

Proposed Measurement Calendar: Pending review of CHART release dates

Q4 2009 data entry window – Open 2/15/10, Close 2/26/10

Q1 2010 data entry window – Open 5/17/10, Close 5/28/10

Q2 2010 data entry window – Open 8/16/10, Close 8/27/10

Q3 2010 data entry window – Open 11/15/10, Close 11/26/10

Overarching principles:

- All Beacon hospitals will submit data on a quarterly basis
- Data are submitted for both Beacon-wide initiatives and a minimum of two hospital selected menu offerings
- Hospitals will be asked to provide historical data from 2008, when possible, in order to establish a baseline for improvement
- Data from published sources may also be used to establish a baseline for improvement, when available
- If historical baseline data is not available, we will use the intersection of the trend line at the beginning of the sample period as the baseline value
- Improvement will be determined by a trend line. The slope of the line from the baseline until the end of the data collection period will be used to determine if the improvement goal was met
- Due to delays in CalNOC and CHART reports, final measurement for measures, using those sources, may not be calculated until April, 2011
- Hospitals will continue to submit data for CI BSI and VAP

Beacon – Wide Initiatives

Initiative	Measurement Plan	Recommended Goal
Falls	<p>Definition – Falls with injury per 1,000 patient days, all units combined $n = \# \text{ of unplanned descents to the floor with injury}$ $d = \# \text{ patient days} \times 1,000$</p> <p>Source – Cal NOC</p> <p>Baseline 2007 – 0.10 falls with injury per 1,000 patient days for Beacon hospitals that participate in CalNOC</p>	<p>By Q2, 2010, each hospital will reduce its 2007 falls with injury rate per 1,000 patient days by 50%.</p> <p>The ultimate goal is zero falls with injury.</p>
Sepsis	See Page 4	

Menu Initiatives Each Facility Will Select At Least TWO of the Following		
Initiative	Measurement Plan	Recommended Goal
HAPU	<p>Definition – HAPU rate, all units combined $n = \#$ of patients with hospital-acquired pressure ulcers (HAPU), Stage 2 or above (all studies combined) $d = \#$ of patients surveyed for ulcers (all studies combined) X 100</p> <p>Source – CHART</p> <p>Baseline 2007 – Mean for Beacon hospitals that participate in CHART 4.5%, median 3%, 25th percentile 2%.</p>	<p>By Q2, 2010, each hospital will reduce its 2007 HAPU rate by 50%.</p> <p>The ultimate goal is zero HAPUs.</p>
Perinatal	<p>Definition – Birth trauma rate per 1,000 live births $n =$ The number of neonates discharged with an ICD – 9 CM code for birth trauma $d =$ The number of all live newborns X 1000</p> <p>AHRQ – PSI 17</p> <p>Birth trauma diagnosis codes: 7670, 76711, 7673, 7674, 7677, 7678, 7679</p> <p>Excludes infants with subdural or cerebral hemorrhage and diagnosis of pre-term infant < 2,500 gram and < 37 weeks or \leq 34 weeks. Excludes infants with injury to skeleton and any diagnosis of osteogenesis imperfect</p> <p>Source – Hospital information system</p> <p>Baseline – No Beacon baseline available. AHRQ National Observed rate 2004 – 2006 1.8/1,000 live births.</p>	<p>By Q2, 2010, each hospital will reduce its baseline birth trauma rate by 30%.</p>
Stroke	<p>Definition –Stroke mortality rate, 18 years and older $n =$ The number of patients with a principle diagnosis code of stroke (ischemic or hemorrhagic) who expired $d =$ The number of patients with a principle diagnosis code of stroke(ischemic or hemorrhagic)</p> <p>AHRQ - IQI 17</p> <p>ICD – 9 CM codes: 430, 431, 4320, 4321, 4329, 43301, 43311, 43321, 43331, 43381, 43391, 43401, 43411, 43491</p> <p>Source – Hospital information system</p> <p>Baseline – Rolling 12 months Q307 – Q208 for 23 hospitals reporting – Mean 9%, median 8.3%, 25th percentile 6% AHRQ Baseline for 2006 – 25th percentile 8.33%</p>	<p>By Q2, 2010, each hospital will reduce its baseline stroke mortality rate by 15%.</p>
AMI Mortality	<p>Definition –AMI mortality rate, without transfers $n =$ The number of patients age 18 years and older with a principle diagnosis code of AMI who expired $d =$ The number of patients age 18 years and older with a principle diagnosis code of AMI</p> <p>AHRQ IQI 32</p> <p>ICD – 9 CM AMI diagnosis codes: 41001, 41011, 41021, 41031, 41041, 41051, 41061, 41071, 41081, 41091</p> <p>Excludes transfers to or from another short term hospital</p> <p>Source – Hospital Information System</p> <p>Baseline – Beacon specific baseline not available at this time. AHRQ 25th percentile 2006 was 6%.</p>	<p>By Q2, 2010, each hospital will reduce its baseline AMI mortality rate by 15%.</p>

CDAD	<p>Definition –C. Difficile Associated Disease rate Patients with a discharge diagnosis of CDAD n = The number of patients with stool positive for c. diff toxins, new onset diarrhea, diarrhea without diagnosis or cases of pseudomembraneous colitis causing megacolon (toxic) or colectomy. d = The number of patient days X 1,000 Excludes patients diagnosed with CDAD within 2 days of admission unless they were previously discharged in the past 7 days. Patients < 18 years old. ICD -9 CM Code 008.45 Note - Patients are only counted once if they multiple positive tests. Patients should have new onset diarrhea or documented change in stool consistency. Source – Hospital information system Baseline – Beacon specific baseline not available at this time. Data from the US Centers for Disease Control and Prevention (CDC) reveal that hospitalizations with a discharge diagnosis of CDAD have significantly increased from 31per 100,000 population in 1996 to 61 per 100,000 in 2003. Canada c-diff rate per 1,000 patient days 0.39 August 2008</p>	<p>By Q2, 2010, each hospital will reduce its baseline CDAD rate by 30%.</p> <p>The ultimate goal is Zero hospital acquired CDAD.</p>
CAUTI	<p>Definition – Catheter Associated Urinary Tract Infection rate, hospital acquired n = The number of catheter associated hospital acquired urinary tract infections d = The number of patient days X 1,000 (Will discuss the feasibility of collecting catheter days instead) Source – Hospital Infection Preventionist Baseline – Beacon specific baseline not available at this time. Almost 100% of patients who have an indwelling catheter draining to an open system for > 4 days develop a UTI. Approximately 20% of all patients with a urinary catheter maintained on a closed system may become infected. (CDC) Pooled mean from NHSN 2006 data show UTI rate of 4.4 and 3.4 in Combined ICU Non-teaching and teaching respectively and 3.7 combined M/S unit.</p>	<p>By Q2, 2010, each hospital will reduce its baseline CA UTI rate by 30%.</p> <p>The ultimate goal is zero catheter associated UTIs.</p>

Perinatal Improvement		
Measurement Plan	Beacon Grant Deliverable Goal	Hospital Commitment Goal
<p>Definition – Percentage of deliveries 37+0 – 38+6 weeks gestational age that are elective</p> <p>n = The number of elective* deliveries with documented gestational age by best clinical estimate (usually US confirming LMP) 37+0 – 38+6 weeks, inclusive</p> <p>d =The number of singleton live births with gestational age by best clinical estimate (usually US confirming LMP) documented at 37+0 to 38+6 weeks, inclusive</p> <p>Exclusions: Indications for delivery that make it not elective are the ACOG list (tweaked slightly by JC)- Table 11.07 “Conditions Justifying Elective Delivery” (separate file)</p> <p>*"Elective" = scheduled birth either CS or induction. Induction includes all forms of induction: oxytocin, prostaglandin, Foley, and AROM when not in labor. Elective CS also means that the woman is not in labor (many repeat CS are done in early labor but will not have an ICD9 code for labor as that does not exist.)</p> <p>Source – Data may reside in various places including: Hospital information system, Birth log, Medical Record</p> <p>Baseline – No Beacon baseline available.</p>	<p>NA</p>	<p>Test Measure with goal to eliminate elective deliveries at <39 weeks by Q210.</p>

Instructions for Severe Sepsis/Septic Shock Mortality Data Collection: Baseline and End of Project

DEFINITIONS

Population: Patients that will be used to calculate data results will be identified by discharge ICD-9 codes

Sepsis Population Inclusion Criteria:

- All Patients 18 years of age or older

AND

- **At least one (1)** of the two (2) ICD-9 codes from **Table 1 (see Appendix A)** coded at discharge **any patient with one of these ICD 9 codes*

AND/OR

- **At least one (1)** ICD-9 code from **Table 2 (see Appendix A)**
PLUS at least one ICD-9 code from **Table 3 (see Appendix A)** coded at discharge.
**any patient with these combinations of ICD-9 codes*

Mortality Definition:

- **Actual Mortality:** Number of patients identified in population expiring during current month hospitalization
- **Mortality Rate:** Percentage of patients in population expiring during current month hospitalization
 - **Numerator:** Number of patients identified in population expiring during current month hospitalization
 - **Denominator:** Number of patients identified in population that month

Directions for Data Collection

1. Instruct IT department to identify all patients from July, 2008 to December, 2008 meeting inclusion criteria for population, as identified above. Report data for each month individually (month-by-month), and in the aggregate (sum total for the 6 month period).
2. For each month, generate one report with everyone who has a code of “severe sepsis” or “septic shock” (ICD-9 Category 1: Table 1 – Appendix A).
3. For each month, generate one report including only those patients that have at least one code in each table 2 and table 3.
4. For each month, combine report data from items #2 and #3 above to generate one (1) “master population list.”
5. Use one (1) “data submission form” for each month.
6. For each month:
 - a. Indicate the *number of the patients* on Data Submission Form, “**Line A**”
 - b. Have IT (or respective department who can supply data) identify the *number of patients in the population expiring during hospitalization*. Place the total number of the expired patients on Data Submission Form, “**Line B**”
 - c. *Calculate percentage of patients expiring* (**Line B ÷ Line A**) and enter value on Data Submission Form, “**Line C.**”



**Instructions for Severe Sepsis/Septic Shock Mortality Data Collection:
Baseline and End of Project**

7. *Submit* completed data form to *Vincent Lok* at the INLP by **Friday, February 27, 2009**.
(vlok@thecenter.ucsf.edu)

ICD-9 Code Tables

Table 1 – Category 1

DESCRIPTION	CODE
Surviving Sepsis ICD-9-CM Codes	
Systemic Inflammatory Response Syndrome without Organ Dysfunction	995.91
Systemic Inflammatory Response Syndrome with Organ Dysfunction (Severe Sepsis)	995.92
Septic Shock	785.52

Table 2 – Category 2

DESCRIPTION	CODE
Infection Related ICD-9-CM Codes	
Streptococcal Septicemia	038.00
Staphylococcal Septicemia	038.10-038.19
Pneumococcal Septicemia	038.20-038.29
Septicemia due to Anaerobes	038.30-038.39
Septicemia due to other Gram Negative Org.	038.40-038.49
Other Specified Septicemias	038.80-038.89
Unspecified Septicemia	038.90-038.99
Salmonella Septicemia	003.10-003.19
Septicemic Plague	020.20-020.29
Anthrax Septicemia	022.30-022.39
Meningococemia	036.20-036.29
Waterhouse-Friderichsen Syndrome	036.30-036.39
Herpetic Septicemia	054.50-054.59
Candidiasis Disseminated	112.50-112.59
Pneumococcal Pneumonia	481.00-482.99
Bronchopneumonia, Organism Unspecified	485.00-486.99
UTI, Site not Specified	599.00-599.09
Acute Pyelonephritis	590.10-590.19
Other Pyelonephritis or Infection of Kidney	590.80-590.99



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Table 3 – Category 3

DESCRIPTION		CODE
Organ Dysfunction ICD-9-CM Codes		
Respiratory	Acute Respiratory Failure	518.81-518.82
	Other Dyspnea/Respiratory Abnormalities	786.09
	Respiratory Arrest	799.10
Cardiovascular	Shock without Mention of Trauma	785.50-785.59
	Cardiac Arrest	427.50
	Hypotension	458.00, 458.80, 458.90
	Nonspecific Low Blood Pressure Reading	796.30
Coagulation	Defibrination Syndrome	286.60
	Other and Unspecified Coagulation Defect	286.90
Renal	Acute Renal Failure	584.00-584.99
Hepatic	Acute and Subacute Necrosis of Liver	570.00-570.99
	Hepatic Coma	572.20
	Hepatic Infarction	573.40
Central Nervous System	Delirium	293.00-293.90
	Anoxic Brain Damage	348.10
	Encephalopathy - Unspecified	348.30
	Coma	780.0



Instructions for Severe Sepsis/Septic Shock Mortality Data Collection:
Baseline and End of Project

**INLP Sepsis Project Baseline and End of Project Mortality
Data Submission Form SAMPLE (use Excel Spreadsheet)**

**INLP Sepsis Project Baseline and End of
Project Mortality
Baseline Data Submission Form**



Hospital:	
Data Month:	
A. Number of Patients in sepsis population as defined by ICD-9 tables:	
B. Number of Patients in this sepsis population (as defined by ICD-9 tables) expiring during their hospitalization in this reporting month:	
C. Percentage of Patients Who Expired (B divided by A to get the percentage):	#DIV/0!

