



Performance Measurement and Public Reporting

National Committee on Vital and Health Statistics Quality Workgroup June 19, 2007

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Challenges/Barriers Facing The Joint Commission and Hospitals In the Evolution to Electronic Data

- ▶ Fragmented health information exchanges – need to address multiple physicians, settings
- ▶ Privacy of health information
- ▶ Data quality
- ▶ Need for national measurement priorities – standardized data dictionary with common data elements & definitions across multiple venues of care



Challenges/Barriers Facing The Joint Commission and Hospitals In the Evolution to Electronic Data

- ▶ Current measure specifications not designed for electronic record – need automatic extraction of all data
- ▶ Measure construct issues - identification of denominator, inclusions, exclusions and calculation algorithms
- ▶ Need to capture and link various data sets – clinical, financial, administrative, human resources, etc.



Challenges/Barriers Facing The Joint Commission and Hospitals In the Evolution to Electronic Data

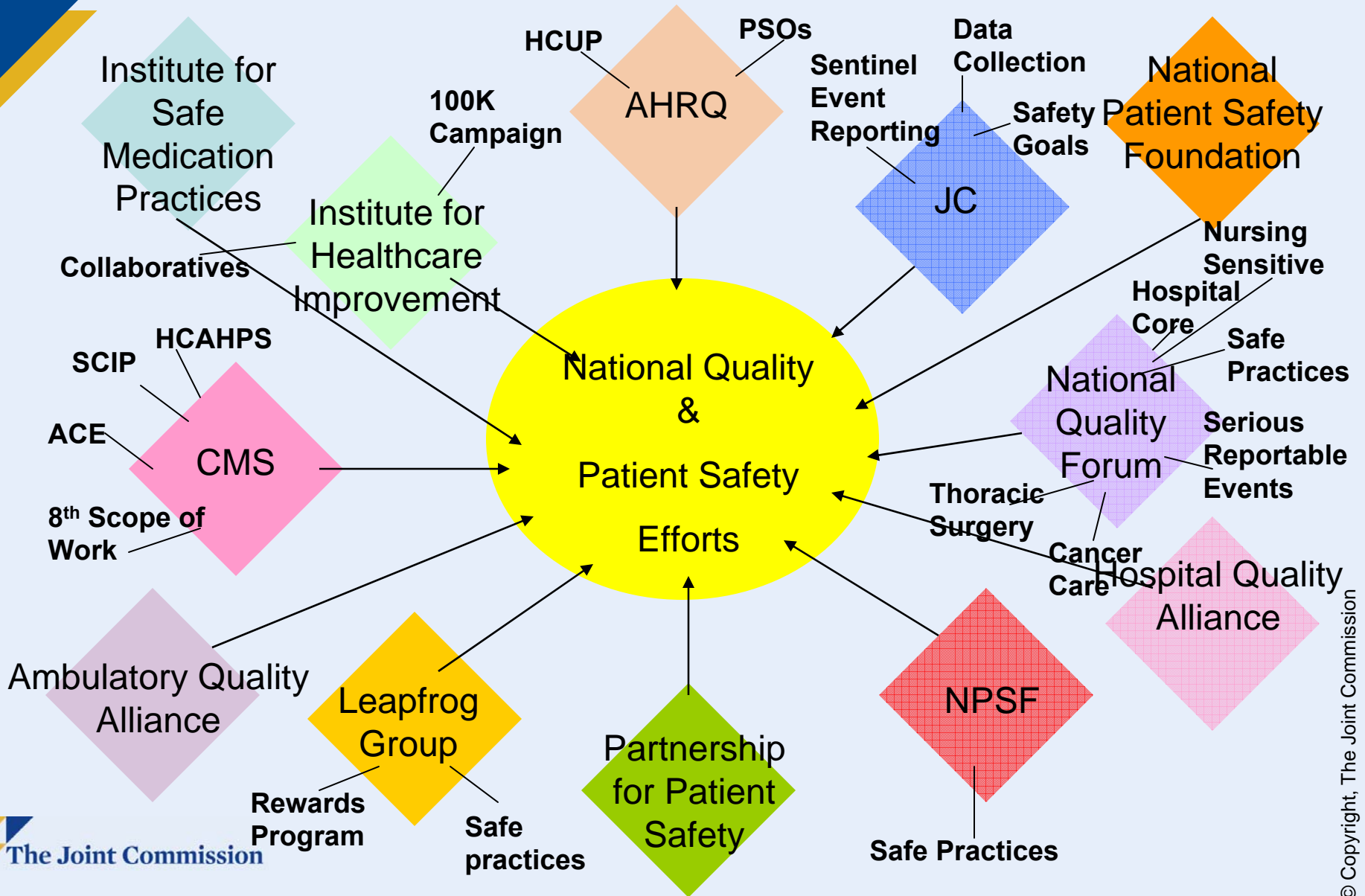
- ▶ Process changes needed
- ▶ Minimization of human error associated with MANUAL worksheets, record review, and data abstraction
- ▶ Technology/Implementation Costs
 - Developing functionality, but tools needed to capture performance data



Challenges/Barriers Facing The Joint Commission and Hospitals In the Evolution to Electronic Data

- ▶ Healthcare organizations need to adopt IT before the electronic health record can support performance measures
- ▶ Pace of change to electronic data is slow
- ▶ Thinking out of the box for future needs

Multitude of Activities Confronting Hospitals



EXAMPLE

Expansion Hospital Reporting Quality Measures for Annual Payment Update

- ▶ 2006 - Started with 10 starter set
- ▶ 2007 – Added 11 measures, total 21
- ▶ 2008 – Adding 6 measures, total 27
- ▶ 2009 – Proposing 5 measures, total 32
- ▶ 2009 – Hospital outpt measures, total ?



Current Joint Commission ORYX Performance Measurement Requirements

- ▶ Standardized core measure sets
 - **Joint Commission/CMS Common Measure Sets**
 - Acute myocardial infarction
 - Heart failure
 - Pneumonia
 - Surgical Care Improvement Project s)
 - **Joint Commission Only Measure Sets**
 - Pregnancy and related conditions
 - Children's asthma care

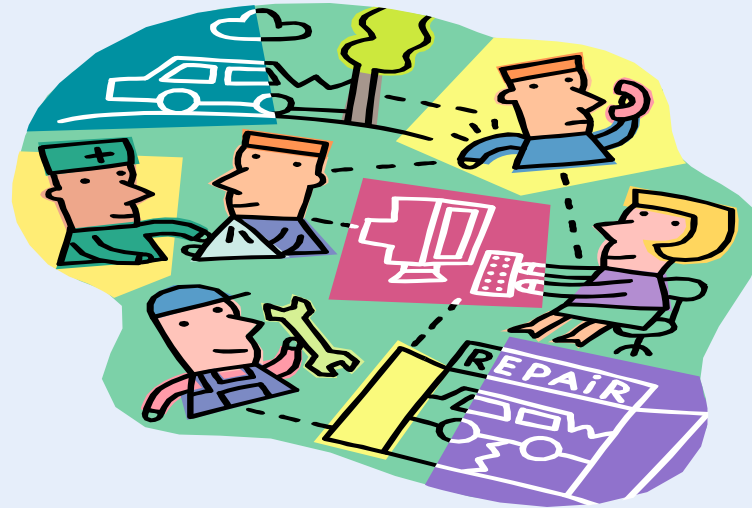
- ▶ Data collection required on 3 full measure sets
 - Some exceptions for small and specialty hospitals

- ▶ January 2008 Increase reporting requirements from 3 to 4 sets

- ▶ More than 3,800 hospitals collecting data
 - Monthly data transmitted quarterly to the Joint Commission

On the Move to Continuously Improve ORYX Data Quality

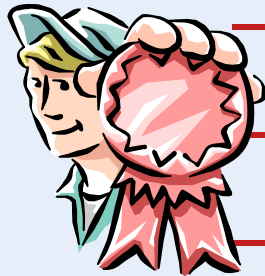
- ▶ 53 Joint Commission core vendors
(as of 4/07)
- ▶ Quarterly core data transmissions
- ▶ Transmitting core data for approximately
3,300 accredited hospitals each quarter



On the Move to Continuously Improve ORYX Data Quality

What is done by The Joint Commission to ensure data quality?

- Vendor Contract
- Data Quality Education
- Vendor Education Manuals/Guides
- Quarterly Data Quality Tests
- Data Quality Reports/Integrity Reporting
- Data Retransmissions
- Vendor Audits






The Joint Commission Uses of Data

- ▶ Priority Focus Process (PFP)
- ▶ ORYX Performance Measure Report
- ▶ Quality Check
- ▶ Annual Report – New March 2007
 - National Quality Improvement Goals
 - National Patient Safety Goals



The National Quality Forum (NQF) Endorsed Nursing Sensitive Care (NSC) Measure Set

Current State and Needed Evolution to Electronic Alternative Data Sources

- 
- ▶ Grant from the Robert Wood Johnson Foundation to test the 15 NQF endorsed NSC performance measures. (24 month test across 54 HCOs, data collection 7/2007 – 6/2008)

 - ▶ The objectives of the project include Test:
 - effectiveness of the measures as an integrated set
 - impact in assessing/improving the quality of nursing and patient care
 - capacity for discriminating nursing-specific variance within multi-disciplinary care processes
 - evaluate reliability at the data element, measure and measure set level

National Voluntary Consensus Standards for Nursing-Sensitive Care Performance Measures

1 Death Among Surgical Inpatients with Treatable Serious Complications	9 Smoking Cessation Counseling for Acute Myocardial Infarction
2 Pressure Ulcer Prevalence	10 Smoking Cessation Counseling for Heart Failure
3 Patient Falls	11 Smoking Cessation Counseling for Pneumonia
4 Falls with Injury	12 Skill Mix
5 Restraint Prevalence (vest and limb)	13 Nursing Care Hours per Patient Day
6 Urinary Catheter-Associated Urinary Tract Infection Rate	14 Practice Environmental Scale- Nursing Work Index
7 Central Line-Associated Bloodstream Infection Rate	15 Voluntary Turnover
8 Ventilator-Associated Pneumonia Rate	



Different Measure Foci

▶ Clinical Focus

- Death in Surgical Patients
- Central Line Infections

▶ Nursing Intervention Focus

Smoking Cessation Counseling for Heart Failure

▶ Organizational Focus

- Voluntary Turnover-Nursing Staff
- Productive Nursing Hours



Different Measure Populations

- ▶ Patients
- ▶ Employees
- ▶ Administrative Data



Different Data Collection Approaches

- ▶ Aggregate count data
 - ICD-9-CM diagnosis code data
- ▶ Survey data
 - Staff survey
- ▶ Clinical Assessment
 - Pressure sore prevalence

Measure ID	Measure Type	Measure Population	Data Source	Unit of Analysis	Data Collection Frequency	Measure Calculation Frequency
NSC 1	Clinical (Incidence)	Patient	Medical Record	Hospital-level	Monthly	Quarterly
NSC 2	Clinical (Prevalence)	Patient	Prevalence Survey Medical Record	Unit -level	Quarterly	Quarterly
NSC 3	Clinical (Incidence)	Patient	Medical Record	Unit-level	Monthly	Quarterly
NSC 4	Clinical (Incidence)	Patient	Medical Record	Unit-level	Monthly	Quarterly
NSC 5	Clinical (Prevalence)	Patient	Prevalence Survey Medical Record	Unit-level	Quarterly	Quarterly
NSC 6	Clinical (Incidence)	Patient	Medical Record	Unit-level	Monthly	Quarterly
NSC 7	Clinical (Incidence))	Patient	Medical Record	Unit-level	Monthly	Quarterly
NSC 8	Clinical (Incidence)	Patient	Medical Record	Unit-level	Monthly	Quarterly
NSC 9	Clinical (Incidence)	Patient	Medical Record	Hospital-level	Monthly	Quarterly
NSC 10	Clinical (Incidence)	Patient	Medical Record	Hospital-level	Monthly	Quarterly
NSC 11	Clinical (Incidence)	Patient	Medical Record	Hospital-level	Monthly	Quarterly
NSC 12	Administrative	Nursing Resources	Human Resources, Payroll	Unit-level	Monthly	Quarterly
NSC 13	Administrative	Nursing Resources	Medical Record Human Resources	Unit-level	Monthly	Quarterly
NSC 14	Perception (Environment)	Nurses	Survey	Hospital-level (Unit-level option)	Annual	Annual
NSC 15	Administrative	Nursing Resources	Human Resources, Payroll	Hospital-level	Monthly	Quarterly



Examples

- ▶ Current State and Needed Evolution to Electronic Alternative Data Sources



Performance Measure Name: Falls with Injury

- ▶ **Numerator Statement:** Number of patient falls with an injury level of minor or greater by *Type of Unit* during the calendar month x 1,000.
- ▶ **Denominator Statement:** Patient days by Type of Unit during the calendar month.
- ▶ **Data Reported as:** Rate of falls with injury per 1,000 patient days stratified by type of unit.



DATA COLLECTION FORM - PATIENT FALL INCIDENCE RECORD

YEAR

- 2007
 2008

MONTH

- | | |
|------------------------------------|-----------------------------------|
| <input type="checkbox"/> July | <input type="checkbox"/> January |
| <input type="checkbox"/> August | <input type="checkbox"/> February |
| <input type="checkbox"/> September | <input type="checkbox"/> March |
| <input type="checkbox"/> October | <input type="checkbox"/> April |
| <input type="checkbox"/> November | <input type="checkbox"/> May |
| <input type="checkbox"/> December | <input type="checkbox"/> June |

TYPE OF UNIT

- 1 Critical Care - adult
2 Step - down - adult
3 Medical - adult
4 Surgical - adult
5 Med - Surg Combined - adult

FALL INJURY LEVEL

- 1 None
2 Minor
3 Moderate
4 Major
5 Death

None- patient had no injuries resulting from the fall

Minor- results in application of a dressing, ice, cleaning of a wound, limb elevation, or topical medication


Moderate- results in suturing, application of steri-strips/skin glue, or splinting

Major- results in surgery, casting, traction, or required consultation for neurological or internal injury

Death- results in death as a result of the fall.



RISK ASSESSMENT PRIOR TO FALL							
<input type="checkbox"/>	Y (Yes)	A risk assessment was completed for the patient prior to the fall					
<input type="checkbox"/>	N (No)	A risk assessment was not completed prior to the fall					
PATIENT AT FALL RISK							
<input type="checkbox"/>	Y (Yes)	Patient risk assessment score indicated he/she was at fall risk					
<input type="checkbox"/>	N (No)	Patient risk assessment score indicated he/she was not at fall risk					
FALL PREVENTION PROTOCOL							
<input type="checkbox"/>	Y (Yes)	There is documentation of a fall prevention protocol (fall precautions) implemented prior to the fall.					
<input type="checkbox"/>	N (No)	There is no documentation of a fall prevention protocol (fall precautions) implemented prior to the fall.					
<input type="checkbox"/>	NA (Not Applicable)	Patient does not have identified risk factors					



Performance Measure Name: Urinary Catheter-Associated Urinary Tract Infection (CAUTI) Rate for ICU Locations

- ▶ **Numerator Statement:** The number of CAUTIs for ICU patients by ICU location
- ▶ **Denominator Statement:** The number of indwelling urinary catheter days for ICU patients by ICU location.

Examples of ICU Locations

- ▶ Adult Burn Critical Care
- ▶ Adult Medical Cardiac Critical Care
- ▶ Adult Surgical Cardiothoracic Critical Care
- ▶ Adult Medical Critical Care
- ▶ Adult Combined medical/surgical Critical Care (major teaching hospital)
- ▶ Adult Combined medical/surgical Critical Care (all hospitals other than major teaching)
- ▶ Adult Neurologic Critical Care
- ▶ Adult Neurosurgical Critical Care
- ▶ Adult Respiratory Critical Care
- ▶ Adult Surgical Critical Care
- ▶ Adult Trauma Critical Care
- ▶ Ped Burn Critical Care
- ▶ Ped Cardiothoracic Critical Care-
- ▶ Ped Medical Critical Care
- ▶ Ped Medical-Surgical Critical Care
- ▶ Ped Neurosurgical Critical Care
- ▶ Ped Respiratory Critical Care
- ▶ Ped Surgical Critical Care
- ▶ Ped Trauma Critical Care
- ▶ NICU Level II
- ▶ NICU Level II or III



DATA COLLECTION FORM - DEVICE DAYS ICU (NOT NICU)

YEAR 2007
 2008

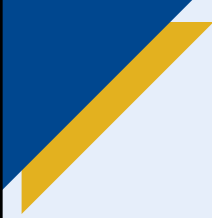
MONTH

- July
- August
- September
- October
- November
- December
- January
- February
- March
- April
- May
- June

Location Code for ICU

See Code List

Date	Number of Patients	Number of Patients with a urinary catheter	Number of Patients 1 or more central lines	Number of Patients on a ventilator
1				
2				
3				
4				
5				



28				
29				
30				
31				
TOTALS				
	Patient Days	Urinary Cath Days	Central Line Days	Ventilator Days

Adapted from NHSN "Denominators for Intensive Care Unit (ICU) www.cdc.gov

DATA COLLECTION FORM - DEVICE DAYS - NICU (NOT ICU)

YEAR 2007
 2008

MONTH July January
 August February
 September March
 October April
 November May
 December June

Location Code for ICU

NICU

NICU III
 NICU II-III

BIRTH WEIGHT CATEGORIES

DATE	≤ 750 GM				751 - 1000gm				1001 - 1500 gm				1501 - 2500 gm			
	Pts	U/C	CL	VNT	Pts	U/C	CL	VNT	Pts	U/C	CL	VNT	Pts	U/C	CL	VNT
1																
2																
3																
4																
5																



Performance Measure Name:

Nursing care hours per patient day –

Registered Nurse (RN)

AND Nursing care hours per patient day -

RN, Licensed Vocational Nurse (LVN),

Licensed Practical Nurse (LPN), Unlicensed
Assistive Personnel (UAP)

Nursing Care Hours Continued

▶ Numerator Statement:

- Total number of productive hours worked by RN nursing staff with direct patient care responsibilities by *Type of Unit* during the calendar month AND by nursing staff (RN, LVN/LPN and UAP)

▶ Denominator Statement: Patient days by *Type of Unit* during the calendar month

Productive Hours Definitions

- Productive hours worked by RN AND nursing staff (RN, LVN, LPN, and UAP) with direct patient care responsibilities for greater than 50% of their shift Include:
 - Staff who are counted in the staffing matrix, *and*
 - Who are replaced if they call in sick., *and*
 - Work hours are charged to the unit's cost center
 - Contract staff



Data Collection Form - Nursing Hours Count Sheet

YEAR 2007
 2008

MONTH July
 August
 Septmber
 October
 November
 December

January
 February
 March
 April
 May
 June

TYPE OF UNIT

- 1 Critical Care - adult
- 2 Step - down - adult
- 3 Medical - adult
- 4 Surgical - adult
- 5 Med - Surg Combined - adult

Day of Month	RN Hours		LPN/LVN Hours		UAP Hours	
	Contract	Employee	Contract	Employee	Contract	Employee
1						
2						
3						
4						
5						



Performance Measure Name: Pressure Ulcer Prevalence

- ▶ **Numerator Statement:** Patients surveyed on an eligible reporting unit that have at least one stage II or greater [National Ulcer Advisory Panel (NPUAP)] nosocomial pressure ulcer on the day of the prevalence study.
- ▶ **Denominator Statement:**
All patients on the selected unit at the time of the study who are surveyed for the study by *Type of Unit.*



Observed Pressure Ulcer None - 8	Observed Stage* 0 = SDTI 1 = stage I 2 = stage II 3 = stage III 4 = stage IV 5 = unstageable	Day of first staff Discovery/ Documentation Admission day = 0001	Observed Pressure Ulcer - Hospital - Acquired Y (Yes) N (No)
None			
1			
2			
3			
4			
5			



Performance Measure Name:

Voluntary turnover for Registered Nurse (RN) & Advanced Practice Nurse (APN)
AND Voluntary turnover for licensed practical nurse (LPN), licensed vocational nurse (LVN) and nurse assistant/aide (NA)

Description:

Total number of full-time and part-time RN & APN AND LPN, LVN and NA voluntary uncontrolled separations occurring during the calendar month.



Voluntary Turnover Continued

- ▶ **Numerator Statement:** The total number of voluntary separations (as specified under the Performance Measure Identifier and Description above) during the calendar month.
- ▶ **Denominator Statement:** Total number of full time and part time employees on the last day of the month.




DATA COLLECTION FORM - EMPLOYMENT/TURNOVER

YEAR
 2007
 2008

MONTH

<input type="checkbox"/> July	<input type="checkbox"/> January
<input type="checkbox"/> August	<input type="checkbox"/> February
<input type="checkbox"/> September	<input type="checkbox"/> March
<input type="checkbox"/> October	<input type="checkbox"/> April
<input type="checkbox"/> November	<input type="checkbox"/> May
<input type="checkbox"/> December	<input type="checkbox"/> June

	APN Advance Practice Nurse	RN Registered Nurse	LPN/LVN Liscenced Practical / Vocational	NA Nurses Assistant
Total Number Staff Employed				
Total Number Voluntary Separations				



Summary

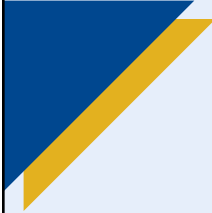
Opportunities to Assess and Improve Quality of Care with Standardized Electronic Data

- ▶ Support System Thinking – Understanding the relationships among a system's parts, rather than the parts themselves



Measure Example: Nursing smoking cessation counseling not provided

- ▶ Some system potential relationships that could be explored with alternative electronic data sources
 - Nursing skill mix
 - Nursing care hours per day
 - Voluntary turnover
 - Nurse survey
 - Day of week
 - Shift
 - -Etc.



Measure Example Continued: Nursing smoking cessation counseling provided and patient readmitted – using electronic data

- Who provided counseling on previous admission
- Type of counseling provided previously
 - e.g., referral to class, direct discussion with patient, smoking cessation video
- Re-evaluate education plan
- Etc.