2016 American Nurses Association Annual Conference

Connecting **Quality**, **Safety** and **Staffing** to Improve Outcomes

Using Data in Nursing Practice

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ANA
AMERICAN NURSES ASSOCIATION

Objectives

- Articulate the implications of data use in nursing practice
- Discuss the future of electronic healthcare data
- Identify the competencies for data use and reporting nurses will need for success in the coming years

The healthcare landscape and electronic data


It took Ralph six minutes to realize the balloon wasn't going to come back.

The Regulatory Landscape

- ACA: Payment reform (Reduce the cost of healthcare)
  --CMS Bundled Payment Pilots
  --Medicaid redesign by states
  --ACOs

- HITECH - Meaningful Use (2010)

- HIMSS Stage 7 (Healthcare Information and Management Systems Society – 1960's)

Why are electronic health records good for patients and the public?

- The intent of “Meaningful Use”
- HIMSS stages - most advanced is a paperless record; all patient information shared digitally with the patient.
- Use of patient portals and applications (apps) that give patients access to their electronic record.
- Believed to promote patient engagement, which promotes better health for the individual.

The impact of regulations on nursing

- In hospitals, the majority of the EHR documentation is done by registered nurses.
- In ambulatory care, much of the documentation required for quality metrics is done by nursing staff (screening tests, tobacco use, vaccines, teaching).
- The quality of our nursing care and our nursing documentation informs the public and payers through publically-reported measures (hospitalcompare.gov).
- Nursing has to keep the patient front and center in everything we do.


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Medicare.gov | Hospital Compare
The Official U.S. Government Site for Medicare
Hospital Compare Home
About Hospital Compare
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Resources
Help
Home → Hospital Results → Compare Hospitals
Sh
Print all informa
Compare Hospitals
Back to Results
General information
Survey of patients' experiences
Timely & effective care
Complications
Readmissions & deaths
Use of medical imaging
Payment & value of care
Survey of patients' experiences
HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) is a national survey that asks patients about their experiences during a recent hospital stay. Use the results shown here to compare hospitals based on 11 important hospital quality topics.
Find out why these measures and the star ratings are important.
Learn more about the data and star ratings.
Get the current data collection period.
Get tips for printing star images (Internet Explorer 8,9).

Care Delivery Integration

Technology Roadmap and EHR Integration

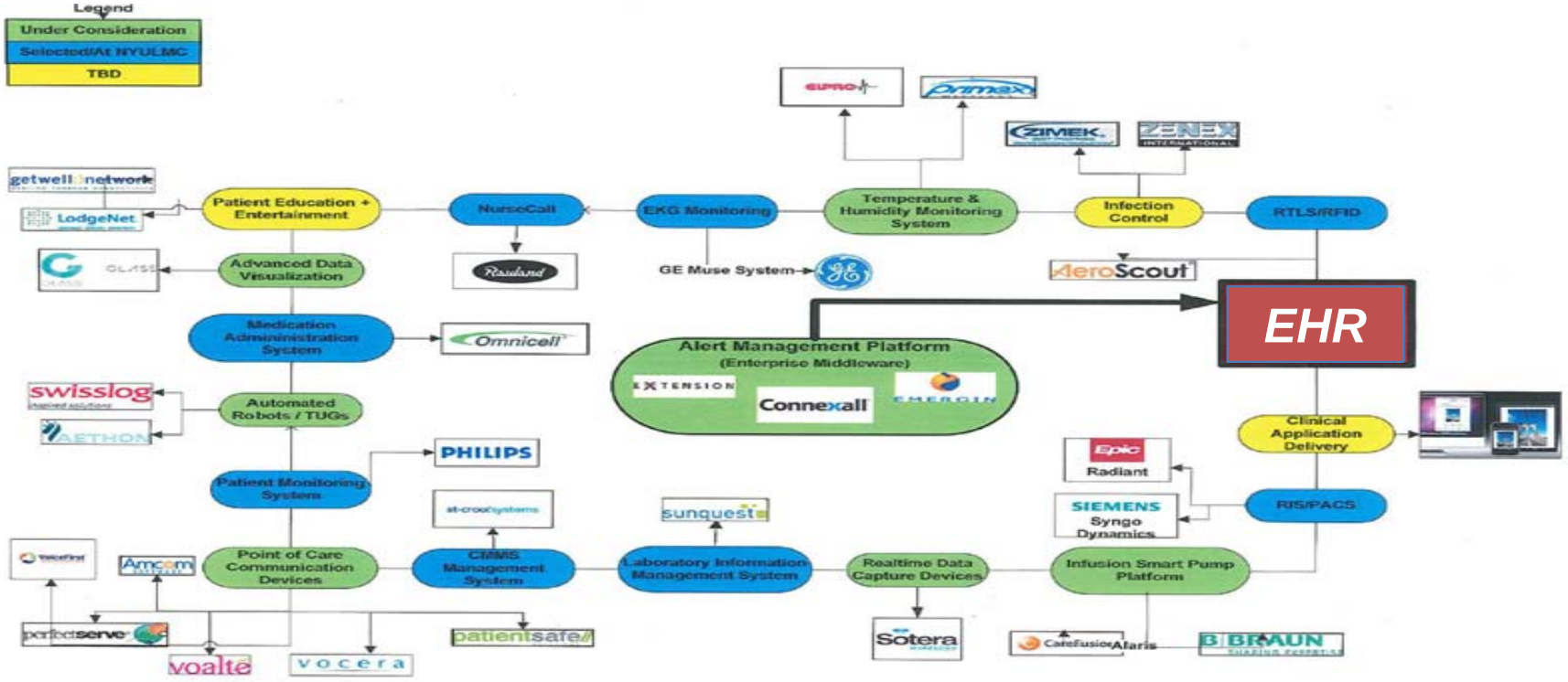
- One example of how a hospital system (inpatient and ambulatory) is using technology to:

  --Support patient care

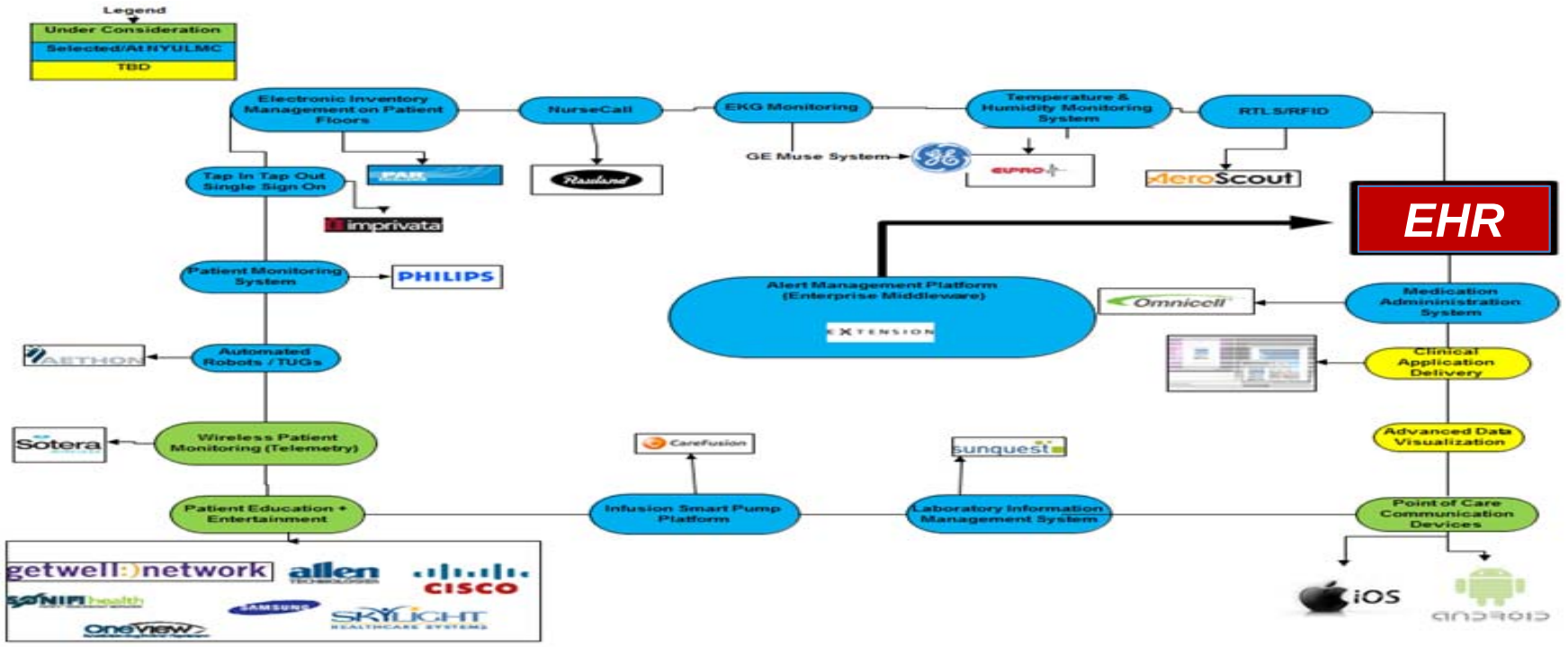
  --Improve nursing workflow and practice

  --Collect data for population health

Then


Legend
Under Consideration
Selected/At NYULMC
TBD
getwellnetwork
LodgeNet
Patient Education + Entertainment
NurseCall
EKG Monitoring
Temperature & Humidity Monitoring System
Infection Control
RTLS/RFID
Advanced Data Visualization
Rauland
GE Muse System
AeroScout
EHR
Medication Administration System
Omnicell
Alert Management Platform
(Enterprise Middleware)
EXTENSION
Connexall
EMERGIN
swisslog
AETHON
Automated Robots / TUGs
Clinical Application Delivery
PHILIPS
Epic
Radiant
Patient Monitoring System
SIEMENS
Syngo Dynamics
RIS/PACS
sunquest
Amcom
Point of Care Communication Devices
CMMS Management System
Laboratory Information Management System
Realtime Data Capture Devices
Infusion Smart Pump Platform
Sotera
CareFusion
Alaris
B BRAUN
patientsafe
voalte
vocera

Now


Legend
Under Consideration
Selected/At NYULMC
TBD
Electronic Inventory Management on Patient Floors
NurseCall
EKG Monitoring
Temperature & Humidity Monitoring System
RTLS/RFID
GE Muse System
Tap In Tap Out Single Sign On
imprivata
Patient Monitoring System
PHILIPS
Alert Management Platform (Enterprise Middleware)
EXTENSION
EHR
Omnicell
Medication Admininistration System
Automated Robots / TUGs
Clinical Application Delivery
Sotera
Wireless Patient Monitoring (Telemetry)
Carefusion
sunquest
Advanced Data Visualization
Patient Education + Entertainment
Infusion Smart Pump Platform
Laboratory Information Management System
Point of Care Communication Devices
getwell network
allen
cisco
SKYLIGHT
oneview
iOS
android

Data and Technology-The future is now

- Interoperability of EHR and devices – some examples

  --Cardiac monitors

  --Ventilators

  --Infusion pumps

  --Vital sign monitors

  --Wearable devices

  --RFID

  --"Middleware"

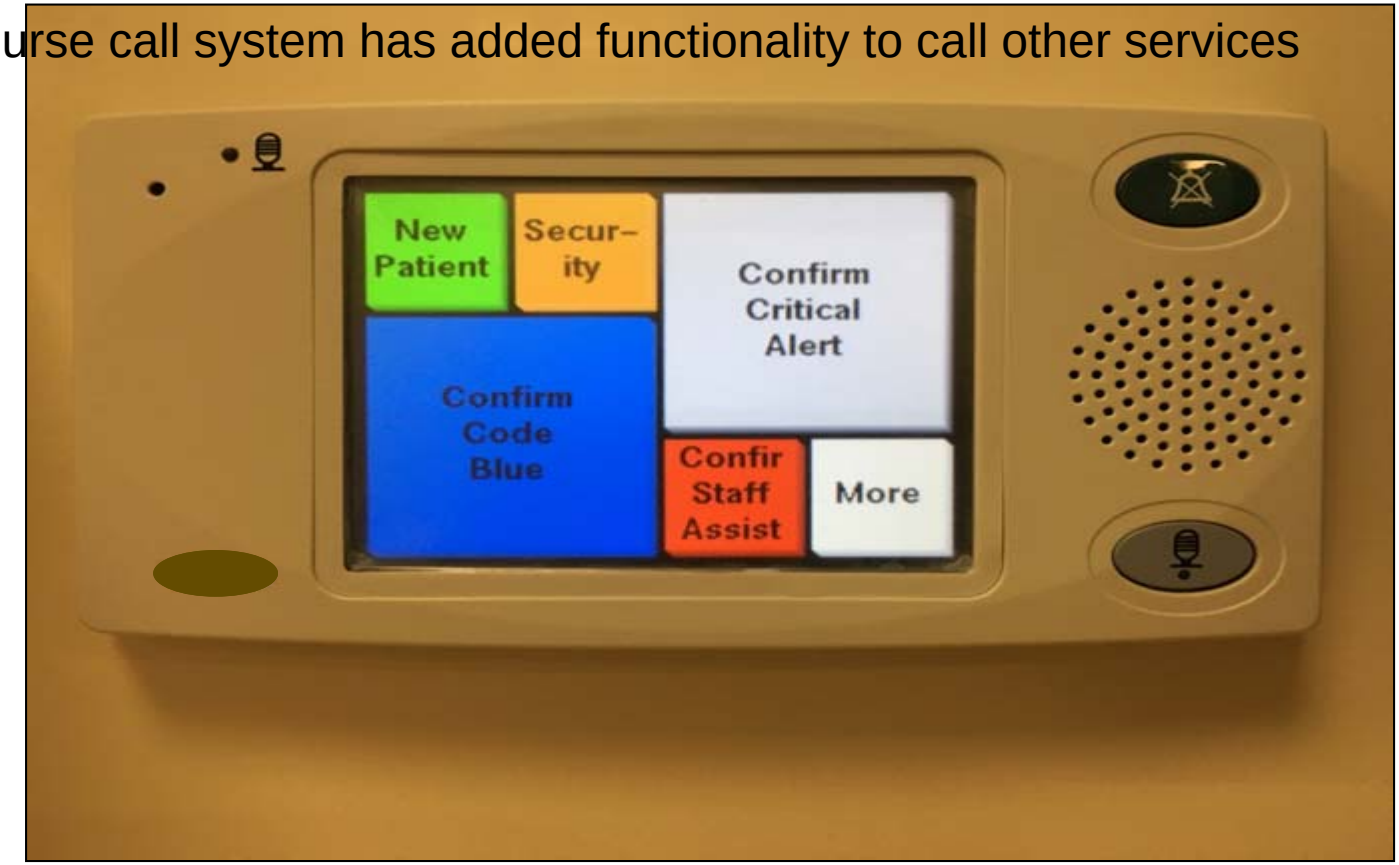
  --Panic call and nurse call

Nursing's role in defining new workflows across care delivery sites

Integration with ventilator and EHR

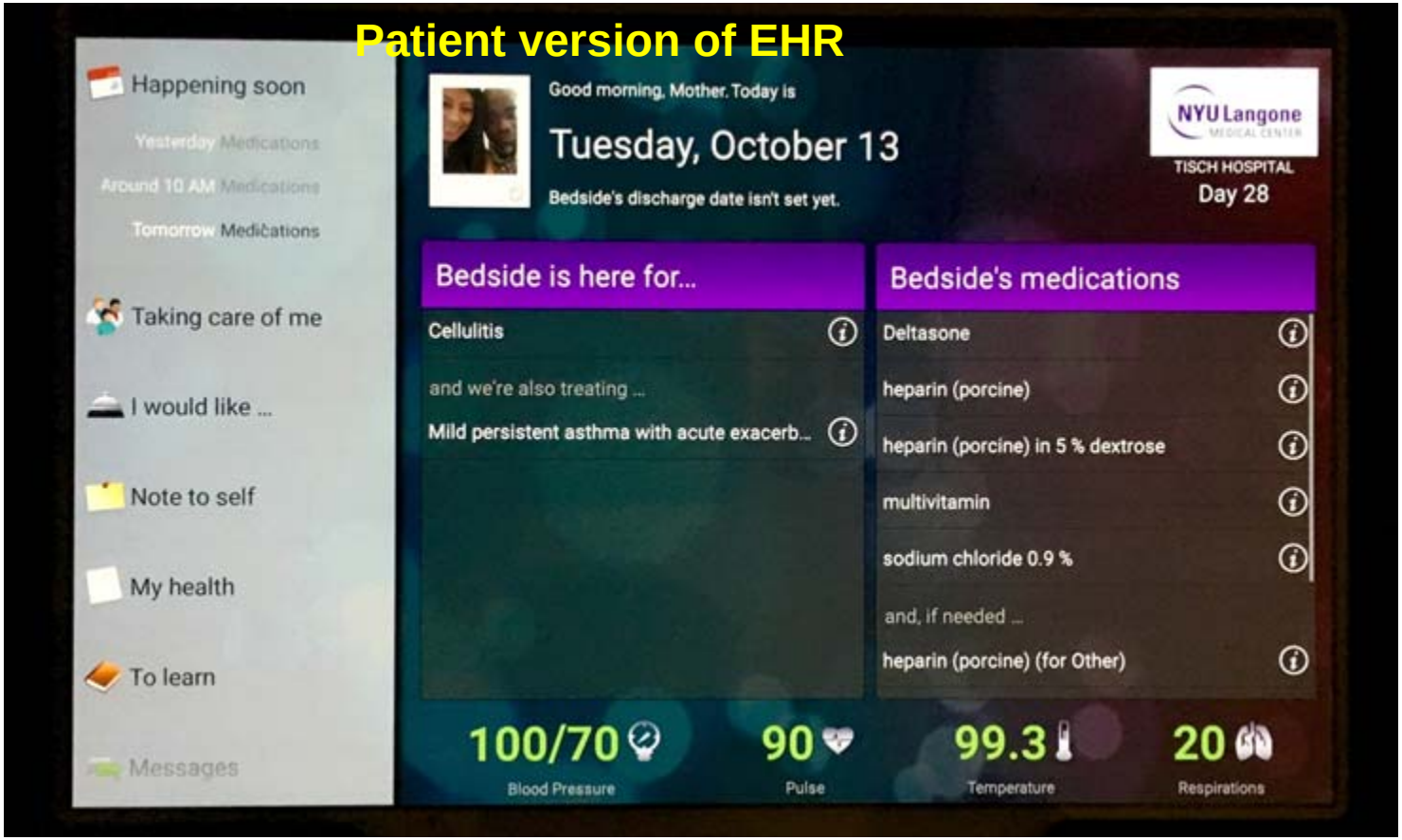
Integration with new wearable vital sign monitor and EHR

Nurse call system has added functionality to call other services



Infusion pumps bi-directional integration with EHR

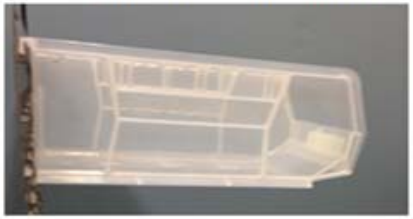
Mobile technology to support care and documentation at the bedside


Patient version of EHR
Happening soon
Yesterday Medications
Around 10 AM Medications
Tomorrow Medications
Taking care of me
I would like ...
Note to self
My health
To learn
Messages
Good morning, Mother. Today is
Tuesday, October 13
Bedside's discharge date isn't set yet.
NYU Langone
TISCH HOSPITAL
Day 28
Bedside is here for...
Cellulitis
and we're also treating ...
Mild persistent asthma with acute exacerb...
Bedside's medications
Deltasone
heparin (porcine)
heparin (porcine) in 5 % dextrose
multivitamin
sodium chloride 0.9 %
and, if needed ...
heparin (porcine) (for Other)
100/70
Blood Pressure
90
Pulse
99.3
Temperature
20
Respirations

Better system for supply management

Current

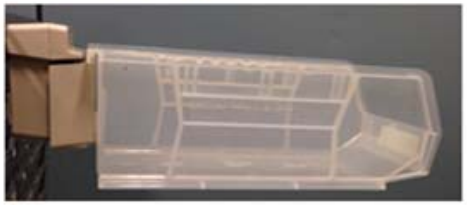
- Bin has label & each label is manually scanned for replenishment



- Supply availability must be visually be inspected

Proposed

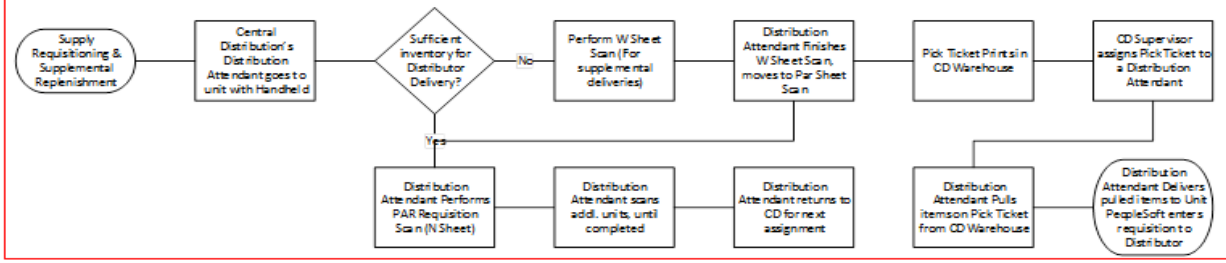
- Bin is on a scale which weighs the supplies automatically



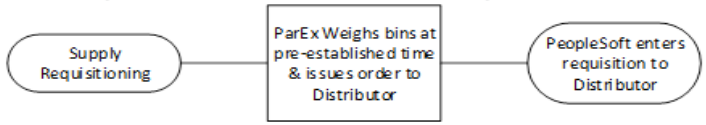
- Supply availability reported in real time

Current State vs Proposed State – Supply Requisitioning

- Current State: 9 Manual steps, (2) of those steps repeated for each item in supply closet



- Proposed State: 1 Automated step



- Current state focuses on augmenting lack of real time visibility by performing two scans at the unit– first for the order from Distributor, second for supplemental replenishment from Central Distribution
- Proposed state is substantially cleaner and eliminates both of the manual scans in current state

Nursing Productivity
Effort to Charge one Patient for Supply & Replenish

With EHR

--3 minutes to charge patient
--10 clicks to charge patient
--3 minutes to request replenishment
--10 clicks to request replenishment

With New Supply System

--42 seconds to charge patient
--4 steps to charge patient
--0 minutes to request replenishment
--0 clicks to request replenishment

SCM Productivity
Scanning a store room for daily replenishment

With EHR

--Average of 60 minutes for daily replenishment per store room
--Average of 15 minutes for supplemental replenishment per store room

With New Supply System

--0 minutes scanning

--More accurate & productive replenishments

Importance of linking care sites

- Electronic records can follow a patient through the delivery system
- Seamless and safer care for patients
- Nurses are key because we deliver the care, and thus populate the EHR.
  - The quality (breadth and depth) of our documentation informs this

QSEN Competencies, Electronic Records, and Data: How do these relate?

What is QSEN?

- IOM defined competencies for health professions in 2003 with an eye towards improving quality and providing safer care.
- Communication and collaboration were key themes
- Advisory group and nursing faculty defined the quality and safety competencies and proposed targets for the knowledge, skills, and attitudes to be developed in nursing pre-licensure programs for each competency
- Graduate nursing competencies (for APRNs) were later developed

Cronenwett, L., Sherwood, G., Barnsteiner, J., Disch, J., Johnson, J., Mitchell, P., Sullivan, D.T., & Warren, J. (2007). Quality and safety education for nurses. Nursing Outlook.
DOI: http://dx.doi.org/10.1016/j.outlook.2007.02.006
http://qsen.org/

Quality and Safety Education for Nursing

- Patient-Centered Care
- Teamwork & Collaboration
- Evidence Based Practice
- Quality Improvement
- Safety
- Informatics

Patient-Centered Care

Definition: Recognize the patient or designee as the source of control and full partner in providing compassionate and coordinated care based on respect for the patient's preferences, values and needs

Knowledge

Integrate understanding of multiple dimensions of patient centered care:

- Patient/family/community preferences values
- Coordination and integration of care
- Information, communication, and education
- Physical comfort and emotional support
- Involvement of family and friends
- Transition and continuity

Describe how diverse cultural, ethnic and social backgrounds function as sources of patient, family, and community values

Skills

Elicit patient values, preferences and expressed needs as part of clinical interview, implementation of care plan and evaluation of care

Communicate patient values, preferences and expressed needs to other members of the health care team

Provide patient centered care with sensitivity and respect to the diversity of human

Attitudes

Value seeing health care situations "through patients' eyes"

Respect and encourage individual expression of patient values, preferences and expressed needs

Value the patient's expertise with own health and symptoms

Seek learning opportunities with patients who represent all aspects of human diversity

Recognize personally held attitudes about working with patients from different ethnic, cultural and social backgrounds

Willingly support patient-centered care for individuals and groups whose values differ from our own

Nursing Informatics - Prelicensure

Definition: Use information and technology to communicate, manage knowledge, mitigate error, and support decision making

Knowledge

Explain why information and technology skills are essential for safe patient care

Identify essential information that must be available in a common database to support patient care.

Contrast benefits and limitations of different communication technologies and their impact on quality and safety

Describe examples of how technology and information management are related to the quality and safety of patient care

Recognize the time, effort and skill required for computers, databases and other technologies to become reliable and effective tools for patient care

Skills

Seek education about how information is managed in care settings before providing care.

Apply technology and information management tools to support safe processes of care

Navigate the electronic health record

Document and plan patient care in an electronic health record

Employ communication technologies to coordinate care for patients

Respond appropriately to clinical decision-making supports and alerts.

Use information management tools to monitor outcomes of care processes

Use high quality electronic sources of healthcare information

Attitudes

Appreciate the necessity for all health professionals to seek lifelong, continuous learning of information technology skills

Value technologies that support clinical decision making, error prevention, and care coordination

Protect confidentiality of protected health information in electronic health records

Value nurses improvement in design, selection implementation, and evaluation of information technologies to support patient care

Nursing Informatics - Graduate

Definition: Use information and technology to communicate, manage knowledge, mitigate error, and support decision making.

Knowledge	**Skills**	**Attitudes**
Contrast benefits and limitations of common Information technology strategies used in the delivery of patient care. Evaluate the strengths and weaknesses of information systems used In patient care	Participate in the selection, design ,implementation and evaluation of information systems. Communicate the integral role of information technology in nurses work. Model behaviors that support implementation and appropriate use of electronic health care records. Assist team members to adopt information technology by piloting and evaluating proposed technology	Value the use of information and communication technologies in perfect care
Formulate essential information that must be available in a common database to support patient care in the practice specialty Evaluate benefits and limitations of different communication technologies and their impact on safety and quality	Promote access to patient care information for all professionals who provide care to a patient. Serve as a resource for how to document nursing care at basic and advanced levels Develop safeguards for protected health information Champion communication technologies that support clinical decision making, error prevention, care coordination, and protection of patient privacy	Appreciate the need for consensus and collaboration in developing systems to manage information for patient care. Value the confidentiality and security of all patient records
Describe and critique taxonomic and terminology systems used in national efforts to enhance Interoperability of information systems and knowledge management systems	Access and evaluate high quality electronic sources of healthcare information Participate in the design of clinical decision-making supports and alerts Search, retrieve, and manage data to make decisions using information and knowledge management systems Anticipate unintended consequences of new technology	Value the importance of standardized terminologies in conducting searches for patient information Appreciate the contribution of technological alert systems Appreciate the time, effort, and skill required for computers, databases, and other technologies to become reliable and effective tools for patient care

How do we leverage EHRs to make them work for us?

- How nursing practice informs data and how data inform practice

- Electronic record documentation feeds “dashboards” and “report cards” which in turn are viewed by clinical nurses at bedside, chairside and tableside.

- NPSG and Core Measures:
  --Vaccine documentation
  --Pain medication documentation, with pain score, triggers assessment based on policy (30-60 minutes)
  --Admission assessment documentation completion

Dashboard, Patient Care - Nursing

Drop-down menu

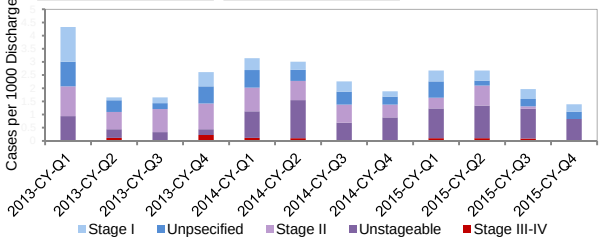
Select unit

Facility ALL ▼ Nursing Unit ALL ▼ Refresh

Hospital Acquired Pressure Ulcers (HAPU) Incidence ascertained using diagnosis code

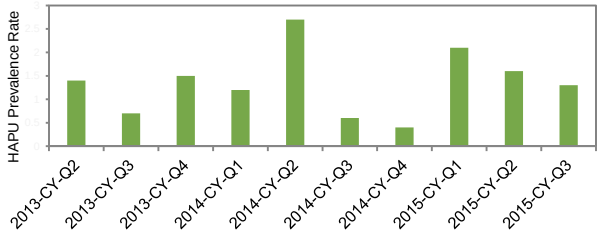
Refresh

Department ALL ▼ Division ALL ▼ By Month ● By Quarter



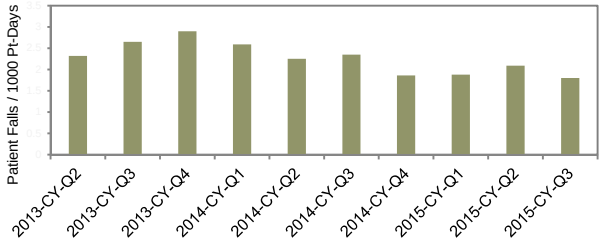
Hospital Acquired Pressure Ulcers (HAPU) Prevalence ascertained through periodic survey

● Rate ○ Patients with HAPU ○ Patients Surveyed



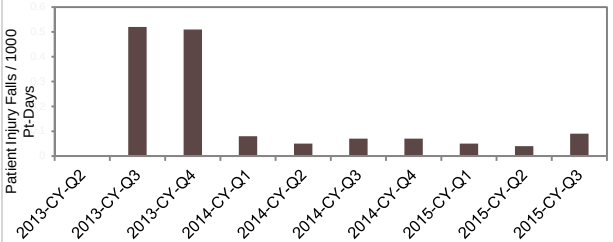
Patient Falls

● Rate ○ Falls ○ Patient Days



Patient Injury Falls

● Rate ○ Injury Falls ○ Patient Days



Patients without Documented Braden Score (24 Hrs)	3/29
Patients without Documented Braden Q Score (24 Hrs)	0/0
Patients without Documented NSCS Score (24 Hrs)	0/0
Pressure Ulcer Risk without a Care Plan	1/16
Restraints Non-Violent Flowsheet (72 Hrs)	0/29
Restraints Violent Flowsheet (72 Hrs)	0/29

Report completed: Fri 12/18 04:48 PM

Immunization Reports - By Dept

Dashboard refreshes hourly from 7am to midnight.

Patients without Flu Screening	4/29
Positive Flu Vac Screen without Flu Order	1/7
Positive Flu Vac Screen with DC Order & Vac Not Given	0
Patients without Pneumo Screening	4/29
Positive Pneumo Vac Screen without Pneumo Order	0/5
Positive Pneumo Vac Screen with DC Order and Vac Not Given	0

Report completed: Fri 12/18 04:48 PM

Surveillance Reports - By Dept

Dashboard refreshes hourly from 7am to midnight.

Patients with Verbal Orders	13/29
Admission Documentation Not Completed	2/29
Admission Documentation Upcoming	3/29
Admission Documentation Overdue	2/29
Patients without Tobacco Cessation Education	0/29
Patients without a Code Status Order	2/29
Patients without Advance Directives	27/29
Pain Assessment / Reassessment	29/29

Report completed: Fri 12/18 04:48 PM

From: Glassman, Kimberly

2016 American Nurses Association Annual Conference

Connecting **Quality**, **Safety** and **Staffing** to Improve Outcomes

Beta - Nursing Dashboard

Nursing Sensitive Indicator Reports -

Dashboard refreshes hourly from 7am to midnight.

Patients at Risk for Falls	400/679
Patients without Documented Falls Risk Score (12 Hrs)	156/679
Falls Risk without a Careplan	13/398
Patients with Braden Score <= 18	113/582
Patients with Braden Q Score <= 16	0/45
Patients with Neonatal Skin Condition Score >=4	1/52
Patients without Documented Braden Score (24 Hrs)	116/582
Patients without Documented Braden Q Score (24 Hrs)	9/45
Patients without Documented NSCS Score (24 Hrs)	4/52
Pressure Ulcer Risk without a Careplan	11/121
Restraints Non-Violent Flowsheet (72 Hrs)	1/679
Restraints Violent Flowsheet (72 Hrs)	0/679

Report completed: Fri 12/18 04:48 PM

Nursing Sensitive Indicator Reports -

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Patients at Risk for Falls	
Patients without Documented Falls Risk Score (12 Hrs)	
Falls Risk without a Careplan	
Patients with Braden Score <= 18	
Patients with Braden Q Score <= 16	
Patients with Neonatal Skin Condition Score >=4	
Patients without Documented Braden Score (24 Hrs)	
Patients without Documented Braden Q Score (24 Hrs)	
Patients without Documented NSCS Score (24 Hrs)	
Pressure Ulcer Risk without a Careplan	
Restraints Non-Violent Flowsheet (72 Hrs)	
Restraints Violent Flowsheet (72 Hrs)	

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Immunization Reports -

Dashboard refreshes hourly from 7am to midnight.

Patients without Flu Screening	135/607

Immunization Reports -

Dashboard refreshes hourly from 7am to midnight.

Patients without Flu Screening	

IOM Report on the Future of Nursing

- Nurses should practice to the full extent of their education and training
- Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression
- Nurses should be full partners, with physicians and other health care professionals, in redesigning health care in the United States
- Effective workforce planning and policy making require better data collection and information infrastructure

See more at: http://iom.nationalacademies.org/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx#sthash.QEiWN578.dpuf

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