Electronic Patient Record (EPR) and Public Reporting

Elisa L. Horbatuk, MA Data Manager, Decision Support Services Stony Brook University Medical Center MIT Information Quality Industry Symposium July, 2010



OVERVIEW

Overview

- About Stony Brook University Medical Center (SBUMC)
- EPR Implementation at SBUMC
- Public Reporting
- EPR and Public Reporting



ABOUT US

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 Dept
 - 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

- 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

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

Oversight of Quality Quality Management/Governance Structure





Strategic Plan

STONY BROOK UNIVERSITY HOSPITAL STRATEGIC GOAL: HRO



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 Hospital Division of Quality Management Organizational Chart



EPR IMPLEMENTATION AT SBUMC

EPR Implementation at SBUMC

- During the past few years we have implemented
 - Nursing documentation
 - Laboratory results and flowsheets
 - Medication administration documentation
 - Medication reconciliation
 - Intraoperative reporting
 - Emergency Department documentation
 - Computerized Physician Order Entry

STONY BROOK

🥵 Adult Nursing History	Form PATIENT N	IAME							_ & ×
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🗸 Language				Ge	eneral Info	rmation			
🗸 Cultural Assessment	Admitted From	Acute C	are Facility	O Law I	Enforcement Dete	ntion			
Contact Information			Living	O Long	Island State Vete	ran's Home			
✓ Advance Directive		C Clinic	ncy Department	O UMR	DD Facility/Group ician's Office	Home			
✔ Height and Weight		O Extende	ed Care Facility/SNF	O Psyci	hiatric Unit				
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🗸 Social Habits									
🗸 Psychosocial									
✓ Education Needs									
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STONY BROOK

🥵 Adult Nursing History											
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Medication From Home											
Measurements											
Allergies											•
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Anesth/Transfusion		J									
✓ Nutrition	Tobacco Use	Tupe	Cigorotto Ileo	Other Tehacea	l ant	lleo	Commont				-
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PROD EHORBATU 03 March 2010 10:39

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	DOB; DATE OF Age	AGE	Sex	SEX	MP		Lo	c:04L1 - CTI	CU: D70
Allergies: No Known Allergies	IP InteRSTUCTION FIN		Admit Dt:			Disch Dt: <n< th=""><th>lo - Disch</th><th>arge date</th><th>>]</th></n<>	lo - Disch	arge date	>]
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Time View	Medications	03/03/2010 03/	03/2010 0	3/03/2010	03/03/2010	03/03/2010	03/03/2010	03/03/201	0 03/0 🔺
Scheduled Scheduled	allopurinol	10.40	10:00	0.00	0.00	0.00	3.30	3:40	3
M Unscheduled	Routine, 02/27/10 10:00:00								
PRN	allopurinol	100	mg Final						
Continuous Infusions	balsam Peru/castor oil/trypsin topical								
	(Granulex topical spray)								
	03/02/10 14:00:00, Body Part(s): Other (Specify in	1							
	to pressure areas								
	balsam Peru/castor oil/trypsin topical					1 spray Final			
	625 mg, Suspension, Oral, TID, First dose is								
	Routine, 02/27/10 10:00:00								
	calcium carbonate	625	mg Final						
		e D	osing Ta						
	Insulin Iispro (ICU/ICK Rapid Acting Insulin Medium Dose Correction)	2 Ur	nits @						
	See Dosing Table, SubCutaneous, Q4H, First dose	03/0	01/2010						
	is Routine, 02/26/10 22:00:00, If Finger sticks not	14:0)0						
	Blood Glucose (mg/dL) Less than 50: Hypoglyci								
	insulin lispro					Not Given: Pa			
	Glucose, Point of Care					71 mg/dL Fina			
	1 g. Rag. IVPR. X1. First doce is STAT. 03/03/10								_
Therapeutic Class View									

PROD EHORBATU 03 March 2010 10:49

Document Medication by Hx							_ 6
ATIENT NAME	DOB: DATE OF	Age: AGE	Sex	SEX 1	MRN: MRN	Loc:04L1 -	CTICU; D7
ergies: No Known Allergies	IP Intellsive Care FI	N: ENCOUN	TER <mark>[Admit Dt</mark> :	ADMIT DATE/	Disch Dt:	(No - Discharge	date>]
Add No Known Home Medications	Inable To Obtain Information	#		TIME			
	Document Medication by Hx						
View	Sorder Name	Status	Details			Last Occurred	Infor
Orders	Documented Medications	by Hx					
Documented Medications by Hx Outpatient Speccription	allopurinol (allopurinol 100 mg oral tablet)	Documented	= 1 tab, Oral, Once daily	y, # 180 tab			
m v riescription	🖨 metoprolol (Lopressor)	Documented	25 mg, Oral, QPM, Q Su	un,Tues,Thur,Sat			
	🖨 metoprolol (Lopressor)	Documented	25 mg, Oral, QAM, Q Su	un,Tues,Thurs,Sat			
	🗳 sevelamer (Renagel 800 mg oral tablet)	Documented	5 x (800mg tab), Oral, T	ID, # 180 tab			
	furosemide (Lasix 80 mg oral tablet)	Documented	1 tab, Oral, Once daily,	30 tab			
	🚭 sodium bicarbonate	Documented	650 mg, Oral, BID, Tak Sundays	e on Tuesdays, Thursd	ays, Saturdays,		
	Calcium carbonate (Tums)	Documented	2 tabs, Oral, TID				
	multivitamin (Nephro-Vite Rx oral tablet)	Documented	1 tab, Oral, Once daily,	30 tab			
	amlodipine (Norvasc 5 mg oral tablet)	Documented	1 tab, Oral, BID, 30 tab				
	🚽 acetaminophen (Tylenol)	Documented	325 mg, Oral, INT-Q4H,	. PRN, Pain or fever			
	GlipiZIDE SipiZIDE SipiZIDE Signature Signature	Documented	5 or 10mg, Oral, INT-Q2	24H			
	Prescription						
	e metoprolol (Lopressor)	Ordered	100 mg, 2 tab, Oral, QA Hold if SBP<100 or HR	M, 30 tab <60			
	e metoprolol (Lopressor)	Ordered	50 mg, 1 tab, Oral, QPM Hold if SBP<100 or HR	1, 30 tab <60			
	•						

Not Official Copy: Intra Flowsheet Date: 02 M Result status: Fina Result title: OR Performed by: NURS Encounter info: ENCOU	aoperative Report March 2010 17:52 al <u>Nursing Record</u> on 02 March 2010 18:07 INTER #
	* Final Report *
OR Nursing Record (Verifie	ed)
OR Nursing Record Su Primary Physician: Case Number: Finalized Date/Time: Pt Name: D.O.B./Sex: Med Rec #: Physician: Financial #: Pt Type: Room/Bed: Admit/Disch:	
Institution:	<pre>}{B}Stony Brook })</pre>
	(B)University Hospital (B)Main Operating Room

MOR General Case Data Ent

Entry 1

Case Information	
OR	M OR 15
ASA Class	4
Specialty	Plastic
Exclude From Average	n/a
Diagnosis	
Preop Diagnosis	sternal wound
Postop Diagno <i>s</i> is	sternal wound
Patient States	N/A
Pregnancy?	
Last Modified By:	NURSING STAFF
	03/02/10 17:12:22

Entry 1

MOR	Case	Attendance

Case Attendee
Role Performed
Relief Reason
Time In
Time Out
Procedure

Last Modified By:

SURGEON	;
Surgical	Attending
n/a	
03/02/10	16:38:00
03/02/10	18:06:00
irrigatio	on 6
debrideme	ent sternum
NURSING S	STAFF
03/02/10	18:06:50

Entry 4

Case Attendee Role Performed NURSING STAFF Circulating Nurse-1

Entry 2

Patient?

Case Level

Wound Class

Sub Speciality

Is this a Cancer

Postop Same As Preop

ANESTHESIOLOGIST Anesthesiology Resident n/a 03/02/10 16:38:00 03/02/10 18:06:00 irrigation 4 debridement sternum NURSING STAFF 03/02/10 18:06:50

Entry 5

OR TECHNICIAN O.R. Technician-1

Entry 3

Elective

Infected

Plastic

Yes

No

NURSING STAFF Circulating Murse-1 n/a 03/02/10 16:30:00 03/02/10 18:06:00 irrigation 4 debridement sternum NURSING STAFF 03/02/10 18:06:50

Entry 6

ANESTHESIOLOGIST Attending

PATIENT NAME	MRN) Opened by	HORBATUK, EL	ISA					_ & ×
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PATIENT NAME		DO	DATE OF	AgeAGE		Se)SEX 9	MRN	MRN	Loc:16S - Cardiac Tele.
Allergies: NKDA - No kn	own drug a	allergiesIP	MBHREEHIY Just	<mark>tified FIN:</mark> ENCO	UNTER	<mark>[Admit Dt</mark> ADMIT D	ATE/ 1	Disch Dt: <no< th=""><th>- Discharge date>]</th></no<>	- Discharge date>]
Clinical Notes				#		TIME	_		📑 Print 🛷 5 minutes ago
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🖻 🗁 🗁 Emergency Departm	ne Flowshe Result s	set Date: status:	Final	10 10:33					
	a Result ti	itle:	ED Vitals/Pa	in					
ED Note Nursing] Perform	ied by:	NURSING S	TAFF on 01 March	2010 10:	33			
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03/01/2010	1								
	en			ED Vitals/F	Pain Enter	ed On: 03/01/2010 10):34		
🕀 🛅 Physical Therapy Do	DC			Penumed Un.	03/01/20	NURSIN	G STAFF		
🗄 🛅 Patient Education	ED Vita	is.							
	Temper	rature Rectal :	· 37.8DegC(Cor	nverted to: 100.0De	egF)				
	Rean Ri	late: 80bpm ston/Rate: 2	Abr/min (HI)						
	Blood P.	ressure Syste	<i>olic:</i> 145mmHG	à					
	Blood P.	Pressure Ďias:	<i>tolic:</i> 62mmHG						
Butupe	Intensity	<u>y:</u> 0,							
C Bu status	Ovvaen	iximetry∶sr∶ i Elow Bate :	% 4.01./min						
C Bu date	Oxygen	<i>Therapy:</i> N	lasal Cannula						
C Performed by							NUR	SING STAFF	-03/01/2010 10:33
C By encounter									

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Patient Name: TEST, NORAIP2	Date: 02/16/2010 15:52 15:
Careset: ED Pneumonia (Full Careset)	
Component	Order Details
Diagnostic Tests	
Physician Reminder: Be sure that Blood Cultures have been ordered and drawn prior to prescribing antibiotics. If they have already been ordered, uncheck them below	
CBC Differential	
Chem 8, ED Whole Blood Panel	
✓Blood Culture	Routine, Collected, X1
Blood Culture	Routine, Collected, X1
✓Lactic Acid	STAT, Collected, X1
Blood Gas - Arterial	
Legionella Pneumophila Ab	
Urinalysis	
Sputum Culture w/ Gram Stain	
Chest Routine (P-A/A-P and Lateral) (Chest PA and Lateral)	
Nursing Orders	
VPulse Oximetry Continuous	
Temperature	Rectal, X1, Other (Please Specify in Comments)
Peripheral IV Insert	X1
Urinary Catheter In-Dwelling Insert	X1
Routine CAP (Non-ICU Patients) Antimicrobial Treatment	
Recommended Regimen:	
Ceftriaxone PLUS Azithromycin Ceftriaxone PLUS Doxycycline	
3. Moxifloxacin for patients with B-lactam Allergy	
cefTRIAXone	1 g, INJ, IVPB, X1, First dose is STAT, T;N
azithromycin	500 mg, INJ, IVPB, X1, First dose is STAT, T;N
moxiflaxacin	400 mg, INJ, IVPB, X1, First dose is STAT, T;N
doxycycline	100 mg, CAP, Oral, X1, First dose is STAT, T;N
CAP (ICU Patients) Antimicrobial Treatment	
Recommended Regimen:	
1. Ceftriaxone PLUS (Azithromycin or Moxifloxacin) 2. Moxifloxacin PLUS Clindamycin for B-lactam Allerov	
cefTRIAXone	1 g, INJ, IVPB, X1, First dose is STAT, T;N
azithromycin	500 mg, INJ, IVPB, X1, First dose is STAT, T;N
moxifloxacin	400 mg, INJ, IVPB, X1, First dase is STAT, T:N
	600 mg. INJ. IVPB. X1. First dase is STAT. T:N
CAP with Pseudomonal Risk (ALL Patients) Antimicrobial Treatment	and with a fact that again a second the

Patient Name: TEST, NORAJP2

et: ED Pneumonia (Full Careset)	
Component	Order Details
Recommended Regimen: 1. [Pip/Tazo or Cefepime] PLUS Ciprofloxacin 2. [Pip/Tazo or Cefepime] PLUS Gentamicin PLUS Moxifloxacin 3. [Pip/Tazo or Cefepime] PLUS Gentamicin PLUS Azithromycin 4. Aztreonam PLUS Moxifloxacin PLUS Gentamicin for B-lactam allergy	
cefePIME	2 g, INJ, IVPB, X1, First dose is STAT
piperacillin-tazobactam	4.5 g, INJ, IVPB, X1, First dose is STAT
ciprofloxacin	400 mg, Bag, IVPB, X1, First dose is STAT
azithromycin	500 mg, INJ, IVPB, X1, First dose is STAT
moxiflaxacin	400 mg, INJ, IVPB, X1, First dose is STAT
clindamycin	600 mg, INJ, IVPB, X1, First dose is STAT
gentamicin	2 mg/kg, INJ, IVPB, X1, First dose is STAT
aztreonam	1 g, INJ, IVPB, X1, First dose is STAT
Aspiration Pneumonia Antimicrobial Treatment	
Recommended Regimen: 1. Clindamycin 2. Pip/Tazo	
clindamycin	600 mg, INJ, IVPB, X1, First dose is STAT, T;N
piperacillin-tazobactam	4.5 g, INJ, IVPB, X1, First dose is STAT, T;N
Analgesics	
acetaminophen	650 mg, TAB, Oral, X1, First dose is STAT, T;N
acetaminophen	975 mg, TAB, Oral, X1, First dose is STAT, T;N
Bronchodilators	
albuterol inhalation (albuterol nebulizer)	2.5 mg, SOLN, NEB, Q5MIN, First dose is STAT, T;N, 3 doses
ipratropium inhalation (ipratropium nebulizer)	0.5 mg, SOLN, NEB, Q5MIN, First dose is STAT, T;N, 3 doses
Respiratory	
Adult Nasal Cannula	2 L/min Oxygen Flow Rate, Special Instructions: maintain oxygen saturation above 9
Oxygen Venti Mask	FiO2 Percent: 40
Oxygen Non-Rebreather Mask	

Date: 02/16/2010 15:52 15:52

EPR Implementation at SBUMC

• Discharge summaries, operative reports, and certain test results are also available in the EPR as free text imported from other systems



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PATIENT NAME 3045	59356 Opened by HORBATUK, ELISA	_ & ×
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PATIENT NAME ×	List 🔿 🖄 Recent 🔻 Name	- M
PATIENT NAME	DOB:DATE OF BIRTH <mark>Age:</mark> AGE rs Sex <mark>SEX le MRN:MRN Loc:16N - Me</mark>	dicine; P0
Allergies: Zosyn, Lasix	IP Semi-Private FIN: ENCOUNTER # Admit Dt: ADMIT DATE/ Disch Dt: DISCHARGE	
Clinical Notes	TIME DATE/ TIME	l minutes ago
2 🔍 🗮 🔍 🗶 🖴 🗎		
	Thursday, April 09, 2009 - Wednesday, July 29, 2009 : 4091 out of 4091 documents are accessible. (Date Range)	• •
 Documents Clinical Notes Discharge Documents Emergency Departme Nursing Documents Operative Reports Operative Report 04/30/2009 0 Respiratory Document Patient Education 	Not Onicial Copy Operative Report Flowsheet Date: 30 April 2009 0:00 Result status: Final Result status: Final Performed by: SURGEON NAME Stony Brook University Hospital, IP Semi-Private, ADMIT-DISCHARGE # OP OP OP OP Surgeon: SURGEON NAME Surgeon: SURGEON NAME ASSISTANT: SURGEON NAME	
↓	PREOPERATIVE DIAGNOSES: Respiratory failure, dysphagia.	
By type	POSTOPERATIVE DIAGNOSES: Respiratory failure, dysphagia	
C By status C By date C Performed by	NAME OF PROCEDURE: Placement of #8 Portex tracheostomy tube via percutaneous approach, Placement of 24-French percutaneous endoscopic guided gastrostomy tube.	
C By encounter	ANESTHESIA: General endotracheal anesthesia.	
	INDICATIONS: This is an 82-year-old female with multiple medical issues who has resided in the medical intensive care unit at Stonv	•

MIVERSITY M Document Viewer PATIENT NAME - MRN

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Not Official Copy:	Chest,AP Portable
Flowsheet Date:	09 April 2009 13:07
Result status:	Final
Result title:	CHEST,AP PORTABLE
Performed by:	080945 -UNKNOWN, PERSONNEL on 09 April 2009 13:07
Verified by:	Contributor_system, RADIOLOGY on 09 April 2009 13:07
Encounter info:	ENCOUNTER # Stony Brook University Hospital, IP Semi-Private, ADMIT-DISCHARGE DATES

* Final Report *

CHEST, AP PORTABLE

This document has an image

CHEST, AP PORTABLE

"PLEASE BE AWARE: This exam will display along with a prior exam (if available) for comparison that may or may not be related to this exam. Thank you." Single AP view the chest.

There are no prior studies available for comparison.

Findings:

The cardiac silhouette is enlarged. The aorta is enlarged with deviation of the trachea to the right suggesting aneurysmal dilatation.

There is no focal consolidation, vascular congestion or pleural effusion. Advanced degenerative changes are seen at the bilateral glenohumeral joints.

Impression:

 Cardiomegaly.
 Enlarged aortic silhouette with the region of the trachea to the right suggesting aneurysmal dilatation.
 Clear lungs.

Resident Radiologist: RADIOLOGIST NAME Attending Radiologist: RADIOLOGIST NAME

EPR Implementation at SBUMC

- Scheduled for implementation:
 - Discharge process
 - Physician documentation
 - ICU flowsheets

EPR Implementation at SBUMC – Role of Decision Support Services (DSS)

- Prior to the most recent phase of implementation, DSS staff assessed all required data elements for public reporting, flagging elements captured on paper tools that were scheduled for replacement by electronic tools
 - For example, contraindications to medications were often captured on paper order sets.
 - Since paper order sets were soon to be replaced by CPOE, it was imperative that CPOE incorporate a method for capturing contraindications



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Electronic Patient Record Core Measure Data Elements Acute Myocardial Infarction

	Currently	If Currently Available in Cerner				If Not Currently Available in Cerner			
Data Element	Available in	Location	Revisions	Considerations	Notes	Planned?	Immediate	Potential	Notes
Contraindication to Beta Blocker on Arrival	EPR? No		needed?			No	need?* Yes - CPOE will replace all paper physician orders (non- discharge) by Fall 2007.	Location CPOE/ EMAR	Checklist item on AMI orders. If not selected, "contra" field becomes enabled. Entered to EMAR at time of administration.
Contraindication to Both ACEI and ARB at Discharge	No					No	No	Power Form: Discharge Orders	Field will be enabled by lack of selection of either ACEI or ARB on AMI discharge orders. Discharge orders may not be completed without this field, if applicable.
Discharge Date	Yes - Cerner, Siemens	Visit List	No	N/A	Entered by?				
Discharge Status	Yes - Siemens Only (similar data element in Cerner but options not as inclusive)	Nursing Assessment	Yes	Process and workflow evaluation needed. May need to consider an alternate source.	Entered by?				
Non-Primary PCI	Yes - Sensis Cath Lab reports					No	No	?	Sensis Cath Lab reports to be interfaced with Power Charts?
Race	Yes - Cerner, Siemens	Patient Demographics	No	N/A	Entered by Admitting				

* An immediate need exists if the current hard copy source for the data element will be replaced in the near future by an electronic source.

EPR Implementation at SBUMC – Role of Decision Support Services (DSS)

 As electronic copies of order sets became available, DSS staff reviewed the order sets to identify data elements that would potentially go uncaptured



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PowerPlan Builds Review Order Sets Affecting Core Measure Data Capture

Order Set Name	Reviewer	Status	Notes
	Initials		
Acute Coronary Syndrome Admission PowerPlan	CI/LAW	Reviewed in Cerner Build - Needs	1.No order sets found NSTEMI/STEMI
		Edits	2. Currently SUGGESTS to order ASA, BB,
			ACE/ARB,etcdoesn'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/JCACHO)
			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/JCACHO)
Cardiothoracic Surgery Post-Operative PowerPlan (Adult)	LCW/SV	Reviewed in Cerner Build - Needs	No where to document contra's to betablockers (LCW).
		Edits	Remove SCIP Hysterectomy Surgery Quality Measures
			Subphase (JM/SV). See table below for SCIP compliant
			antibiotic adminstration (JM/SV).
Heart Failure PowerPlan (Adult)	LCW	Reviewed in Cerner Build - Needs	No where to document contra's to ace, arb or
		Edits	Betablockers under the medication section; on the
			original paper on page one, there is a prompt to
			document the EFTHIS DOES NOT APPEAR IN THE
			ELECTRONIC VERSION
Pneumonia PowerPlan (Adult)	jm	Reviewed in Cerner Build - OK	all the elements for the core measures are present
			however if the plan is not selected in the ED then
			cultures before ABX will be missed.

EPR Implementation at SBUMC – Role of Decision Support Services (DSS)

 Now that implementation of a public reporting application is planned, DSS is working with Clinical Informatics (CI) and Information Technology (IT) to identify any gaps in data capture

PUBLIC REPORTING

Public Reporting

- The Joint Commission(TJC)/Centers for Medicare and Medicaid Services (CMS) Core Measures (inpatient and outpatient)
- New York State Department of Health (NYSDOH requirements)
- Professional Society Registries

Public Reporting

- Current State
 - Primarily retroactive, manual abstraction
 - Use of applications such as Lumedx Apollo and Cerner PowerInsight
 - Different registry modules in Apollo can share data fields
 - Data elements such as laboratory results and height/weight can be queried from our EPR and imported to Apollo

EPR AND PUBLIC REPORTING

Ways EPR Facilitates Data Capture

- More data can be captured at the point of care
- Inclusion of queriable data fields in EPR reduces burden of chart abstraction and decreases human error from abstraction and entry
- Automatic feeds from EPR components comprising the legal medical record import required data elements to reporting applications
- Real-time feedback for certain elements from our vendor's public reporting application or from queries

Maximizing Benefits to Public Reporting

- A cooperative effort among DSS, Clinical Informatics, and Information Technology staff has begun to translate core measure specifications into query specifications to extract required data elements from the EPR, replacing manual abstraction
- This process began with the upcoming Emergency Department core measures, as these contain the most data elements amenable to electronic data abstraction at SBUMC.
- The process has continued with all inpatient core measures

Data Element in Specifications	Field name in merged file	Source	Notes
Data Element in opcomeations	ENCOUNTER	Both	Need for merging purposes
	MRN	Both	Need for merging purposes
Arrival Date		Cerner	Need for merging pulpeses
Arrival Timo		Cornor	
Arrival Data		Cerner	
Arrival Time		Cerner	These fields are called by langtiant and Outpatient just because of the
Anivar nine	OUTPATIENTARRIVETW	Cerner	These fields are spin by inpatient and Outpatient just because of the
			collaborative requirements for separate fields. The source is the same,
			ED Anival Date/Time. As we discussed, there are multiple potential
			sources for ED Arrival Date/Time . Note that even after this field is
			electronically available for all cases, ED and CQI staff will still need to
			review manually, as occasionally earlier dates/times are documented on
		0	paper tools.
Admission Date; Decision To Admit Date	ADMITDATE	Cerner	Date of physician order to admit.
Admission Time; Decision To Admit Time	ADMITTIME	Cerner	I me of physician order to admit.
Chest X-Ray Order Date	ORIGORDERDI	Cerner	Will be blank for patients who did not receive a chest x-ray
Chest X-Ray Order Time	ORIGORDERTM	Cerner	Will be blank for patients who did not receive a chest x-ray
Chest X-Ray Exam Date	CLINICALEVENTPERFORMEDDT	Cerner	Will be blank for patients who did not receive a chest x-ray
Chest X-Ray Exam Time	CLINICALEVENTPERFORMEDTM	Cerner	Will be blank for patients who did not receive a chest x-ray
	INP/OUTP	Cerner	Flag indicating whether patient was admitted as inpatient or discharged
			from ED
Pain Medication Administration Date	Not currently included	Cerner	The earliest date that any pain medication (based on list sent separately)
			is administered (not ordered!) to the patient
Pain Medication Administration Time	Not currently included	Cerner	The earliest time that any pain medication (based on list sent separately)
			is administered (not ordered!) to the patient
Birthdate	PT BIRTH DT	Siemens	Not sent to collaborative; used for age-based exclusion-criteria. May now
			be possible to obtain from Cerner.
ICD-9-CM Principal diagnosis Code	DF1 DX CODE	Siemens	Principal final diganosis code. May now be possible to obtain from
			Cerner.
ED Departure Date	ERDISCHARGEDT	Siemens	Not sent to collaborative; used for age calculation. May now be possible
			to obtain from Cerner.
ED Departure Time	ERDISCHARGETM	Siemens	No longer needed
	INADMITDISCHARGEDT	Siemens	Not sent to collaborative; used for LOS calculation. May now be possible
			to obtain from Cerner.
ED Departure Date	PROCESS DT IP	Siemens	Date patient transferred from 04PT to inpatient unit. May now be possible
			to obtain from Cerner
ED Departure Time	PROCESS TM IP	Siemens	Time patient transferred from 04PT to inpatient unit. May now be
			possible to obtain from Cerner
Admission Date	PROCESS DT 04PT	Siemens	Originally used when date of admission order was not available
			electronically. Also used for LOS and age calculation. Can be replaced
			by ADMITDATE from Cerner.
Admission Time	PROCESS TM 04PT	Siemens	Originally used when time of admission order was not available
			electronically. Can be replaced by ADMITTIME from Cerner.
Observation - we don't have this	N/A	N/A	All patients will be set for no Observation, since we do not have an
			Observation Unit at this time
Revenue Codes	N/A	N/A	Not used by collaborative
Discharge Status	N/A	N/A	Not used by collaborative

* These potential sources include the following:

"ED Triage Time" (appearing on the ED Patient Education Sheet)

"ED Triage Time" (appearing on the ED Triage Form)

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Ed Performance Messures Required Data Elements

- For all ED patients, the following data elements need to be extracted by arrival month from Siemens, preferably in one record per encounter, as quickly as possible (within one week?) after the end of the arrival month to permit time for abstraction and submission:
 - A. Encounter number
 - B. MRN
 - C. Discharge date (from the hospital, for admitted patients)
 - D. Discharge date (from the ED, for non-admitted patients)
 - E. Time of transfer from 04PT to inpatient unit (for admitted patients; first census history record where (Change_Type = "T") and (Nurse_Sta_Old = "04PT") and (Nurse_Sta_New <> "04PT"; use Process Time).
 - F. Final principle diagnosis code (Priority = 1)
 - G. Date of birth
 - Revenue Codes (4-digit code generated by the CDM based on p-file code; ED services typically include code 0450)
 - Admission Date (only if this cannot be extracted from Cerner)
 - J. Admission Time (only if this cannot, be extracted from Cerner)
- II. For all ED patients, the following data elements need to be extracted by arrival month from Cerner, preferably in one record per encounter, as quickly as possible (within one week?) after the end of the arrival month to permit time for abstraction and submission:
 - A. Chest X-Ray Order Date (earliest order)
 - "Chest X-Ray" includes the following order names (Catalog Type = Radiology, Activity Type = Radiology Diagnostic):
 - a. Abdomen Chest Complete
 - b. Chest A-P (Port) Central Line Placement.
 - c. Chest A-P (Portable)
 - d. Chest A-P Only
 - e. Chest Apical Lordotic
 - Chest Complete Minimum 4 Views
 - g. Chest Cross Table/Lateral
 - h. Chest Decubitus/Bilateral
 - Chest Decubitus/Bilateral (Portable)
 - Chest Decubitus/Left
 - k. Chest Decubitus/Left (Portable)
 - Chest Decubitus/Right
 - m. Chest Decubitus/Right (Portable)
 - Chest Fluoroscopy
 - Chest Oblique Anterior/Right

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EPR and Public Reporting

Identification of All Electronic and Paper (Imaged) Data Sources Measure Set: Acute Myocardial Infarction

		Electronic - Non-Queriable	
Data Element	Electronic - Queriable	("blob")	Paper (Imaged)
Arrival Time	For ED Patients: earliest of	None at this time	ED documents, Nsg. Admission
	Registration Time on ED Pat Edu form;		Assessment/admitting note, Observation record,
	Triage Time on ED Triage form. For		procedural notes, VS graphic record; Cardiac
	Direct Admits: Siemens Admission		flowsheet. If a direct admit may also utilize face sheet
	Time		
Aspirin Received Within 24	eMAR, Medication Reconciliation	None at this time	Ambulance record, ER document, H&P, Med.
Hours Before or After			Administration record, Med. Rec. form, Nsg.
Hospital Arrival			Admission assessment, transfer sheet
Birthdate	Birthdate	None at this time	N/A
Comfort Measures Only	"Comfort Measures Only" order	Discharge summary	MICU preprinted order sheet, Progress Notes,
	(available as individual order or on		Consultation Notes, H&P, Comfort Care Form
	Comfort Care Power Plan, MICU		
	Comfort Care Power Plan)		
Clinical Trial	None at this time	None at this time	signed consent as well as protocol documentation
First PCI Date	None at this time	Operative reports	Diagnostic test reports, procedure notes
First PCI Time	None at this time	Operative reports	Diagnostic test reports, procedure notes

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Discern:
C TROPONIN ALERT
Was an Aspirin Ordered? If not applicable, click OK.
Add Order for:
 aspirin -> 325 mg, TAB, Oral, X1, First dose is STAT, Chewe Document reason Aspirin was not given



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🚺 Adult Nursing History Form - PEPPERONI, PATT	PATTY
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*Performed on: 05/06/2010 🕂

Discharge Need:

•	1207	
	 11307	

General Info												
🔀 Language		Social Habits										
🔀 Cultural Assessm	Alcohol Use	lcohol Use										
Contact Informat	Alcohol Use Type Frequency Amount Last Use Comment											
🔀 Advance Directiv	<alpha></alpha>	<alpha></alpha>	<alpha></alpha>									
🔀 Height and Weig	<alpha></alpha>	<alpha></alpha>	<alpha></alpha>									
Medication From			1	1								
Measurements												
Allergies												
Immunization	Do You Curre	ently or Have You		irrent	Sr	moking	Cessation I	Literature G	iven	O Yes		
Valuables & Belo	Valuables & Belo Products			ist								
🔀 Adult Pain Asses	Troudeto		As per hospital policy smoking cessation literature is to be distribut					ited to all				
New Additional F			,									
FLACC	F	.	Europeed at Work									
Health History	Exposure to	lobacco Smoke	Lives with Someone who Smokes									
TB Screen			C Other:									
Anesth/Transfus												
🔀 Nutrition	Decreational	David Hoo										
Functional	kecreational	Drug üse										
Sexuality	Drug Use	Туре	I	Route	Frequen	cy An	nount	Last Use	Comment			
× Social Habits	<alpha></alpha>	<alpha></alpha>	*	(MultiAlpha>	<alpha></alpha>							
Tobacco Use Hi	<alpha></alpha>	<alpha></alpha>		(MultiAlpha>	<alpha></alpha>							
Reuchosocial												
Coucation Need:												

Adult Nursing History Form - PEPPERONI, PATTY

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۴P	<mark>5</mark> Tobacco Use History - PEPPER	ONI, PATTY		×				
2	U 🖏 📾			-				
3		Tobacco	acco History					
3	Past or Current Tobacco Type	Chewing Tobacco	Cigars Pipe Other:					
3	Total Length of Tobacco Product Use?	уг	How Many Packs Per Day Did You Smoke During That Time					
	Have You Changed The Amount You Smoked At Any Time	O Yes O No	After Changing How Many Packs Per Day Did You Smoke at That Time					
3	How Long Did You Smoke that Amount?	уг	When Did You Smoke Your	-				
	Did You Ever Try To Quit Tobacco Use?		When Did You Quit	A V				
3	Are You Currently Using A Nicotine Replacement	<mark>☐ None</mark> ☐ Gum ☐ Patch	How Many Pieces of Nicotine Gum do You Chew Daily					
×	Patch, Medication	Medication	What Dosage of Daily Nicotine Patch mg/day are You Using					
3	Are You Ready to Quit Your Nicotine Replacement Use	O Yes O No	Are you Ready to Quit Your Tobacco Use?					

Social Habits

Alcohol Use

Alcohol Use	Туре	Frequency	Amount	Last Use	Comment
<alpha></alpha>	<alpha></alpha>	<alpha></alpha>			
<alpha></alpha>	<alpha></alpha>	<alpha></alpha>			

Do You Currently or Have You
Ever In The Past Used Tobacco
Products



Smoking Cessation Literature Given



As per hospital policy smoking cessation literature is to be distributed to all patients regardless of smoking status.

Exposure to Tobacco Smoke

Exposed at Work	
Lives with Someone who Smokes	
C Other:	

Recreational Drug Use

Drug Use	Туре	Route	Frequency	Amount	Last Use	Comment
<alpha></alpha>	<alpha></alpha>	<multialpha></multialpha>	<alpha></alpha>			

Challenges Met

- A hybrid medical record consisting of paper tools and multiple electronic systems results in several possible sources for certain data elements.
 - DSS, CI, and IT have collaborated to identify these many sources

Challenges Met

- Public reporting specifications are not yet always oriented to the electronic world, and there are cases in which application of rules that were logical in the paper world result in a misleading picture of care documented electronically
 - DSS staff have submitted numerous questions to Quest, the forum for core measure specification clarifications
 - Specifications are gradually changing

Challenges Met

- Desire to exploit decision support tools must be balanced with avoidance of "alert fatigue"
 - Alerts are used very sparingly
- Care sets must be updated as specifications change
 - Part of the routine when new specs are released is to review care sets for necessary changes

- A potential benefit of EPR is the possibility of data capture at the point of care, resulting in real-time feedback to providers.
- However, reports designed for real-time feedback on public reporting indicators are dependent on the point-of-care providers fully understanding the specifications, which requires extensive training

- Data may be captured in an electronic source that is not part of the legal medical record and not transferred to a location in the legal medical record
 - DSS is working with CI, Nursing, and service staff to find ways to capture vital data in the legal medical record
- Until such time as a local regional health information exchange is fully operational, all documentation from transferring hospitals is received on paper and must be manually reviewed

- Many data elements are still found in free text fields, or "blobs", rather than discrete data fields, which means they cannot currently be queried
- Different registries define similar elements differently, which limits the ability to collect such elements via simple checklists/drop-downs
- External validators must interpret the printed medical record without benefit of background knowledge possessed by hospital staff

- Inconsistent use of care sets
- Start content is not always sufficient when you have a hybrid system
 - Customization is possible, but must be repeated whenever applications are upgraded
- Dynamic environment, so some data are not preserved after subsequent encounters

Discussion

- What is your current stage of EPR implementation?
- What are some benefits related to public reporting requirements that your organization has reaped from EPR implementation?
- What are the biggest challenges solved or unsolved that EPR implementation has posed to public reporting at your organization?
- What advice do you have for hospitals in earlier stages of EPR implementation? What do you wish someone had told you earlier in the implementation process?

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

Elisa.Horbatuk@StonyBrook.edu

1-631-444-4492