

Clinical Nurse Specialist Led Evidence-Based NDNQI Performance Improvement Enabled by Innovative EHR Technology

ANA 6th Annual Nursing Quality
Conference 2012

PALOMAR
POMERADO
HEALTH
SPECIALIZING IN YOU



Authors

- Brenda A Fischer, PhD, RN, MBA, CPHQ
- Jackie Close, PhD(c), RN, GCNS-BC, FNGNA
- Margaret Talley, PhD, RN, CNS, CWCN-AP
- Eva Krall, MSN, RN, CNS, CMSRN
- Lourdes Januszewicz, MSN, RN, CNS, CCRN

Objectives

1. Identify the impact of the EHR in improving NDNQI outcomes.
2. Describe the impact of the CNS in improving outcomes utilizing NDNQI structure and process in a Magnet health system.

Organizational Characteristics

- Largest public health District in California
- First Magnet health system in California
- Represents the full continuum of care
- TJC Diabetes and Stroke
- Bariatric Center for Excellence
- Wound and Hyperbaric
- Nurses Improving Care for Health System Elders

Structure Process Outcome

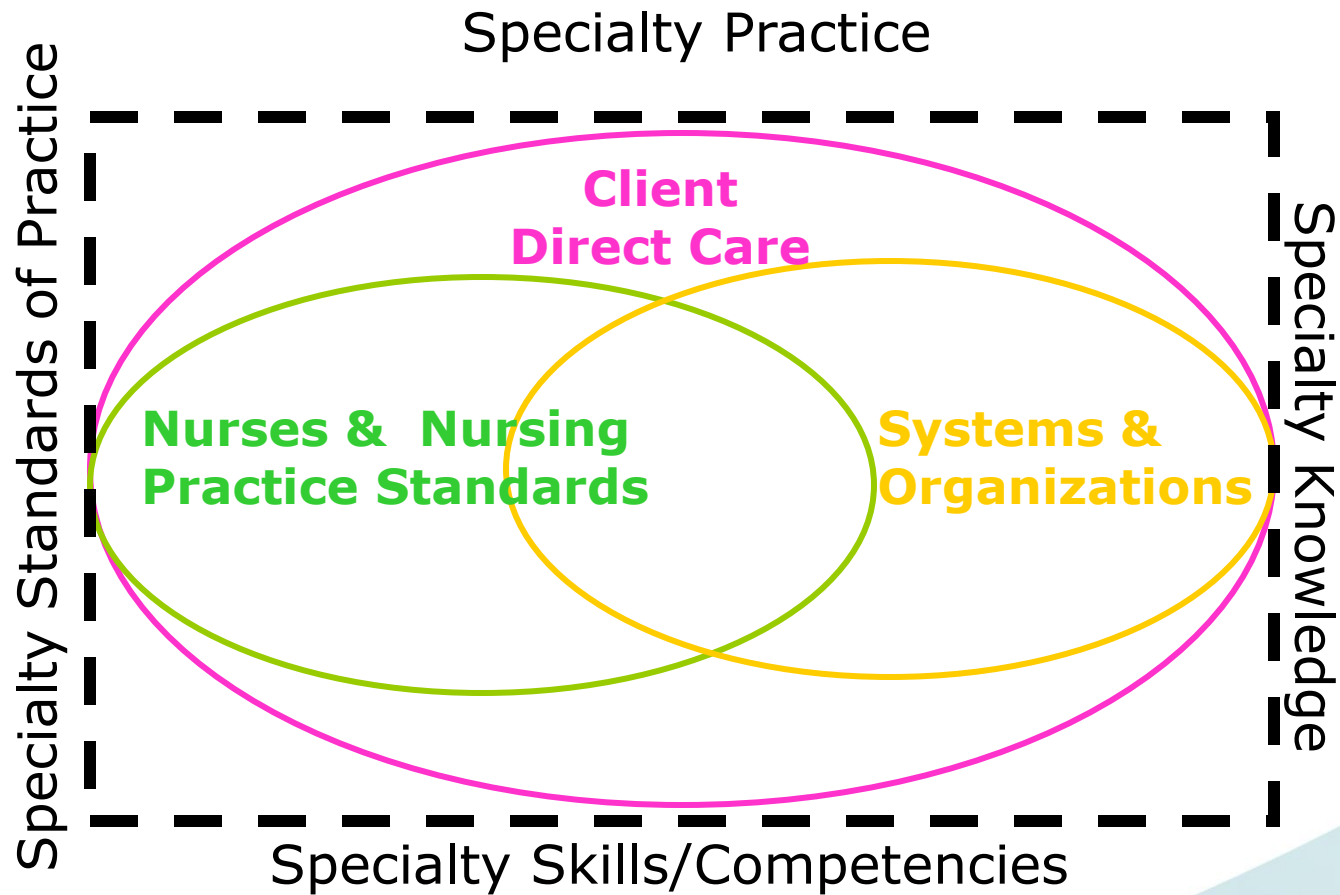
- Clinical Nurse Specialist led Fall and Skin Team
- Staff nurse representation across health system
- Multiple reps from every nursing unit
- Budgetary support
- Metrics/Outcomes/Benchmark-NDNQI data quarterly reporting and feedback
- Cohesive, active and engaged pressure ulcer/fall prevention
- EHR provides real time fall and pressure ulcer data to inform decision making and evidence-based care planning at the bedside to improve quality of care.

EHR Design

- Real time documentation and data at point of care
- Quality dashboards
- 18 months
- Transdisciplinary
- Evidence-based standards of care
- Thousands of design decisions
- Advanced clinical applications

New EHR Applications

- CPOE / PowerPlans
- Medication Reconciliation
- IView
- Enhanced View (in PowerChart, SurgiNet, FirstNet)
- Prescription Writer
- Depart Process
- Message Center
- CareMobile / CareAdmin
- Handheld Specimen Collection
- NHIQM
- Lighthouse
- Clinical Reporting XR
- PowerInsight Reporting
- Document Imaging
- eSignature
- CareAware BMDIs
- 724 Access



CNS practice conceptualized as core competencies in three interacting spheres actualized in specialty practice, and guided by specialty knowledge and standards.

CNS and Direct Care

- **Client Direct Care**
 - **Integration of evidence based practice resources and EHR documentation process to attain optimal patient outcomes**
 - **Example: clinical resource tab, insulin drip calculator, quality dashboard, automatic consult generation for documented pressure ulcer and falls.**

CNS and Nursing

- **Nurses & Nursing Practice Standards**
 - **Alignment of standard of care with EHR documentation**
 - **Task list design**
 - **SBAR nurse communication handoff screen**
 - **Integrated system assessment and electronic flowsheet**

CNS and Organization

- **Systems & Organizations**
 - **Integration of change across departments**
 - **Laboratory, radiology, pharmacy, medicine, finance, medical records, touch therapist (respiratory, P.T. O.T.)**
 - **Troubleshooting and refining quality reporting innovation**
- **Sleuthing out “go live” issues in all three spheres**

Pressure Ulcer/Falls Team

Structure Process Outcome

- Structure: representation from every unit in the organization, direct care RNs
- Metrics/Outcomes/Benchmark: NDNQI benchmarks, quarterly reporting, feedback
- Cohesive, active and engaged pressure ulcer/fall prevention
- Lighthouse implementation provides real time feedback for improving care at the bedside

Lighthouse

- Identify fall and PU risk promptly during the care process
- Alert when Braden Scale score ≤ 18 , Morse > 45
- Place Risk for Pressure Ulcer/Fall on Problem List
- Activate PowerPlan for prevention measures
- Document interventions and outcomes
- Educate patient for ongoing pressure ulcer and fall prevention
- Use links to reference text throughout process
- Provide immediate feedback through use of daily reporting

What works

- Lighthouse quality view allows easy tracking of pressure ulcer and fall patients
- Gives real time feedback to direct care RNs for improving care at the bedside
- Implementations in place immediately
- Documentation includes risk, interventional care plans, evaluation

Design

- Nursing workflow intuitive for RNs
- Reflects EBP, Research and Regulatory requirements
- Support EBP technology enabling the nursing process
- Transdisciplinary care planning
- Interactive electronic flow sheet

Nursing documentation for Braden assessment, pressure ulcer assessment, and fall risk by the RN. Generates Braden and Morse Fall Risk Scores.

View/I&O

Last 18 Hours

Find Item Critical High Low Abnormal Unauth Flag And Or

Result	Comments	Flag	Date	Performed By
01/11/2011				
12:00 11:00 10:00 9:00 8:00 7:00 6:00				
- > Braden Assessment <input checked="" type="checkbox"/>				
Sensory Perception Braden				
Moisture Braden				
Activity Braden				
Mobility Braden				
Nutrition Braden				
Friction and Shear Braden				
Braden Score				
+ > Skin Abnormality/Incision Ass... <input checked="" type="checkbox"/>				
- > Pressure Ulcer Assessment <input checked="" type="checkbox"/>				
- Sacrum 06/22/2011 Yes <input checked="" type="checkbox"/>				
Pressure Ulcer Stage				
Pressure Ulcer Description				
Pressure Ulcer Surround Tissue				
Pressure Ulcer Depth cm				
Pressure Ulcer Length cm				
Pressure Ulcer Width cm				
Pressure Ulcer Dressing Type				
Pressure Ulcer Dressing Condition				
Pressure Ulcer Drainage Description				
+ Sacrum 08/05/2011 Yes <input checked="" type="checkbox"/>				
+ Hip, right No 10/10/2011 <input checked="" type="checkbox"/>				
+ Leg, left No <input checked="" type="checkbox"/>				
+ Leg, left No <input checked="" type="checkbox"/>				
+ Hip, left No <input checked="" type="checkbox"/>				
- Pain Site Assessment <input checked="" type="checkbox"/>				

MS Quick View

MS Systems Assessment

- Neurological Assessment/Check
- Cardiovascular Assessment
 - > Pulses
 - > Edema
 - > Cardiac Rhythm
- Respiratory Assessment
- Gastrointestinal Assessment
- Genitourinary Assessment
- Perineum Assessment
- Musculoskeletal Assessment
- Integumentary Assessment
 - > Braden Assessment
 - > Skin Abnormality/Incision Assessment
 - > Pressure Ulcer Assessment
- Pain Site Assessment
- Psychosocial Assessment
- EENT Assessment
- Morse Fall Risk Scale
- Assessment/Treatment Refusal

MS Lines

MS Tubes/Drains/Devices

MS Safety/Nutrition/ADLs

MS Respiratory Procedures

MS Treatments/Procedures

MS Events

Restraints

Summary Views

Advanced Graphing

Intake and Output

Based on the nursing documentation, nursing care plans are recommended by the system. The nurse is able to modify and select care plan details.

Orders Medication List Document In Plan

View

- Orders for Signature
- Plans
 - Document In Plan
 - Medical
 - Wound and Pressure Ulcer (Planned)
 - Suggested Plans (3)**
 - Nursing**
 - Fall Prevention and Management EBN Adult Care Plan (01/11/12 12:58)**
 - Pressure Ulcer Management EBN Adult Care Plan (01/11/12 12:58)
 - Pressure Ulcer Prevention EBN Adult Care Plan (01/11/12 12:58)
- Orders
 - Condition
 - Consults
 - Activity
 - Diet
 - Patient Care Orders
 - IV Solutions
 - Respiratory Services
 - Medications
 - Laboratory
 - Radiology
 - Diagnostic Tests
 - Rehab Services
 - Non Categorized
- Medication History

Initiate Accept Reject

Offset	Component	Status	Details
Fall Prevention and Management EBN Adult Care Plan, Fall Prevention Suggested On: 01/11/12 12:58			
Outcomes			
<input checked="" type="checkbox"/>	Verbalizes Understanding of Fall Risk/Precautions	By Phase End	
<input checked="" type="checkbox"/>	Patient Specific Fall Risk Factors	During Phase	
<input checked="" type="checkbox"/>	Pt Takes Action to Control Fall Related Risks	By Phase End	
<input checked="" type="checkbox"/>	Adherence to Fall Risk Precautions	During Phase	
Interventions			
	To access CKM evidence links use the following username and password when prompted. Username:ckm Password:Ckm4Ckm		
<input checked="" type="checkbox"/>	Fall Interventions High Risk	Once	
<input checked="" type="checkbox"/>	Education Fall Risk Prevention (Fall Risk Prevention Education)	Constant Indicator	
	Collaborate with physician for Physical Therapy to evaluate gait, balance, and transfer mobility		
	If elimination problems are present, collaborate with physician to obtain appropriate referral		
	Consult pharmacy for medication evaluation related to fall risk.		
<input type="checkbox"/>	Consult Pharmacy (PP)	Routine, Fall Risk Medication Asmt	
	FOR PATIENTS UNABLE OR UNWILLING TO PARTICIPATE IN FALL PREVENTION		
	Minimize use of restraints.		
	Manage activity carefully providing verbal cues and reducing distraction.		
	PATIENT AT RISK OF INJURY FOR FALLS		
<input checked="" type="checkbox"/>	Increase Supervision During High Fall Risk Activities	Patient at risk for falls, Constant Indicator	
<input checked="" type="checkbox"/>	Assist During High Fall Risk Activities	Patient at risk for falls, Constant Indicator	
Fall Prevention and Management EBN Adult Care Plan, Post-Fall Care Suggested On: 01/11/12 12:58			
Outcomes			
Details			

The care plan creates documentation tasks for the nurse that reminds the RN to document fall prevention/safety interventions.

The screenshot displays a medical software interface with the following components:

- Header:** "View/I&O" in a blue bar.
- Activity View (Left Pane):** A list of tasks including "Fall Interventions High Risk" (highlighted in yellow) and "MS Quick View", "MS Systems Assessment", "MS Lines", "MS Safety/Nutrition/ADLs", "MS Tubes/Drains/Devices", "MS Treatments/Procedures", and "MS Respiratory Procedures".
- Main Table:** A table with columns for "Result", "Comments", "Flag", "Date", and "Performed". It shows a task for "Fall Interventions High Risk" on "01/11/12" at "16:27".
- Task Detail (Right Pane):** A detailed view of the "Fall Interventions High Risk" task. It includes a checklist for "Standard Safety" with the following items:
 - Fall alarm
 - Bed in low position
 - Upper/Half-length side-rails up
 - Wheels locked
 - Call device within reach
 - Monitor/alarms verified
 - Non-slip footwear
 - Oriented to room
 - Sitter at bedside
 - Wheelchair alarm
 - Other

At a glance, any nurse or physician can see how the patient is progressing related to the care plan – the green checkmark indicates that any nursing documentation is showing how the patient is progressing. The red X indicates that a charted result was not expected (such as the patient being willing to adhere to fall precautions).

Orders				
+ Add Document Medication by Hx Reconciliation ▾				
Orders Medication List Document In Plan				
☐	Description	Last Evaluated	Target	Status
☐ Fall Prevention and Management EBN Adult Care Plan, Fall Prevention (Initiated) 11/23/2010 10:23				
☐	🎯 Verbalizes Understanding of Fall Risk/Precautions	✓ 11/23/2010 11:07	By Phase End	✓➔
☐	📊 Patient Specific Fall Risk Factors	✓ 11/23/2010 10:35	Phase End	
☐	🎯 Pt Takes Action to Control Fall Related Risks	✗ 11/23/2010 10:23	By Phase End	✓➔
☐	📊 Adherence to Fall Risk Precautions	✗ 11/23/2010 10:35	Phase End	
☐	📊 Fall Risk Score	✓ 11/23/2010 11:04	Phase End	
☐	📊 Fall Leaf Placed	✗ 11/23/2010 10:23	Phase End	
☐	📊 Standard Safety	✓ 11/23/2010 10:23	Phase End	
☐ Fall Prevention and Management EBN Adult Care Plan, Post-Fall Care (Initiated) 11/23/2010 14:42				
☐	🎯 Will Be Free From Injury Post Fall		By Phase End	✓➔
☐	📊 Fall Injury Evaluation	✓ 11/23/2010 15:01	Phase End	
☐	🎯 Status Unchanged After Fall		By Phase End	✓➔
☐	📊 Post Fall Status	✓ 11/23/2010 14:48	Phase End	

The Quality and Safety Dashboard allows an at-a-glance look at any status for falls, AMI, Heart Failure, Pneumonia and Pressure Ulcers. A blue circle indicates that items have been documented as required. Partial circle indicates it is in progress, and an empty circle indicates it requires completion.

Quality-Safety											
AA 📄 🔍 150% 🔵 🔵 🏠											
List: Critical Care 1 FMC							Page 1 of 1	Previous	Next		
Patient Demographics			+	+	+	+	- Falls				
Name	Date Of Birth	FIN	AMI	Heart Failure	Pneumonia	Pressure Ulcers	Assessment	Interventions	Falls		
							●	●	N/A		
							●	○	N/A		
							●	●	N/A		
							●	●	N/A		
							●	●	N/A		
							○	●	N/A		
							●	●	N/A		
							N/A	N/A	N/A		

IView

BM202-NURSING, ESTER - 2258573 Opened by Test, RN10

Task Edit View Patient Chart Links Options Documentation Orders Help

Patient List Multi-Patient Task List Patient Access List Quality-Safety Micromedex Tear Off Attach Change Suspend Charges Charge Entry

BM202-NURSI... x List Recent Name

BM202-NURSING, ESTER Age:88 years Gender:Female Location:CC2 PMC; 651; 01 Weight:90 kg Allergies: Compazine
 Code Status: DOB:11/29/22 MRN:2258573 FIN:9242329 Precaution: Inpatient[01/17/11 14:5...

Print 0 minutes ago

IView/I&O

CC Quick View
 CC Systems As...
 CC Lines
 CC Tubes/Drain...
 CC Safety/Nutrit...
 Nutritional Screen Ac
 Nutrition ADLs
 Gastric Tube Feedin
 Safety ADLs
 Hygiene ADLs
 Activity ADLs
 Alcohol Withdrawal (

CC Respiratory ...
 CC Treatments/...
 CC Events
 Restraints
 Summary Views
 Advanced Graphi...
 Intake and Output

Last 18 Hours

Find Item Critical High Low Abnormal Unauth Flag And Or

Result	Comments	Flag	Date	Performed By													
08/11/11																	
			14:00	13:00	12:00	11:00	10:00	09:00	08:00	07:00	06:00	05:00	04:00	03:00	02:00	01:00	
Safety ADLs																	
Standard Safety																	
FALL Leaf Placed																	
Bed Type																	
Patient Position	Lying o...		Lying o...		Semi-Fo...		Sitting i...		Supine		Unable ...						
HOB 30 degrees																	
Rotation deg... degrees																	
Rotation Number of T...																	
Foot Drop Boot																	

T163 RN10 11 August 2011 14:07

start Clarity screenshots Li... CernerWorks - Applic... PowerChart Organize... BM202-NURSING, ES... 2:07 PM

IVIEW: Restraint Workflow Process

KOLB, KYOKO x __TEST, PATI... x

TEST, PATIENT1 Age:28 years Gender:Female Location:Lab POM Weight:70 kg Allergies: benazepril, ir...
 de Status:1. Full Resuscitation DOB:01/01/1983 MRN:5048 FIN:9558547 Precaution: Client[05/18/2011 11:11...

Orders Print 0 minutes ago

Step 1: CPOE – order entered by provider

Orders Medication List Document In Plan

Status
 Meds History Adm. Meds Rec Disch. Meds Rec

Start: Now ... Duration: None ...

Component	Status	Details
Restrains Nonviolent (Planned Pending)		
Patient Care Orders		
This restraint order will route to the ordering provider's Message Center Inbox and will be available for renewal from the time of order initiation for 24 hours. You may renew the order from your Inbox or the patient's order details page at any time during the 24 hour period after the order is initiated. If you take no action in the 24 hour period the order will automatically be discontinued		
<input checked="" type="checkbox"/> Restraints Nonviolent Initiate or Continue		T,N, Restraint Type Soft Wrist, Restraint Location Bil... Physician Certification: I have assessed the patient an...
		T,N, Restraint Type Soft Wrist, Restraint Location Bilateral, Reason for Restraint Less restrictive actions u... T,N, Restraint Type Soft Mitten, Restraint Location Bilateral, Reason for Restraint Less restrictive actions... T,N, Restraint Type Chair Lap Tray/Lap Buddy, Restraint Location N/A, Reason for Restraint Less restrict... T,N, Restraint Type Enclosed Bed, Restraint Location N/A, Reason for Restraint Less restrictive actions u...

Diagonoses & Problems
 Related Results

IVIEW: Restraint Workflow Process

TEST, PATIENT1 Age:28 years Gender:Female Location:Cardio PDM Weight:70 kg Allergies: benazepril, irbesart...
Code Status:1. Full Resuscitation DOB:01/01/1983 MRN:5048 FIN:9329124 Precaution: Client[06/03/2010 11:33-06/03...

Menu **Task List** Print 0 minutes ago

Task List
Nursing Communication
Results Review
Microbiology
IView/I&O
Clinical Notes
Form Browser
MAR
MAR Summary
Medication List + Add
Orders + Add
Allergies + Add
Immunization Schedule
Diagnosis & Problems
Patient Information
Reference Text Browser
Patient Schedule
Documentation
Infusion Billing
Quality Measures View
Graph Summary

Monday, 21 November 2011 07:00:00 - Monday, 21 November 2011 19:30:00

Nursing Care Nurse Collect Medications

Task retrieval completed

	Task Status	Task Description	Scheduled Date and Time	Route	Frequency	Order Details
	Pending	Restraints Nonviolent	11/21/2011 17:00		q2hr	11/21/11 17:00:00, Initial order valid for 24 hours. TI Physician Certification: I have assessed the patient e
	Pending	Restraints Nonviolent	11/21/2011 19:00		q2hr	11/21/11 19:00:00, Initial order valid for 24 hours. TI Physician Certification: I have assessed the patient e

Step 2: Task generated by Order for Restraint Documentation to Nurse Task List

IVIEW: Restraint Workflow Process

TEST, PATIENT1
 Status: 1. Full Resuscitation

Age: 28 years
 DOB: 01/01/1983

Gender: Female
 MRN: 5048

Location: Cardio POM
 FIN: 9329124

Weight: 70 kg
 Precaution:

Allergies: benazepril, ir...
 Client[06/03/2010 11:33...

Print 15 minutes ago

Step 3: Clicking on task brought Nurse to area in IVIEW to document – captures Regulatory Requirements

Result	Comments	Flag	Date	Performed By

	17:00	16:16	15:00
NVR Pre-Restraint Alternatives	Bed check/alert system, Bu...	Bed check/alert system, Busy Blanket, Comfort ...	
NVR Patient Response to Alternatives	High risk behavior continues...	High risk behavior continues, No change after en...	
◆ NVR Activity	Discontinue	Initiate	
◆ NVR Type	Enclosed bed	Enclosed bed	
◆ <u>NVR Location</u>	Other: Bed	◆	
◆ NVR Initiation Time		11/21/2011 16:10	
◆ NVR Safety/Release Info Given to		Patient, Family	
◆ NVR Dignity	Rights to dignity, safety, and...	Rights to dignity, safety, and well-being maintained	
◆ NVR Fluid Intervention	Done	Done	
◆ NVR Nutrition Intervention	Done	Done	
◆ NVR Toileting Intervention	Done	Done	
◆ NVR Hygiene Intervention	Done	Done	
◆ NVR ROM/Release Intervention	Done	Done	
◆ NVR Circulation/Skin Check Intervention	Done	Done	
◆ NVR Position Changed Intervention	Done	Done	
◆ NVR Discontinue Time	11/21/2011 16:31		
◆ Total NVR Time	min 21		

Reflects initiation and discontinuation

- Activity View
- Restraints Nonvioler
- Restraints Nonvioler
- Find Item
- MS Quick View
- MS Systems As...
- MS Lines
- MS Tubes/Drain...
- MS Safety/Nutriti...
- MS Respiratory ...
- MS Treatments/...
- MS Events
- Restraints
- Summary Views
- Advanced Graphi...
- Intake and Output

Contact

- Brenda.Fischer@pph.org (Director, PPH Center for Nursing Excellence)
- Jacqueline.Close@pph.org (District Gerontological Clinical Nurse Specialist)
- Margaret.Talley@pph.org (District Wound Clinical Nurse Specialist)
- Eva.Krall@pph.org (Medical-Surgical Clinical Nurse Specialist)
- Lourdes.Januszewicz@pph.org (ICU/IMC Clinical Nurse Specialist)

PALOMAR
POMERADO
HEALTH
SPECIALIZING IN YOU



HEALTH
SPECIALIZING IN YOU