

Restructuring Learning with Electronic Clinical Reference Systems (CRS)

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Disclosures

We have no conflicts of interest.

This project was formally determined to be quality improvement, not human subjects research, and was therefore not overseen by the Institutional Review Board, per institutional policy.

Objective

Describe the CNS role in leading organizational processes to implement a Clinical Reference System (CRS) for professional career development

About Us



Situation

- Increasing number of offsite units, expanded services
- Staff need to have access to education without going to classes
- Newer staff prefer to use technology at the bedside when needed for learning
- Organizational need to provide learning across the patient continuum (ambulatory sites, emergency department, inpatient units)
- Organizational need to leverage technology to enhance learning, orientation, education, and competency around the clock

Overview of Processes

- CNS Sphere of Influence: System
- Phase I Implementation:
Introduction to CRS Skills
- Phase II Implementation:
Piloted Education
- Phase III Full Implementation
- Challenges/Lessons Learned

Phase I Implementation: Introduction to CRS Skills



- Purchased Clinical Reference System July 2015
- CNS lead-initiatives:
 - Benchmarked best practices against other like organizations
 - Developed standard template for skill review against specialty standards of practice, sources of evidence
 - Reviewed selected (high-risk) skills for accuracy and integration with current policies and procedures
 - Inactivated skills that did not align with organizational practices or latest evidence based practices
 - Customized skills to the organization
 - Linked organizational policies/documents/pathways to skills
 - Standardized follow up process with vendor

Sample Customized Skill



Urinary Catheter: Indwelling (Foley) Catheter Removal

 **UCMC Documents**

 Quick Sheet

 Extended Text

 Supplies

 Demos

 Illustrations

 Test

 CheckList

Adult Standard Pathway for Prevention on Catheter-Associated Urinary Tract Infections

Pediatric Standard Pathway for Prevention of Catheter Associated Urinary Tract Infections

IC 02-19 Urinary Catheterization

Phase II Implementation: Piloted Education



- July 2016-July 2017 assigning skills content to new staff
- Customized modules for specialty certification and annual competencies
- Packaged learning modules as pre-reads for annual competencies for Sedation RNs
- Prepackaged learning modules for Ambulatory RNs (actual competency included)

Phase II Implementation: Piloted Education



- Pilot timeline: July 2016- June 2017
 - 300 clinicians
 - 10 departments
 - 244 modules assigned
 - 141 continuing education (CE) hours completed
 - 5741 times skills accessed

Phase II Implementation: Challenges



- Manual process to enter learners time consuming
- Lack of interface between Human Resource files and the CRS file
- Lack of Clinical Nurse Educator (CNE) and Clinical Nurse Specialist (CNS) knowledge of CRS functions

Department Education for CNEs/CNSs

- May 2017 and ongoing
- Determination of administrative rights
- System functionality
- Scope of access
- How to build modules, assign skills, enroll staff, run reports, reset passwords

Phase III: Full Implementation

- Occurred July 2017
- Required collaboration with Human Resources
- Collaboration with Information Technology to develop
 - standard unique identifier
 - standard interface date/time

Special Project Needs

- Ultrasound guided IV Therapy (June-July)
- Pediatric IV therapy (Aug-Dec)
- Medical Assistant expanded role with medication administration (Aug)
- Radiation Safety (Sep)
- U500 Insulin (Oct-Dec)
- Radial Arterial Puncture for Critical Care RNs (Dec-Jan)

Sample Customized Modules

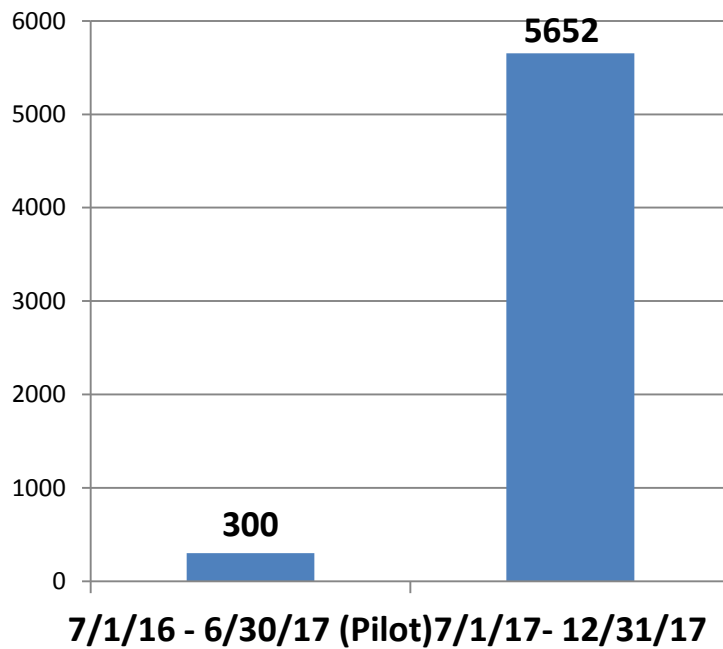


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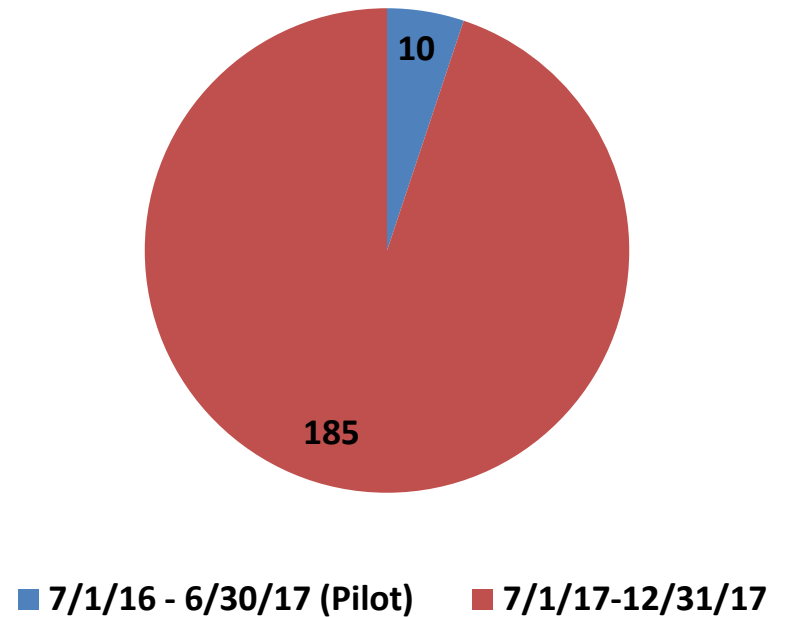
2018 Radiation Nurse Safety
2018 Radiation Safety/Adults
2018 Radiation Safety/Peds
Adult Sepsis Education
Ambulatory - Central Line Maintenance & Dressing Change
Ambulatory - Pediatric Vital Signs & Measurements
Ambulatory - Peripheral IV Insertion
Ambulatory - Venipuncture
Ambulatory Medical Assistant Expanded Role
Ambulatory Medication and Oxygen Administration
Ambulatory Pediatric IM & Subcutaneous Injections
Ambulatory-Sterile Gloving and Sterile Field Preparation
Arterial Lines for L&D
Arterial Punctures - Initial Competency - NICU
Bariatric Care Sensitivity Training FY18
Basic IV Therapy for Adults
CCD OR Fire Hunt FY18
CNPPR-FY18 Jan.24 -April 19 Quarter
CNPPR-FY18 Oct 1- Dec 31 Quarter

Data

Clinicians with Access

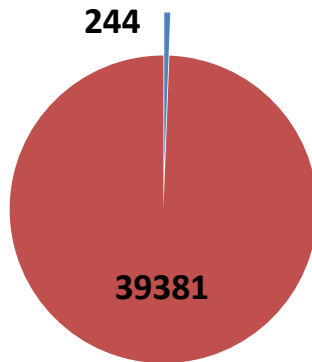


Departments



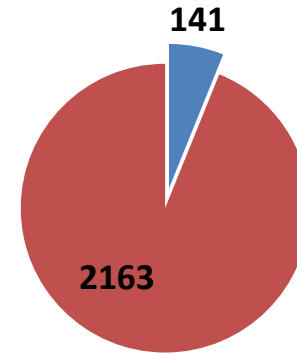
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Modules Assigned



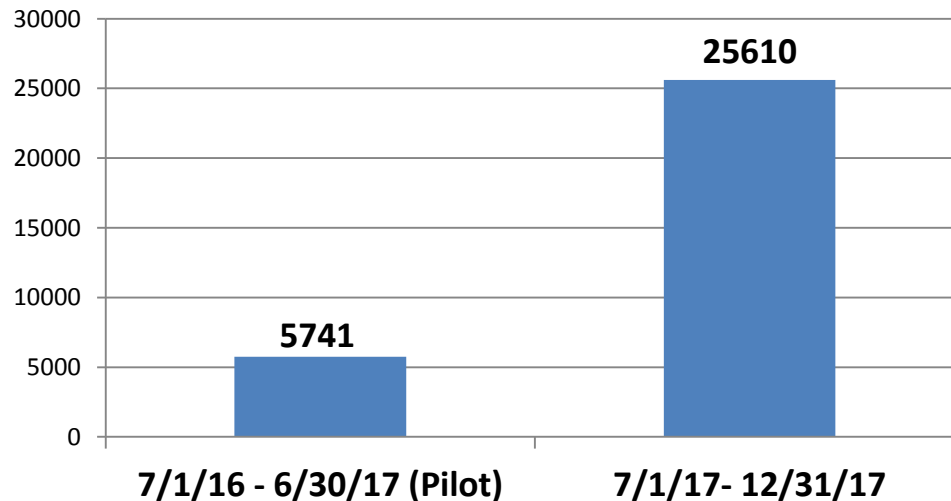
■ 7/1/16 - 6/30/17 (Pilot) ■ 7/1/17-12/31/17

CE Hours Completed



■ 7/1/16 - 6/30/17 (Pilot) ■ 7/1/17-12/31/17

Times Skills Accessed



Challenges

- Inter-departmental
 - Many new departments not yet identified and flagged for the automatic download
 - Learners entered in wrong departments
 - New hires not identified during onboarding
 - Additional departments (non-nursing) required access to education built in CRS to recertify for specialty organization certification (VAD, STROKE)
 - Collaboration with nursing unit leadership for running compliance reports
 - Selected learner unique identifier was changed

Challenges

- Technology
 - Slow when multiple learners on system
 - Access through multiple firewalls
 - Not saving completion records
- Maintenance
 - Need to update learner groups manually
 - Need to update administrative privileges manually



Positive Experiences

- Developed CNS/CNE partnerships with CRS use
- Allowed customization of learning for specialty groups
- Provided access to free CE hours for licensure and certification renewal
- Easy to run learner reports, aggregate organization reports for regulatory compliance
- Enhanced EBP with the basics already in place
- 24 hour access to the CRS
- All learning records in one system

Sample Learning Record



Show All	eLearning	Checklist	Acknowledgements	Discussion	
Status	All Current <input type="button" value="v"/>				
Assigned / Self-Enrolled:	All <input type="button" value="v"/>				
Show Module:	<input type="checkbox"/>				
Export to Excel	Print				
All Items: 101	Completed: 91	Due: 10			
Moderate Sedation During a Diagnostic Procedure	Skill	04/26/2017	✓	10/23/2017	100.00
NICU Cardiopulmonary Module1_FY18	Lesson	10/15/2017	✓	08/25/2017	
NICU Cardiopulmonary Module2_FY18	Lesson	10/15/2017	✓	08/25/2017	
NICU Cardiopulmonary Module3_FY18	Lesson	10/15/2017	✓	08/25/2017	
November/December 2017 Policy and Procedure Bulletin	Acknowledgement	06/10/2018	✓	01/03/2018	

Strategies For Success



- Interdepartmental collaboration is ESSENTIAL
- Dedicated multimedia technologist who develops content, knows the interfacing of systems
- Nursing executive leadership support
- Commitment to training/ongoing support for CNEs and CNSs within the department
- Good working relationship with vendor for ongoing support

Summary



- Early collaboration with key individuals across departments is essential.
- Piloting organizational projects allows for identification of challenges and opportunities for resolution prior to full implementation.
- This project demonstrates the role of the CNS in systems leadership.

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