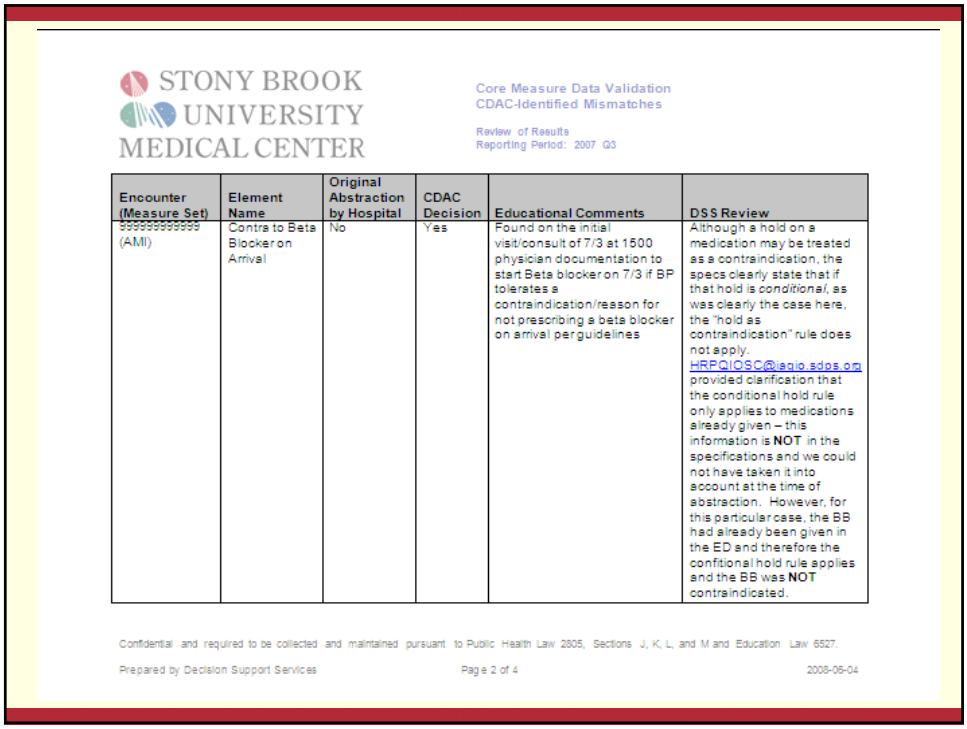
Interdisciplinary Approach

- Data Integrity Task Force
- EPR implementation
- Medical record abstraction validation

STONY BROOK UNIVERSITY MEDICAL CENTER

Training

- Data Abstractors/Analysts
  - Centralized
  - Ongoing
  - Review of revised data element specifications
  - Monthly meetings at which specifications/validation results are clarified
  - Continuous updates to internal reference documents summarizing clarifications from public reporting agencies



STONY BROOK UNIVERSITY MEDICAL CENTER

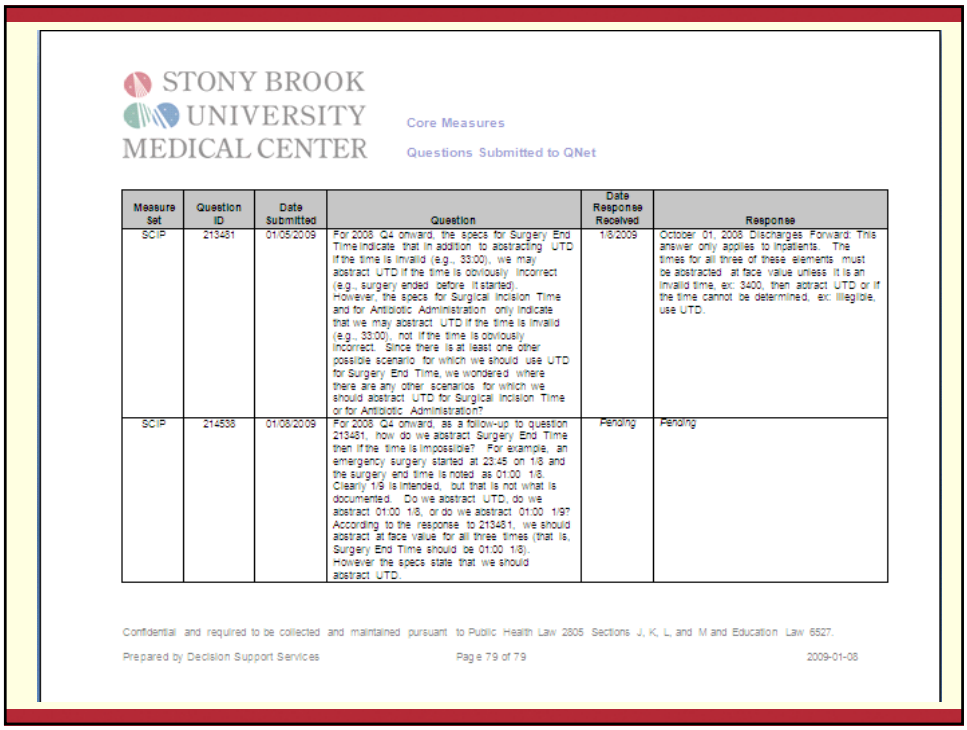
Core Measure Data Validation
CDAC-Identified Mismatches

Review of Results
Reporting Period: 2007 Q3

Encounter (Measure Set)	Element Name	Original Abstraction by Hospital	CDAC Decision	Educational Comments	DSS Review
999999999999 (AMI)	Contra to Beta Blocker on Arrival	No	Yes	Found on the initial visit/consult of 7/3 at 1500 physician documentation to start Beta blocker on 7/3 if BP tolerates a contraindication/reason for not prescribing a beta blocker on arrival per guidelines	Although a hold on a medication may be treated as a contraindication, the specs clearly state that if that hold is *conditional*, as was clearly the case here, the "hold as contraindication" rule does not apply. HRPQIOSC@isgio.sdps.org provided clarification that the conditional hold rule only applies to medications already given – this information is **NOT** in the specifications and we could not have taken it into account at the time of abstraction. However, for this particular case, the BB had already been given in the ED and therefore the confitional hold rule applies and the BB was **NOT** contraindicated.

Confidential and required to be collected and maintained pursuant to Public Health Law 2805, Sections J, K, L, and M and Education Law 6527.

Prepared by Decision Support Services Page 2 of 4 2008-06-04



STONY BROOK UNIVERSITY MEDICAL CENTER

Core Measures

Questions Submitted to QNet

Measure Set	Question ID	Date Submitted	Question	Date Response Received	Response
SCIP	213481	01/05/2009	For 2008 Q4 onward, the specs for Surgery End Time indicate that in addition to abstracting UTD if the time is invalid (e.g., 33:00), we may abstract UTD if the time is obviously incorrect (e.g., surgery ended before it started). However, the specs for Surgical Incision Time and for Antibiotic Administration only indicate that we may abstract UTD if the time is invalid (e.g., 33:00), not if the time is obviously incorrect. Since there is at least one other possible scenario for which we should use UTD for Surgery End Time, we wondered where there are any other scenarios for which we should abstract UTD for Surgical Incision Time or for Antibiotic Administration?	1/8/2009	October 01, 2008 Discharges Forward: This answer only applies to inpatients. The times for all three of these elements must be abstracted at face value unless it is an invalid time, ex: 3400, then abtract UTD or if the time cannot be determined, ex: Illegible, use UTD.
SCIP	214538	01/08/2009	For 2008 Q4 onward, as a follow-up to question 213481, how do we abstract Surgery End Time when it's time is impossible? For example, an emergency surgery started at 23:45 on 1/8 and the surgery end time is noted as 01:00 1/8. Clearly 1/9 is intended, but that is not what is documented. Do we abstract UTD, do we abstract 01:00 1/8, or do we abstract 01:00 1/9? According to the response to 213481, we should abstract at face value for all three times (that is, Surgery End Time should be 01:00 1/8). However the specs state that we should abstract UTD.	Pending	Pending

Confidential and required to be collected and maintained pursuant to Public Health Law 2805 Sections J, K, L, and M and Education Law 6527.

Prepared by Decision Support Services Page 79 of 79 2009-01-08

Question	Date Response Received	Response
For 2008 Q4 onward, the specs for Surgery End Time indicate that in addition to abstracting UTD if the time is invalid (e.g., 33:00), we may abstract UTD if the time is obviously incorrect (e.g., surgery ended before it started). However, the specs for Surgical Incision Time and for Antibiotic Administration only indicate that we may abstract UTD if the time is invalid (e.g., 33:00), not if the time is obviously incorrect. Since there is at least one other possible scenario for which we should use UTD for Surgery End Time, we wondered where there are any other scenarios for which we should abstract UTD for Surgical Incision Time or for Antibiotic Administration?	1/8/2009	October 01, 2008 Discharges Forward: This answer only applies to inpatients. The times for all three of these elements must be abstracted at face value unless it is an invalid time, ex: 3400, then abtract UTD or if the time cannot be determined, ex: illegible, use UTD.
For 2008 Q4 onward, as a follow-up to question 213481, how do we abstract Surgery End Time then if the time is impossible? For example, an emergency surgery started at 23:45 on 1/8 and the surgery end time is noted as 01:00 1/8. Clearly 1/9 is intended, but that is not what is documented. Do we abstract UTD, do we abstract 01:00 1/8, or do we abstract 01:00 1/9? According to the response to 213481, we should abstract at face value for all three times (that is, Surgery End Time should be 01:00 1/8). However the specs state that we should abstract UTD.	Pending	Pending

STONY BROOK UNIVERSITY MEDICAL CENTER

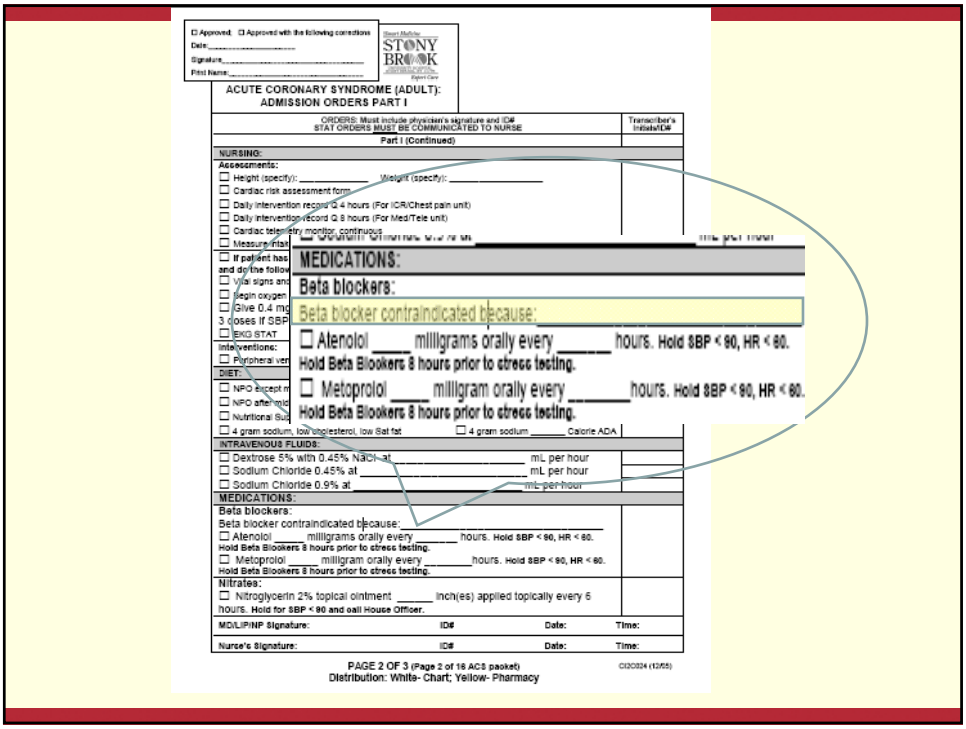
Training

- Clerical staff
  - Changes in definitions of point of origin for admission
  - Field definitions
- Clinical staff
  - Upgrades for new fields captured

STONY BROOK UNIVERSITY MEDICAL CENTER

Public Reporting Data Element Capture in Medical Records

- Paper
  - Completed at the point of care
  - Standard AMI order sets updated to include contraindication documents
  - Specialized tools for ICD, CAS public reporting requirements
  - Forms usage tracking and enforcement



☐ Approved. ☐ Approved with the following corrections
Date:_____
Signature:_____
Print Name:_____

STONY BROOK UNIVERSITY MEDICAL CENTER

ACUTE CORONARY SYNDROME (ADULT):
ADMISSION ORDERS PART I

ORDERS: Must include physician's signature and ID#
STAT ORDERS MUST BE COMMUNICATED TO NURSE

Transcriber's Initials/ID#

Part I (Continued)

NURSING:
Assessments:
☐ Height (specify): _____ Weight (specify): _____
☐ Cardiac risk assessment form
☐ Daily intervention record Q 4 hours (For ICR/Chest pain unit)
☐ Daily intervention record Q 8 hours (For Med/Tele unit)
☐ Cardiac telemetry monitor, continuous
☐ Measure intak
☐ If patient has
and do the follow
☐ Vital signs and
☐ Begin oxygen
☐ Give 0.4 mg
3 doses if SBP
☐ EKG STAT
Interventions:
☐ Peripheral ven
DIET:
☐ NPO except m
☐ NPO after mid
☐ Nutritional Sup
☐ 4 gram sodium, low cholesterol, low Sat fat ☐ 4 gram sodium _____ Calorie ADA

INTRAVENOUS FLUIDS:
☐ Dextrose 5% with 0.45% NaCl at _____ mL per hour
☐ Sodium Chloride 0.45% at _____ mL per hour
☐ Sodium Chloride 0.9% at _____ mL per hour

MEDICATIONS:
Beta blockers:
Beta blocker contraindicated because:_____
☐ Atenolol ____ milligrams orally every _____ hours. Hold SBP < 90, HR < 60.
Hold Beta Blockers 8 hours prior to stress testing.
☐ Metoprolol ____ milligram orally every _____ hours. Hold SBP < 90, HR < 60.
Hold Beta Blockers 8 hours prior to stress testing.

Nitrates:
☐ Nitroglycerin 2% topical ointment _____ inch(es) applied topically every 6 hours. Hold for SBP < 90 and call House Officer.

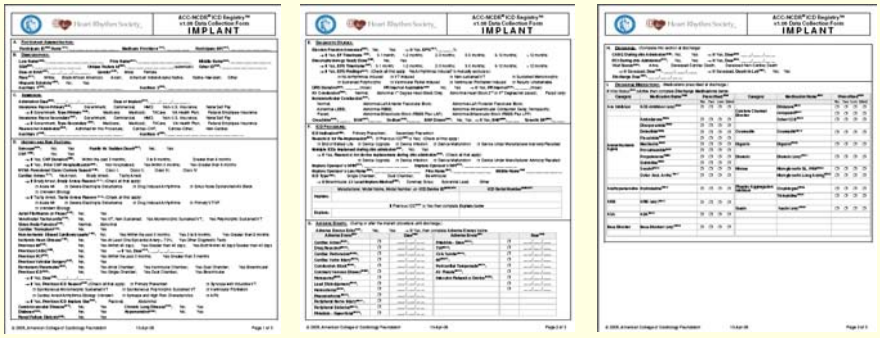
MD/LIP/NP Signature: ID# Date: Time:

Nurse's Signature: ID# Date: Time:

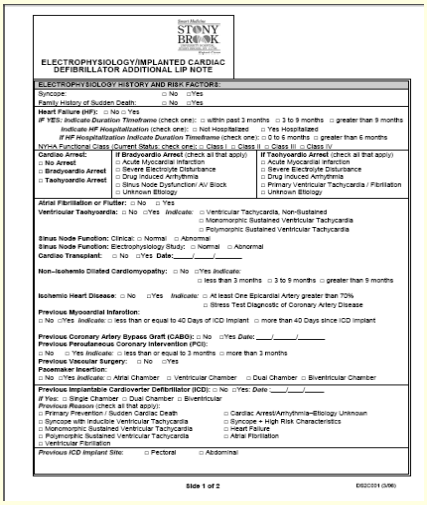
PAGE 2 OF 3 (Page 2 of 16 ACS packet)
Distribution: White- Chart; Yellow- Pharmacy

CI20324 (12/05)

MEDICATIONS:
Beta blockers:
Beta blocker contraindicated because:
☐ Atenolol ____ milligrams orally every _____ hours. Hold SBP < 90, HR < 60.
Hold Beta Blockers 8 hours prior to stress testing.
☐ Metoprolol ____ milligram orally every _____ hours. Hold SBP < 90, HR < 60.
Hold Beta Blockers 8 hours prior to stress testing.



ICD Medical Record Tool



ELECTROPHYSIOLOGY/IMPLANTED CARDIAC DEFIBRILLATOR ADDITIONAL LIP NOTE

ELECTROPHYSIOLOGY HISTORY AND RISK FACTORS:

Syncope: □ No □Yes

Family History of Sudden Death: □ No □Yes

Heart Failure (HF): □ No □ Yes

IF YES: Indicate Duration Timeframe (check one): □ within past 3 months □ 3 to 9 months □ greater than 9 months

Indicate HF Hospitalization (check one): □ Not Hospitalized □ Yes Hospitalized

If HF Hospitalization Indicate Duration Timeframe (check one): □ 0 to 6 months □ greater than 6 months

NYHA Functional Class (Current Status; check one): □ Class I □ Class II □ Class III □ Class IV

Cardiac Arrest:
□ No Arrest
□ Bradycardia Arrest
□ Tachycardia Arrest

If Bradycardia Arrest (check all that apply)
□ Acute Myocardial Infarction
□ Severe Electrolyte Disturbance
□ Drug Induced Arrhythmia
□ Sinus Node Dysfunction/ AV Block
□ Unknown Etiology

If Tachycardia Arrest (check all that apply)
□ Acute Myocardial Infarction
□ Severe Electrolyte Disturbance
□ Drug Induced Arrhythmia
□ Primary Ventricular Tachycardia / Fibrillation
□ Unknown Etiology

Atrial Fibrillation or Flutter: □ No □ Yes

Ventricular Tachycardia: □ No □Yes *Indicate:* □ Ventricular Tachycardia, Non-Sustained
□ Monomorphic Sustained Ventricular Tachycardia
□ Polymorphic Sustained Ventricular Tachycardia

Sinus Node Function: Clinical: □ Normal □ Abnormal
Sinus Node Function: Electrophysiology Study: □ Normal □ Abnormal
Cardiac Transplant: □ No □Yes **Date:**____/____/____

Non–Ischemic Dilated Cardiomyopathy: □ No □Yes *Indicate:*
□ less than 3 months □ 3 to 9 months □ greater than 9 months

Ischemic Heart Disease: □ No □Yes *Indicate:* □ At least One Epicardial Artery greater than 70%
□ Stress Test Diagnostic of Coronary Artery Disease

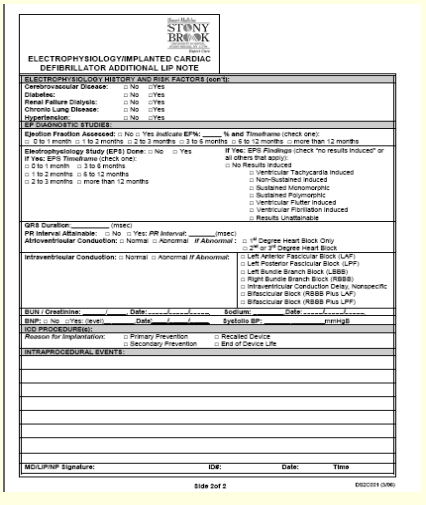
Previous Myocardial Infarction:
□ No □Yes *Indicate:* □ less than or equal to 40 Days of ICD Implant □ more than 40 Days since ICD Implant

Previous Coronary Artery Bypass Graft (CABG): □ No □Yes *Date:* ____/____/____
Previous Percutaneous Coronary Intervention (PCI):
□ No □ Yes *Indicate:* □ less than or equal to 3 months □ more than 3 months
Previous Vascular Surgery: □ No □Yes
Pacemaker Insertion:
□ No □Yes *Indicate:* □ Atrial Chamber □ Ventricular Chamber □ Dual Chamber □ Biventricular Chamber

Previous Implantable Cardioverter Defibrillator (ICD): □ No □Yes: *Date* ____/____/____
If Yes: □ Single Chamber □ Dual Chamber □ Biventricular
Previous Reason (check all that apply)
□ Primary Prevention / Sudden Cardiac Death
□ Syncope with Inducible Ventricular Tachycardia
□ Monomorphic Sustained Ventricular Tachycardia
□ Polymorphic Sustained Ventricular Tachycardia
□ Ventricular Fibrillation
□ Cardiac Arrest/Arrhythmia–Etiology Unknown
□ Syncope + High Risk Characteristics
□ Heart Failure
□ Atrial Fibrillation

Previous ICD Implant Site: □ Pectoral □ Abdominal

Side 1 of 2



ELECTROPHYSIOLOGY/IMPLANTED CARDIAC DEFIBRILLATOR ADDITIONAL LIP NOTE

ELECTROPHYSIOLOGY HISTORY AND RISK FACTORS (cont'd):

Cerebrovascular Disease: □ No □Yes
Diabetes: □ No □Yes
Renal Failure Dialysis: □ No □Yes
Chronic Lung Disease: □ No □Yes
Hypertension: □ No □Yes

EP DIAGNOSTIC STUDIES:

Ejection Fraction Assessed: □ No □ Yes *Indicate* **EF%:** ____ % and *Timeframe* (check one):
□ 0 to 1 month □ 1 to 2 months □ 2 to 3 months □ 3 to 6 months □ 6 to 12 months □ more than 12 months

Electrophysiology Study (EPS) Done: □ No □ Yes
If Yes: *EPS Timeframe* (check one):
□ 0 to 1 month □ 1 to 3 months
□ 1 to 2 months □ 6 to 12 months
□ 2 to 3 months □ more than 12 months

If Yes: *EPS Findings* (check "no results induced" or all others that apply):
□ No Results Induced
□ Ventricular Tachycardia Induced
□ Non-Sustained Induced
□ Sustained Monomorphic
□ Sustained Polymorphic
□ Ventricular Flutter Induced
□ Ventricular Fibrillation Induced
□ Results Unattainable

QRS Duration: _____ (msec)
PR Interval Attainable: □ No □ Yes: *PR Interval:* _____(msec)
Atrioventricular Conduction: □ Normal □ Abnormal *If Abnormal :* □ 1st Degree Heart Block Only
□ 2nd or 3rd Degree Heart Block

Intraventricular Conduction: □ Normal □ Abnormal *If Abnormal:*
□ Left Anterior Fascicular Block (LAF)
□ Left Posterior Fascicular Block (LPF)
□ Left Bundle Branch Block (LBBB)
□ Right Bundle Branch Block (RBBB)
□ Intraventricular Conduction Delay, Nonspecific
□ Bifascicular Block (RBBB Plus LAF)
□ Bifascicular Block (RBBB Plus LPF)

BUN / Creatinine: ____/____ **Date:** ____/____/____ **Sodium:** ____/____ **Date:** ____/____/____
BNP: □ No □Yes: (level)_____ **Date:** ____/____/____ **Systolic BP:** ____/____mmHg

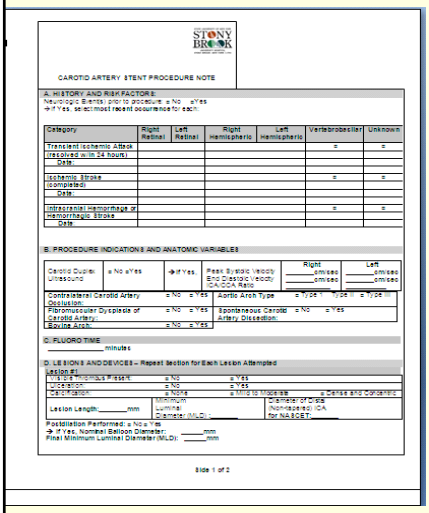
ICD PROCEDURE(S):
Reason for Implantation: □ Primary Prevention □ Secondary Prevention □ Recalled Device □ End of Device Life

INTRAPROCEDURAL EVENTS:

MD/LIP/NP Signature: **ID#:** **Date:** **Time**

Side 2of 2

CARE Medical Record Tool



CAROTID ARTERY STENT PROCEDURE NOTE

A. HISTORY AND RISK FACTORS:
Neurologic Events: prior to procedure: ⚬ No ⚬ Yes
→ If Yes, select most recent occurrence for each:

Category	Right Retinal	Left Retinal	Right Hemispheric	Left Hemispheric	Vertebrobasilar	Unknown
Transient Ischemic Attack (resolved w/in 24 hours) Date:					⚬	⚬
Ischemic Stroke (completed) Date:					⚬	⚬
Intracranial Hemorrhage or Hemorrhagic Stroke Date:					⚬	⚬

B. PROCEDURE INDICATIONS AND ANATOMIC VARIABLES

Carotid Duplex Ultrasound	⚬ No ⚬ Yes	→ If Yes,	Peak Systolic Velocity / End Diastolic Velocity / ICA/CCA Ratio	Right ____cm/sec ____cm/sec ____	Left ____cm/sec ____cm/sec ____
Contralateral Carotid Artery Occlusion:	⚬ No ⚬ Yes	Aortic Arch Type	⚬ Type I ⚬ Type II ⚬ Type III		
Fibromuscular Dysplasia of Carotid Artery:	⚬ No ⚬ Yes	Spontaneous Carotid Artery Dissection:	⚬ No ⚬ Yes		
Bovine Arch:	⚬ No ⚬ Yes				

C. FLUORO TIME
_____minutes

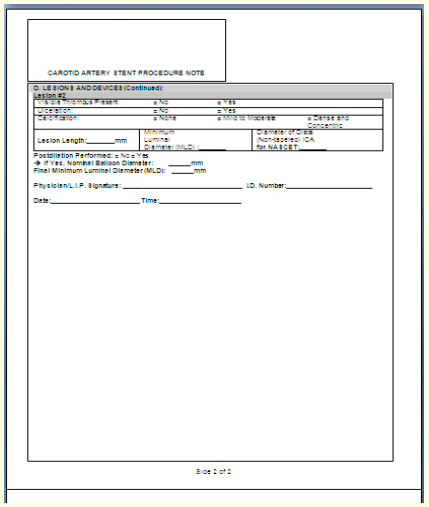
D. LESIONS AND DEVICES – Repeat Section for Each Lesion Attempted
Lesion #1

Mural Thrombus Present:	⚬ No	⚬ Yes
Ulceration:	⚬ No	⚬ Yes
Calcification:	⚬ None	⚬ Mild to Moderate ⚬ Dense and Circumferential

Lesion Length:_____mm | Minimum Luminal Diameter (MLD): _____ | Diameter of Distal Nontapered ICA for NASCET:_____

Postdilation Performed: ⚬ No ⚬ Yes
→ If Yes, Nominal Balloon Diameter: _____mm
Final Minimum Luminal Diameter (MLD): _____mm

Side 1 of 2



CAROTID ARTERY STENT PROCEDURE NOTE

D. LESIONS AND DEVICES (Continued):
Lesion #2:

Mural Thrombus Present:	⚬ No	⚬ Yes
Ulceration:	⚬ No	⚬ Yes
Calcification:	⚬ None	⚬ Mild to Moderate ⚬ Dense and Circumferential

Lesion Length:_____mm | Minimum Luminal Diameter (MLD): _____ | Diameter of Distal Nontapered ICA for NASCET:_____

Postdilation Performed: ⚬ No ⚬ Yes
→ If Yes, Nominal Balloon Diameter: _____mm
Final Minimum Luminal Diameter (MLD): _____mm

Physician/LIP Signature: _____ I.D. Number:_____

Date:_____ Time:_____

Side 2 of 2

CARE Registry
ACC-NCDR

Cases for Which Data Collection Tool is Missing/Incomplete
Reporting Period: 2008 Q3

MRN	Encounter	Admit Date	Procedure Date	Disch. Date	Patient Name	Interventionalist	Form Status
		7/2/2008	7/2/2008	7/3/2008		Interventionalist A	no form in chart
		7/8/2008	7/8/2008	7/9/2008		Interventionalist B	no form in chart
		7/25/2008	7/25/2008	7/27/2008		Interventionalist C	partially complete
		8/26/2008	8/26/2008	8/27/2008		Interventionalist D	partially complete
		8/14/2008	8/15/2008	8/16/2008		Interventionalist D	no form in chart
		7/21/2008	7/21/2008	7/25/2008		Interventionalist E	no form in chart

STONY BROOK UNIVERSITY MEDICAL CENTER

Public Reporting Data Element Capture in Medical Records

- Electronic Patient Record (EPR)
  - Grid with all data elements
  - Detailed order set review
- Sensis
  - Catheterization Lab hemodynamics system
  - Recent upgrade to capture fields required for ACC-NCDR CathPCI registry
    - Imported directly to public reporting application (Apollo)
  - Staff trained in entry for new fields

STONY BROOK UNIVERSITY MEDICAL CENTER

Electronic Patient Record
Core Measure Data Elements
Heart Failure

Data Element	Currently Available in EPR?	If Currently Available in Cerner				If Not Currently Available in Cerner			
		Location	Revisions needed?	Considerations	Notes	Planned?	Immediate need?*	Potential Location	Notes
ACEI Prescribed at Discharge	No					No	No	Power Form: Discharge Orders	Checklist item on HF discharge orders. If neither this field nor ARB selected, "contra" field becomes enabled.
Admission Date	Yes - Cerner, Siemens	Visit List (on Patient Information tab)	No	N/A	Entered by Admitting				
Adult Smoking Counseling	Yes - Cerner Only	Adult Nursing Hx Form - Social Habits	Yes	N/A	Required field for all patients, whether or not the patient currently smokes.				
Adult Smoking History	Yes - Cerner Only	Adult Nursing Hx Form - Social Habits	Yes	N/A	If "yes" to "ever smoked", enable check boxes for types of smoking (cigarettes, any other type of tobacco) and for last time smoked.				
Comfort Measures Only	No					No	Yes - CPOE will replace all paper physician orders (non-discharge) by Fall 2007.	CPOE	Checklist item on HF order set. [Consult Palliative Care Group]

STONY BROOK UNIVERSITY MEDICAL CENTER

PowerPlan Builds Review

Order Sets Affecting Core Measure Data Capture

Order Set Name	Reviewer Initials	Status	Notes
Acute Coronary Syndrome	CI/LAW	Reviewed in Cerner Edits	1.No order sets found NSTEMI/STEMI 2. Currently SUGGESTS to order ASA, BB, ACE/ARB,etc.--doesn't clearly indicate that these must be ordered and if not you must provide a contraindication. (should clearly state this is a requirement for CMS/TJC) 3. There is no space provided to write contraindications and has no prompts to be alerted. 4.found to have too much reading required for MD's. An example was the suggestive source or the recent documentation re:studies of uses of medication. 5. There was no space provided to write in for delay of PCI (requirement for CMS/TJC)
Heart Failure - Secondary Diagnosis PowerPlan (Adult)	LCW	Reviewed in Cerner Build - Needs Edits	No where to document contra's to ace, arb, or betablockers; also there is no where to document an alternative ace/arb or betablocker to the ones that are already on the orders
Hysterectomy - Pre-Operative Admission PowerPlan, Day of Surgery	jm/SV	Reviewed in Cerner Build - Needs Edits	Beta Blocker Statement. For patients without contraindications undergoing surgery who are currently on a beta blocker prior to admission, beta blocker therapy needs to be continued during the perioperative period (24 hrs. prior to incision time through to PACU discharge, as defined by SCIP measures). DVT/VTE Prophylaxis Statement. See Adult Venous Thromboembolism Prophylaxis Assessment And Order Sheet. This form must be completed for all patients. Peri-operative (discontinuation) Antibiotic Reminder Statement In order to meet SCIP criteria, prophylactic antibiotics must be discontinued within 24 hours after surgery end time. Following an every 6 hr X3 or every 8hr. X2 frequency is recommended to meet this timeframe. Remove SCD orderable from intervention area. Antibiotic Selection needs to be discussed with the Clinical Service Group (see antibiotic table below).
Joint Replacement Center - Admission PowerPlan (Adult)	jm/SV	Reviewed in Cerner Build - Needs Edits	Vancomycin Acceptable use Statements: Vancomycin- Reason for use needs to be documented

STONY BROOK UNIVERSITY MEDICAL CENTER

Data Validation

- System reconciliations
- Internal validation of abstraction
- Review of vendor data quality reports and internally-developed validation reports
- Comparisons of results generated internally and by vendors/regulatory agencies
- Pursuit of missing documentation

Last Name	First Name	MRN	Encounter	Discharge Date	Inconsistency	Resolution
				9/8/2008	Coded as CABG in Apollo; not coded as CABG in billing data.	ICD-9 Code 35.21 is consistent with the DOH CABG-Valve code. SC confirmed that she will add the missing CABG code. - RESOLVED
				8/2/2008	Coded as 3521, 3614, 3512 in billing data; coded as double valvuloplasty with single or multiple CABG in Apollo	NYS and ICD-9 coding is consistent - RESOLVED
				8/26/2008	Coded as PCI in Cath Lab system but not entered to Apollo as such	LW confirmed entered to Sensis as [incorrect encounter number] - corrected in tracking sheet and Sensis. - RESOLVED
				8/7/2008	Entered to Apollo as PCI but not coded as PCI in billing system.	Appears to have been only a diagnostic cath, not an intervention. Also does not appear on either the tracking sheet. The only data entered to Apollo is an adverse event report by LW. PV confirmed that the case apparently appeared on the PCI report due to the adverse event data. - RESOLVED
				8/18/2008	Entered to Apollo as PCI but not coded as PCI in billing system.	Patient appears to have had a PCI on 5/30, but not during the August admission. New ADT data appears to have overwritten the admit-disch data for the 5/30 case. SB is correcting in Apollo and will follow-up with the DOH. - RESOLVED

STONY BROOK UNIVERSITY MEDICAL CENTER

ICD Registry: Patient Identification Verfication

Comparison of ICD Log with IT Listings
Reporting Period: October 2008

Categ	Encounter	MRN	Notes	Follow-Up	Results
In Patient Log, not in IT Listing			Possible typo - check with CI whether this should be [encounter number differing by one digit]	CI will review patient log	Corrected in patient log - RESOLVED.
In IT Listing, not in Patient Log			Possible typo in patient log - see above	CI will review patient log	Corrected in patient log - RESOLVED.
			Code 37.98 in Power Charts. No ICD note but other documentation from EP Lab plus consent form indicates ICD procedure	CI determined that this was a pocket revision only, not a full implant. Requested that SC review the case to determine whether coded correctly.	SC updated the coding for this case.
			Code 37.94 in Power Charts. Chart not scanned but discharge summary indicates ICD procedure.	Cindy will review the case and add to Patient Log if appropriate.	Added to Patient Log and ICD registry - RESOLVED.

STONY BROOK UNIVERSITY MEDICAL CENTER

Core Measures Reporting
Noncompliant Cases

Measure Set: SCIP - Hospital-Wide
Reporting Period: Q3, 2008

Encounter	MRN	Admission Date	Discharge Date	Indicator(s)	Attending	Notes
Based on Measure Category Assignment Report dated 09/24/2008						
		6/27/2008	7/11/2008	Abx in 1 or 2 hrs; Abx d/c in 24/48	Attending A	Surgery start time documented at 10:27. Antibiotic time documented as given at 10:45 (18 minutes after surgery start time). Postop periop abx order not written until POD#1 (too late) at 0835. Dr. D wrote Postop oders, not including post op abx. Dr. A indicated the next morning he wanted the pt. covered for 24 hrs. Order should have been written with initial postop orders. LD of abx received 10/29/08 at 18:00.
Based on Measure Category Assignment Report dated 10/13/2008						
		7/1/2008	7/10/2008	BB Periop	Attending B	BB order writen for q6h, with parameters to hold for SBP<100 or HR<60. Nurse E held 2 doses pre-op, once for SBP of 101, and 2nd for HR of 61. Holding these held doses do not meet "hold parameters", no other documentation of discussion with a physician to hold these doses found.
Based on Measure Category Assignment Report dated 12/31/2008						
		7/26/2008	8/29/2008	BB Periop	Attending C	Abstaction error (SV). Documentation of contraindication located.

STONY BROOK UNIVERSITY MEDICAL CENTER

Core Measures Data Collection Overreads
Results Summary

Measure Sets: AMI, HF, PN, and SIP
Reporting Period: Q2 2006

No.	Encounter	MRN	Adm Date	Disch Date	Measure	Total Elements	Elements in Agreement	Rate of Agreement	Items With Variance
1			4/19/2006	4/26/2006	AMI	13	10	76.9%	1, 18, 24
2			4/8/2006	4/10/2006	AMI	14	12	85.7%	3, 19
3			4/11/2006	4/14/2006	AMI	11	11	100.0%	
4			4/19/2006	4/22/2006	AMI	10	8	80.0%	1, 20
5			4/16/2006	5/5/2006	AMI	9	7	77.8%	20, 22
35			4/18/2006	5/1/2006	SIP	7	4	57.1%	4, 5, 6
36			4/19/2006	5/5/2006	SIP	22	18	81.8%	11
37			5/16/2006	5/19/2006	SIP	21	18	85.7%	1, 7, 11
38			5/15/2006	6/6/2006	SIP	6	5	83.3%	4
39			5/29/2006	6/6/2006	SIP	21	19	90.5%	10, 11
40			6/6/2006	6/7/2006	SIP	5	3	60.0%	1, 4
AMI						**111**	**95**	**85.6%**	
HF						**121**	**114**	**94.2%**	
PN						**245**	**183**	**74.7%**	
SIP						**140**	**116**	**82.9%**	
Overall						**617**	**508**	**82.3%**	

STONY BROOK UNIVERSITY MEDICAL CENTER

ACC-NCDR: CARE Registry

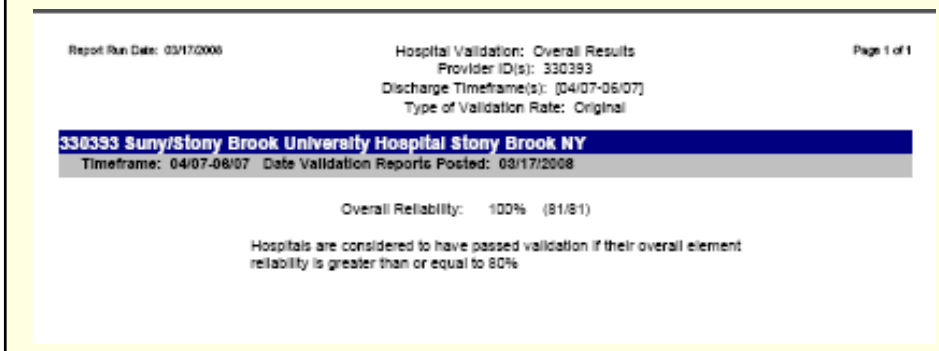
Review of Stroke Cases Lacking "Disabling/Non-Disabling" Documentation
Reporting Period: 1/1/2008-7/31/2008

MRN	Encounter	NCDR ID	Admit Date	Procedure Date	Discharge Date	Name	Attending	Addendums added
			4/3/2008	4/4/2008	4/5/2008		Attending A	no
			4/10/2008	4/10/2008	4/11/2008		Attending A	n/a pt. with TIA, amarosis
			4/21/2008	4/21/2008	4/22/2008		Attending B	n/a pt. with TIA's (no date)
			5/1/2008	5/16/2008	5/23/2008		Attending A	no
			5/18/2008	5/23/2008	6/5/2008		Attending C	signed out to CI
			6/15/2008	6/19/2008	6/27/2008		Attending D	no

STONY BROOK UNIVERSITY MEDICAL CENTER

Does It All Work?

- Clinical Data Abstraction Center (CDAC) validation rates
  - Performs validation on behalf of CMS
  - Our CDAC validation results for the past four quarters have ranged from 95% to 100% ("passing" is 80%).
- National Cardiovascular Data Registry (NCDR) "lights"
  - The NCDR uses color-coding to indicate the degree of data completeness for each quarterly submission.
  - We have achieved a green light for every quarter that we have submitted Implantable Cardioverter Defibrillator data, since 2006 Q2.
  - Decreased number of failed elements for the CARE registry.



Report Run Date: 03/17/2008

Hospital Validation: Overall Results
Provider ID(s): 330393
Discharge Timeframe(s): [04/07-06/07]
Type of Validation Rate: Original

Page 1 of 1

330393 Suny/Stony Brook University Hospital Stony Brook NY
Timeframe: 04/07-06/07 Date Validation Reports Posted: 03/17/2008

Overall Reliability: 100% (81/81)

Hospitals are considered to have passed validation if their overall element reliability is greater than or equal to 80%

Stony Brook University Medical Center Validation Results
From CMS Clinical Data Abstraction Center

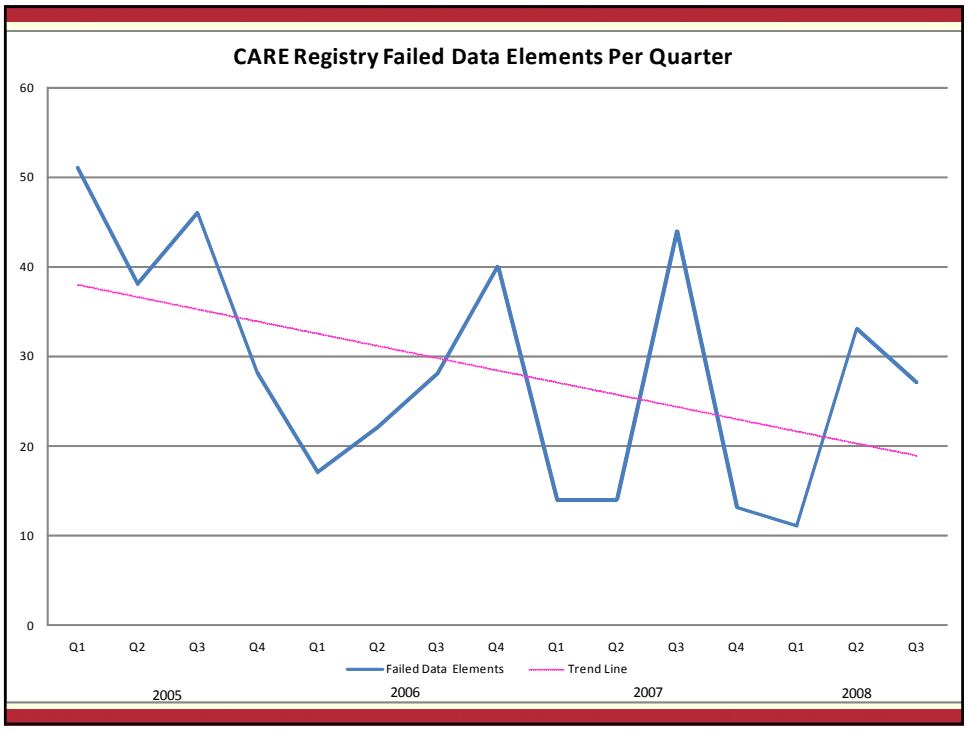
"Passing" score = 80%

Submission Quarter														
2004		2005				2006				2007				2008
Q3	Q4	Q1	Q2	Q3	Q4*	Q1*	Q2	Q3*	Q4	Q1	Q2	Q3*	Q4	Q1*
84%	66%	93%	94%	94%	97%	93%	90%	92%	91%	95%	100%	95%	97%	94%

* Contested results - validation score should be higher

Data Quality Report "Lights"

Registry	Submission Quarter														
	2005				2006				2007				2008		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
ICD	N/A	N/A	N/A	N/A	N/A										
CARE															



STONY BROOK UNIVERSITY MEDICAL CENTER

OVERVIEW

STONY BROOK UNIVERSITY MEDICAL CENTER

Overview

- About Stony Brook University Medical Center
- Steps insuring data integrity for public reporting
- Mechanisms for using those data to evaluate patient care quality

STONY BROOK UNIVERSITY MEDICAL CENTER

MECHANISMS FOR USING DATA TO EVALUATE PATIENT CARE QUALITY

STONY BROOK UNIVERSITY MEDICAL CENTER

Quality Improvement and Reporting Levels

- To be successful, (CQI) efforts must incorporate accountability at all levels of the facility, from leadership to individual staff.
  - CQI results are accountable to all levels of the Quality Management structure, including the Associate Director for Quality Management, Chief Quality Officer, Quality Coordinating Group, Quality Committee of the Governing Body, Chief Executive Officer, Quality Assessment Review Board, Governing Body, and State University of New York Board of Trustees
- This is best accomplished through a wide range of reporting efforts, tailored to each accountable group.

STONY BROOK UNIVERSITY MEDICAL CENTER

Quality Improvement and Reporting Levels

- Most of the reports in this presentation are based on the following databases, which offer a rich source from which to create such reports:
  - University HealthSystem Consortium (UHC) core measure database
  - NCDR ICD and CARE databases
- CQI activities may then be developed and monitored based on the results of these reports.

STONY BROOK UNIVERSITY MEDICAL CENTER

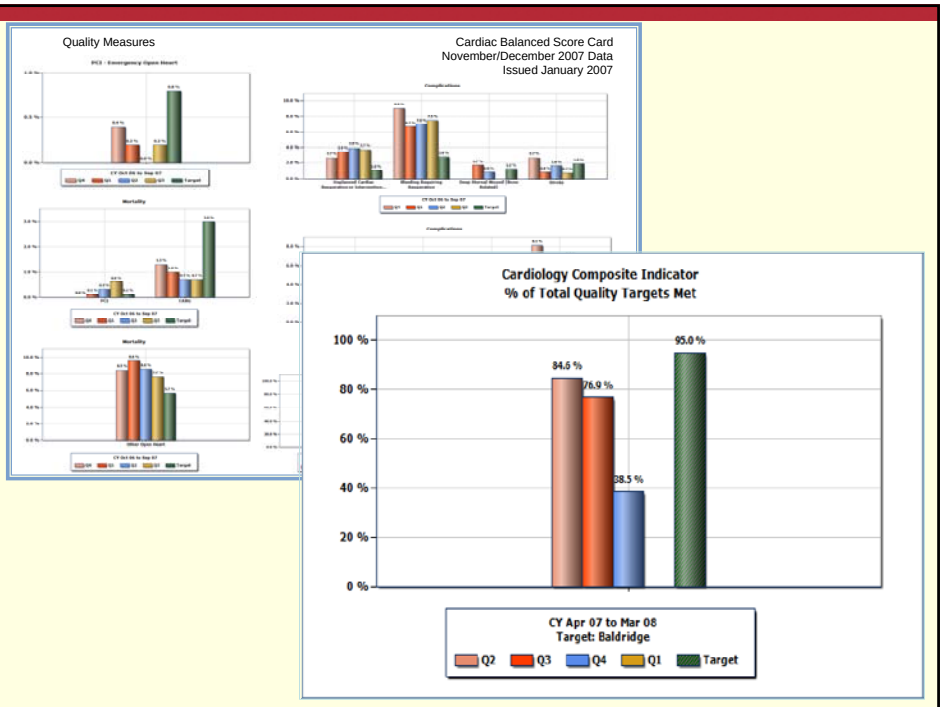
Three Reporting Levels

- Scorecards
- Dashboards
- Detailed reports

STONY BROOK UNIVERSITY MEDICAL CENTER

Scorecards

- High level reports consisting of summary data reviewed at executive level
- The indicators displayed in the scorecards are aligned with the hospital's strategic goals, including the following:
  - Aggregate quality indicators such as number of core measure targets met
  - Financial, accessibility, and research activity indicators
- Clinical chairs are held accountable by hospital leadership for meeting targets.



STONY BROOK UNIVERSITY MEDICAL CENTER

Dashboards

- Quality indicators relevant to a clinical service or multidisciplinary group, including
  - All core measure rates relevant to the service
  - Other appropriate quality indicators based on internal databases, required New York State reporting, and registry reporting
- Reviewed on a monthly bases by service leadership held accountable for quality of care.
- Where needed, a plan for corrective action may be developed
  - At the monthly clinical service group meeting.
  - By a CQI team created for that purpose

Cardiology Dashboard Excerpt

Overall Hospital Acute Myocardial Infarction Core Measures	Target	Q3 2006	Q4 2006	Q1 2007	Q2 2007	Q3 2007	Q4 2007	Q1 2008	Q2 2008
AMI Core Measure Composite Indicator	95%		89.3%	95.0%	92.4%	94.8%	94.8%	93.7%	94.9%
Time to PCI (revised from mean to median time in 2006 Q1; revised from 120 to 90 minutes in 2006 Q3)	<=90 minutes	95	95	71	76	78	76	75	98
Percent receiving PCI within 90 minutes of arrival (rev. from 120 to 90 min in 2006 Q3)	>=93%	50.0%	45.5%	70.0%	75.0%	71.4%	93.8%	82.4%	33.3%
Adult cessation advice	100%	98.5%	97.2%	100%	98.6%	100%	100%	100%	100%
Aspirin at arrival	100%	97.3%	95.5%	100%	100%	97.2%	97.6%	95.2%	97.7%
Aspirin prescribed at dsc	100%	98.8%	98.8%	100%	96.4%	99.1%	97.3%	98.7%	97.3%
Beta blocker at arrival	100%	100%	100%	98.5%	100%	94.3%	95.4%	94.3%	100%
Beta blocker prescribed at dsc	100%	97.5%	97.4%	100%	97.2%	99.2%	98.9%	98.8%	100%
ACEI or ARB for LVSD (ARB's not included in metric prior to 2005 Q1)	100%	76.7%	86.0%	86.0%	95.2%	96.8%	94.3%	97.9%	95.2%
Overall Hospital Heart Failure Core Measures	Target								
HF Core Measure Composite Indicator	95%		71.8%	70.8%	88.2%	87.8%	88.0%	86.1%	89.2%
Discharge Instructions	100%	60.7%	72.4%	72.6%	90.6%	90.6%	93.1%	83.6%	90.5%
LVF Assessment	100%	90.3%	100%	100%	98.7%	97.3%	98.7%	100%	100%
ACEI or ARB for LVSD (ARB's not included in metric prior to 1/1/05)	100%	77.5%	86.8%	86.1%	93.9%	94.4%	90.2%	96.7%	90.7%
Adult Smoking Cessation Advice/Counseling	100%	90.9%	92.9%	100%	100%	100%	100%	100%	100%

STONY BROOK UNIVERSITY MEDICAL CENTER

Detailed Reports

- Results for individual indicators
- Documenting specifics of noncompliance and adverse events
- Identifying units that have a problem
- Demonstrating associations between care and outcomes
- Breakdowns of care into intermediate steps

STONY BROOK UNIVERSITY MEDICAL CENTER

Results for Individual Indicators

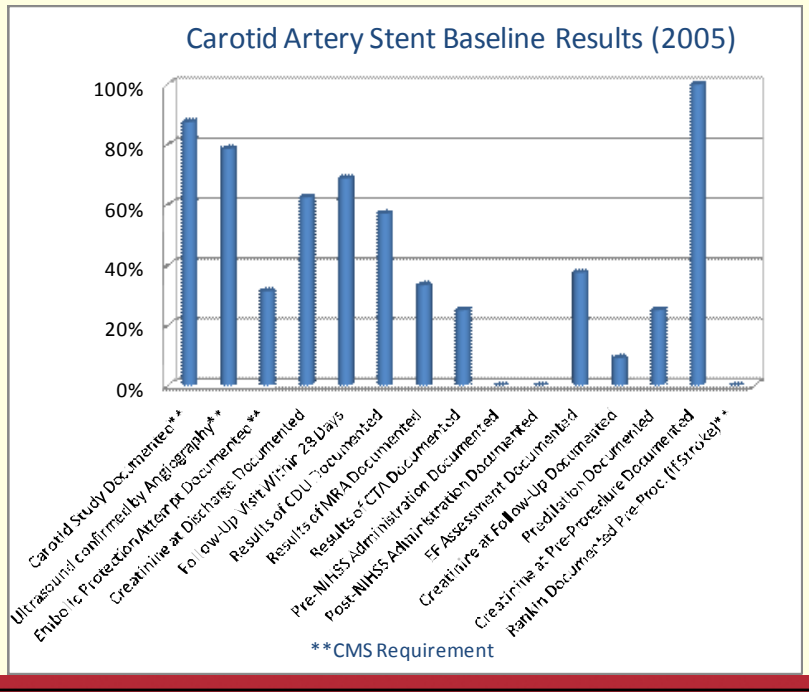
- Mechanism for identifying specific areas of improvement

STONY BROOK UNIVERSITY MEDICAL CENTER

Core Measures
Measure Set: HF

Reporting Period: 2008 Q2

Indicator	Denominator	Numerator	Rate
Appropriate Care Measure	**382**	**333**	**87.2%**
HF Composite Indicator	**74**	**66**	**89.2%**
HF_1: Dis. Instruc	**63**	**57**	**90.5%**
Instruct: Activity	63	63	100.0%
Instruct: Diet	63	63	100.0%
Instruct: Follow-Up	63	63	100.0%
Instruct: Meds	63	58	92.1%
Instruct: Symptoms	63	63	100.0%
Instruct: Weight	63	61	96.8%
HF_2: LVF	**74**	**74**	**100.0%**
HF_3: ACEI/ARB	**43**	**39**	**90.7%**
HF_4: Smoking	**17**	**17**	**100.0%**



STONY BROOK UNIVERSITY MEDICAL CENTER

Carotid Artery Stenting
Key Indicators Report

ACC-NCDR Registry Reporting
Reporting Period: 2005 - 2008 Q3

Demographics	2005		2006		2007		2008 Q1-Q3	
	N	% or Avg	N	% or Avg	N	% or Avg	N	% or Avg
Total Cases								
Overall	16		7		23		8	
Cardiology	3	18.8%	4	57.1%	8	34.8%	6	75.0%
Neurosurgery	0	0.0%	0	0.0%	6	26.1%	0	0.0%
Vascular Surgery	13	81.3%	3	42.9%	9	39.1%	2	25.0%
Age	16	73.68	7	65.33	23	67.47	8	64.30
Presentation								
Symptomatic	9	56.3%	6	85.7%	15	65.2%	1	12.5%
TIA	*4*	*44.4%*	*2*	*33.3%*	*4*	*26.7%*	*1*	*100.0%*
Stroke	*5*	*55.6%*	*4*	*66.7%*	*12*	*80.0%*	*0*	*0.0%*
Average pre-procedure stenosis	*5*	*86.80*	*6*	*89.83*	*15*	*76.33*	*1*	*90.00*
Asymptomatic	7	43.8%	1	14.3%	8	34.8%	7	87.5%
Average pre-procedure stenosis	*6*	*92.00*	*1*	*90.00*	*8*	*85.63*	*7*	*87.86*
Angiography (MRA or CTA) Performed	7	43.8%	1	14.3%	15	65.2%	6	75.0%
Procedural								
Lesion Treatment Incomplete or Aborted	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Embolic Protection Attempted	5	31.3%	6	85.7%	23	100.0%	8	100.0%
Adverse Events								
Neurologic								
New Stroke	1	6.3%	0	0.0%	1	4.3%	0	0.0%
New TIA	0	0.0%	0	0.0%	0	0.0%	1	12.5%
Cardiac								
MI	0	0.0%	0	0.0%	1	4.3%	0	0.0%
Angiographic (any)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Arterial Access (any)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
All Other Complications	1	6.3%	0	0.0%	2	8.7%	1	12.5%
Mortality								
In-Hospital	0	0.0%	0	0.0%	1	4.3%	0	0.0%
By time of follow-up	0	0.0%	0	0.0%	1	4.3%	0	0.0%

STONY BROOK UNIVERSITY MEDICAL CENTER

Noncompliance Reports

- Generated on a weekly basis while core measure data abstraction and entry are in progress
- Used by Quality and clinical staff to:
  - Double-check and confirm noncompliance
  - Provide an opportunity to document specific reasons for noncompliance, for example:
    - Physician didn't order ACEi
    - Nurse didn't give ACEi that was ordered
    - Discharge orders misfiled by clerk

STONY BROOK UNIVERSITY MEDICAL CENTER

Core Measures Reporting
Noncompliant Cases

Measure Set: AMI
Reporting Period: Q4, 2007

Encounter	MRN	Admission Date	Discharge Date	Indicator(s)	Unit	Attending	Notes
Based on Measure Category Assignment Report dated 02/19/2008							
		9/27/2007	10/4/2007	Mortality	Unit B		Confirmed deceased by E. Horbatuk
Based on Measure Category Assignment Report dated 03/10/2008							
		10/4/2007	10/9/2007	BB at Arrival	Unit A		BB ordered 1st dose now by MD, not given by RN, given routinely @ 10am outside 24 hr window. L. Wilbert
Based on Measure Category Assignment Report dated 03/29/2008							
		11/10/2007	11/13/2007	PCI within 90 minutes	Unit A		104 minutes
Based on Measure Category Assignment Report dated 04/14/2008							
		10/25/2007	12/18/2007	Aspirin at Arrival	Unit C		Asa ordered on call to cath lab, then cath cancelled, then Asa ordered stat, given routinely outside 24 hr window. L. Wilbert
		12/19/2007	12/20/2007	ACEI/ARB at Discharge	Unit D		On Post Cath D/C orders where Ace is listed the NP wrote in Discontinue Toprol with 2 stars. L. Wilbert
		12/23/2007	12/25/2007	Aspirin at Discharge	Unit A		Not really AMI, pericarditis, coding unable to be changed. L. Wilbert

Based on most recent Measure Category Assignment report available from UHC (04/14/2008).
Total completed cases as of this report: 260

STONY BROOK UNIVERSITY MEDICAL CENTER

Adverse Event Reports

- Generated on a quarterly basis after NCDR registry data abstraction and entry are completed
- All cases with adverse events reviewed and causes identified.
- This process educates all providers regarding best practices in a variety of circumstances.

STONY BROOK UNIVERSITY MEDICAL CENTER

ICD Registry
ACC-NCDR

Review of Cases with Adverse Events
Reporting Period: 2008 Q3

MRN	Encounter	Admit Date	Implant Date	Disch. Date	Patient Name	Implant Physician	Adverse Event		Notes
							Event	Date	
		7/14/2008 8/14/2008	7/14/2008 8/15/2008	7/18/2008 8/17/2008		Dr. A Dr. B	Lead Dislodgement Pericardial Tamponade	7/15/2008 8/15/2008	

STONY BROOK UNIVERSITY MEDICAL CENTER

Unit/Service-Level Reports

- Unit-level reports provide an opportunity to identify areas within the hospital that need re-education or tailored forms
- Service-level reports breakdown SCIP indicators by the surgical service that performed the procedure on which rates are based

STONY BROOK UNIVERSITY MEDICAL CENTER

Discharge Instructions
Core Measure Set: HF

Compliance By Nursing Station
Reporting Period: 2007 Q4

Nursing Station	Denominator	Discharge Instructions Core Measure Indicator		Discharge Instructions Present in Medical Record	
		Numerator	Rate	Numerator	Rate
Overall	**58**	**54**	**93.1%**	**44**	**75.9%**
Unit B	1	1	100.0%	1	100.0%
Unit D	8	6	75.0%	5	62.5%
Unit A	26	26	100.0%	22	84.6%
Unit J	7	6	85.7%	5	71.4%
Unit G	2	2	100.0%	1	50.0%
Unit E	2	1	50.0%	1	50.0%
Unit H	5	5	100.0%	3	60.0%
Unit C	4	4	100.0%	3	75.0%
Unit K	3	3	100.0%	3	100.0%

STONY BROOK UNIVERSITY MEDICAL CENTER

Core Measures
Measure Set: SCIP

General Surgery and Vascular Physicians
Reporting Period: 2007 Q4

Indicator	Denominator	Numerator	Rate
SCIP_Inf_1h: Abx in hr - Vascular	7	5	71.4%
SCIP_Inf_2h: Abx Selection - Vascular	8	7	87.5%
SCIP_Inf_3h: Abx done in 24 - Vascular	7	5	71.4%
SCIP_Inf_6: Appropriate Hair Removal	36	31	86.1%
SCIP_Inf_7: Postoperative Normothermia	11	7	63.6%
SCIP_Card_2: Beta Blocker Perioperative	16	16	100.0%
SCIP_VTE_1: VTE Prophylaxis Ordered	20	20	100.0%
SCIP_VTE_2: VTE 24 to 24	20	20	100.0%

STONY BROOK UNIVERSITY MEDICAL CENTER

Core Measures
Measure Set: SCIP

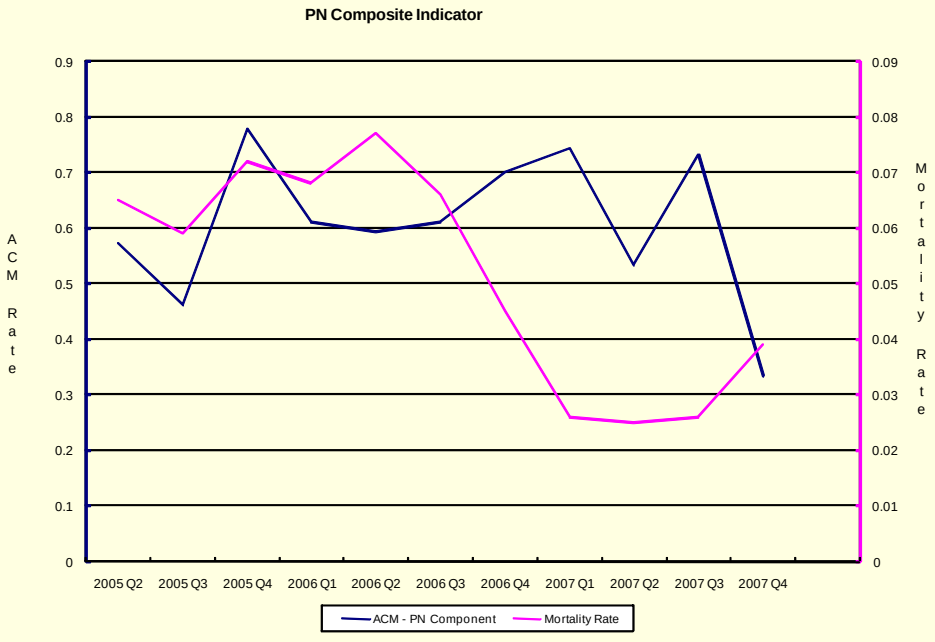
Neuorological Surgery
Reporting Period: 2007 Q4

Indicator	Denominator	Numerator	Rate
SCIP_Inf_6: Appropriate Hair Removal	12	7	58.3%
SCIP_Card_2: Beta Blocker Perioperative	4	4	100.0%
SCIP_VTE_1: VTE Prophylaxis Ordered	6	6	100.0%
SCIP_VTE_2: VTE 24 to 24	6	6	100.0%

STONY BROOK UNIVERSITY MEDICAL CENTER

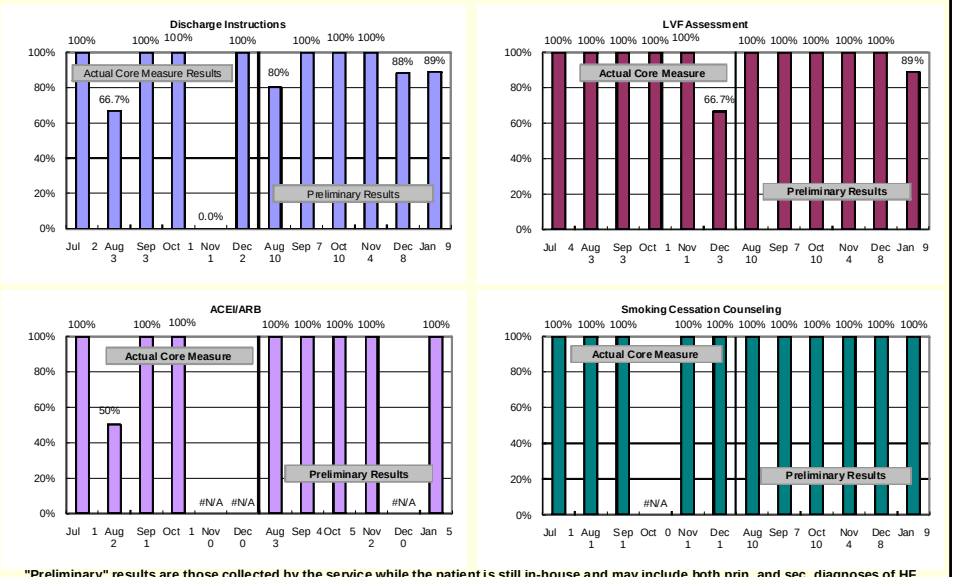
Other Reports

- Composite indicator reports demonstrate the association between appropriate care and patient outcomes
- Reports based on core measures integrated with other data sources, for example
  - Preliminary HF data collected by the HF service
  - Time to PCI rates broken out by steps in the Code H process collected and compiled by the door-to-balloon CQI team



STONY BROOK UNIVERSITY MEDICAL CENTER

Heart Failure Core Measures Results - Unit G
Reporting Period: July 2007 - Janaury 2008



"Preliminary" results are those collected by the service while the patient is still in-house and may include both prin. and sec. diagnoses of HF.
"Actual" results are from the random sample drawn by UHC, are based on retroactive review and include principal diagnosis of HF only.

AMI Time from Arrival to PCI Breakdowns

JC/CMS Core Measures - Acute Myocardial Infarction	Target	Q3 2007	Q4 2007	Q1 2008	Q2 2008
Time to PCI (revised from *mean* to *median* time in 2006 Q1; revised from 120 to 90 minutes in 2006 Q3)	<=90 minutes	78	76	75	98
Time from Code H to Patient in Cath Lab	<=30 min	27	20	44	44
Time from Cath Lab to Local Anesthesia	<=15 min	13	12	10	14
Time from Local to Balloon Inflation	<=30 min	22	18	20	26
Percent receiving PCI within 90 minutes of arrival (rev. from 120 to 90 min in 2006 Q3)	>=93%	71.4%	93.8%	82.4%	33.3%
Code H to Patient in Cath Lab in 30 min	>=93%	55.6%	52.9%	25.0%	40.0%
Cath Lab to Local Anesthesia in 15 min	>=93%	66.7%	76.5%	90.0%	60.0%
Local to Balloon Inflation in 30 min	>=93%	80.0%	100.0%	72.2%	66.7%

STONY BROOK UNIVERSITY MEDICAL CENTER

Are All These Reports Any Help?

- Improvements in The Joint Commission/Centers for Medicare and Medicaid Services (TJC/CMS) core measure rates
- Each of the following core measure indicators has shown statistically significant improvement from the 2004 baseline through 2007 (the most recent full year for which data are available):
  - Acute Myocardial Infarction (AMI)
    - Smoking cessation counseling
    - Prescription of an angiotensin converting enzyme inhibitor (ACEi)/angiotensin receptor blocker (ARB) at discharge

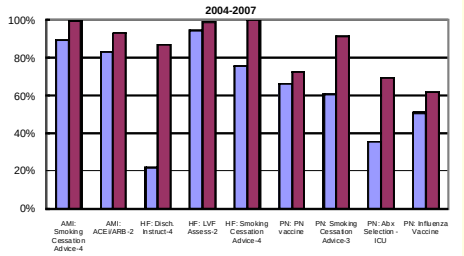
STONY BROOK UNIVERSITY MEDICAL CENTER

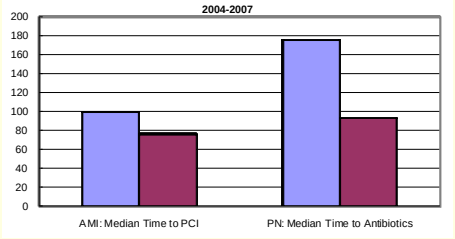
Are All These Reports Any Help?

  - Heart Failure (HF)
    - Smoking cessation counseling
    - Discharge instructions
    - Assessment of left ventricular systolic function (LVF)
  - Pneumonia (PN)
    - Smoking cessation counseling
  - Surgical Care Improvement Program (SCIP)
    - Appropriate antibiotic selection
    - Timely discontinuation of prophylactic antibiotics

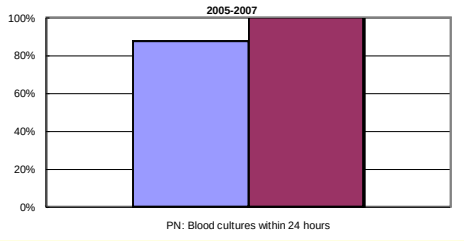
STONY BROOK UNIVERSITY MEDICAL CENTER

Differences in Key Core Measures Results From Start of Reporting to Present





Significance testing of differences between medians not performed due inability to assume identically-shaped sitribution for samples form both time periods.



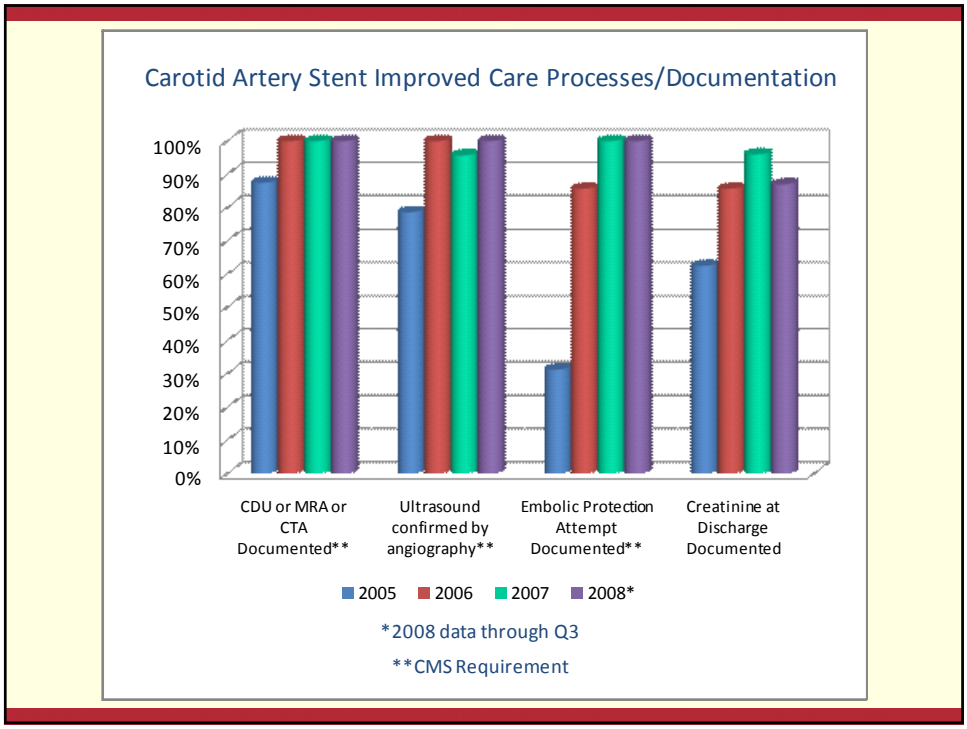
1 Significant at the 0.05 level 2 Significant at the 0.01 level 3 Significant at the 0.001 level 4 Significant at the 0.0001 level

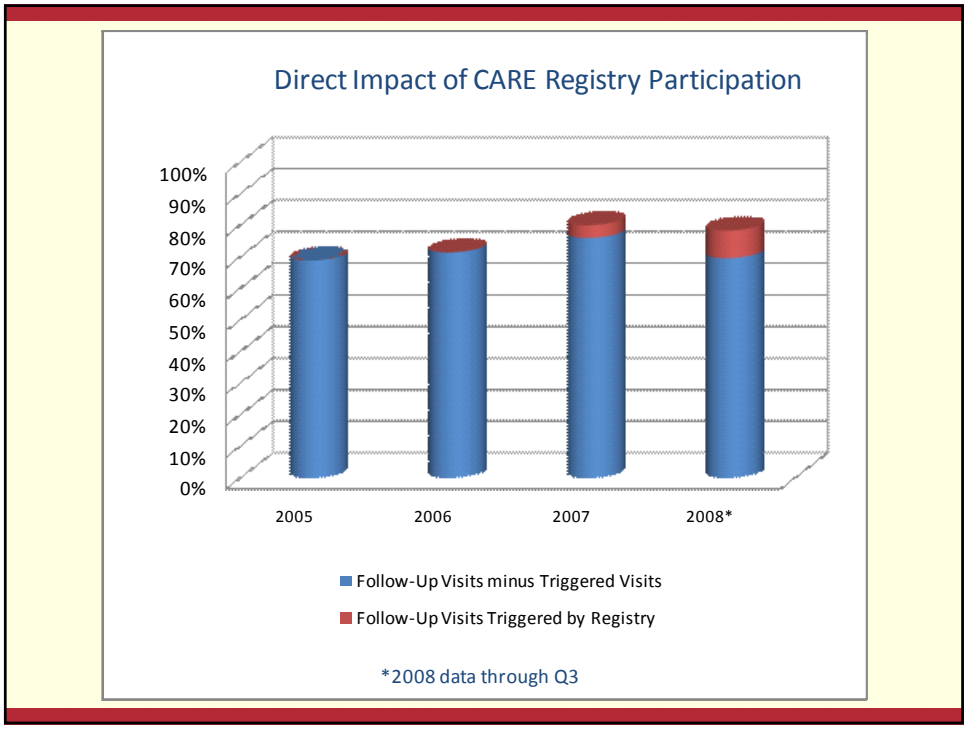
2004 is the first full calendar year for which data for most Core Measure indicators are available, and improvement is shown from that baseline to the present. Data collection for other indicators began in later years, so a different baseline period is displayed.

STONY BROOK UNIVERSITY MEDICAL CENTER

Are All These Reports Any Help?

- Increases in the percentage of CAS patients for whom
  - Carotid study was documented
  - Ultrasound was confirmed by angiography
  - Embolic protection attempts documented
  - Creatinine level at discharge documented.
- Documentation of three of these processes of care has reached 100% since the start of SBUMC's registry participation.
- Follow-up visits occurred more frequently due to intervention by the CARE abstractor.


Carotid Artery Stent Improved Care Processes/Documentation
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
CDU or MRA or CTA Documented**
Ultrasound confirmed by angiography**
Embolic Protection Attempt Documented**
Creatinine at Discharge Documented
2005
2006
2007
2008*
*2008 data through Q3
**CMS Requirement


Direct Impact of CARE Registry Participation
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2005
2006
2007
2008*
Follow-Up Visits minus Triggered Visits
Follow-Up Visits Triggered by Registry
*2008 data through Q3

STONY BROOK UNIVERSITY MEDICAL CENTER

Elisa L. Horbatuk, MA
Data Manager, Decision Support Services
Stony Brook University Medical Center

Elisa.Horbatuk@StonyBrook.edu
1-631-444-3611