

# Three Partnerships to Teach Nurses about Electronic Documentation and The EHR



## Speakers

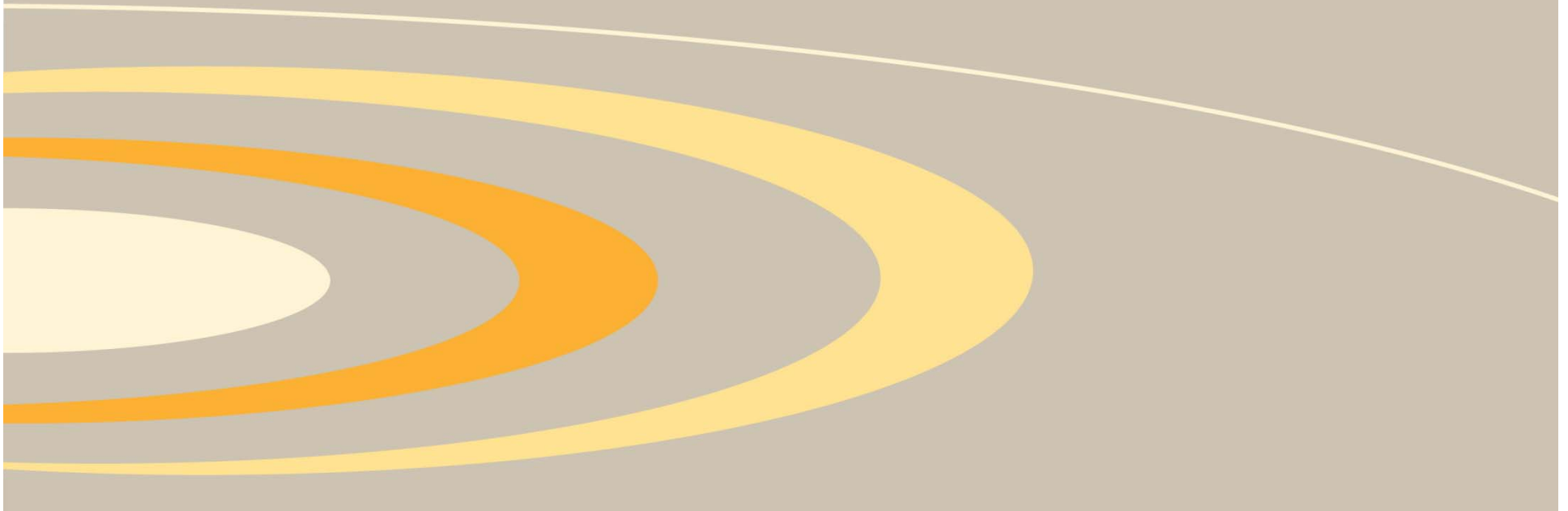
- Karin Sherrill & Diana Breed, Maricopa Community College
- Kay Hodson & Dlynn Melo, Ball State University
- Helen Connors & Judith Warren, University of Kansas Medical Center
- Diane J. Skiba, Moderator, University of Colorado Denver

December 12, 2008

**Session Sponsor**



# TIGER Education and Faculty Development Collaborative



# Health Assessment Nursing Documentation System (HANDS)



**Karin Sherrill RN, MSN, CNE**

**Diana Breed RN, MSN**

**Maricopa Community Colleges District Nursing Program**

**Mesa Campus**



## Who we are

- Maricopa County, Arizona
  - In 2007: 4 of top 10 fastest growing cities in the US
  - Size: >9,200 sq miles
- Maricopa Community Colleges District Nursing Program
  - Current enrollment 2012 ADN students
  - College Campus Sites: 10



## Problem Identified

- Students not exposed to documentation in facilities
- Rotations to as many as 8 hospitals, all with different EHR: spending clinical hours training students to the system
- Community agencies feeling students are not prepared to document upon graduation
- Students brought concern to Student-Faculty Forum

Goal: To create a ***critical thinking*** documentation tool



# Challenges

- Funding....none
- Partnership.....none
- Deadline.....yesterday
- Solution.....HITS application

## Plan of action

### Software Exploration

- Web based for multiple clinical setting use
- Electronically transferred to instructor
- Asynchronous evaluation by instructor
- Time stamped to verify submission
- Multiple data bases to be used with multiple patients
- Free (or limited cost)
- Best choice: File Maker Pro
  - Added bonus: IT expert available and willing



## Plan of action

- Creation of Tool
  - Exploration of best practices
  - Did not want “drop down” boxes or pre-filled answers
  - Integrate the ability to make students think and associate knowledge to this patients situation

# Welcome to Maricopa Community Colleges Health Assessment Nursing Documentation System



(Instructor View)

Patient Records

New Record

Find A Record

Assessment Records

View Records



= This icon open a help window that helps with data input idea's.



= This icon goes to a "critical thinking" window. Did you get everything.

# Patient Information:

Welcome Today is:  
10/24/2008



New Record

Find A Record

Patient ID:

First Name Initial:

Last 4 of MR#:

Last Name Initial:

Date of Birth:

Age

Patient History:

Visit History:


Create new Assessment Record

Go to last Assessment Record

# Health Assessment Nursing Documentation System

NEURO

CARDIAC

RESP

GI

GU

MS

SKIN

FUNDAMENTALS

IV's

LABS/Dx

PEDS

OB

PSYCH

MEDS

NOTES

CARE PLAN

PATIENT

NEW PATIENT

Creation User: sherrill

Creation Date / Time: 10/24/2008 3:19:55 PM

Mod Stamp: 10/24/2008 3:19:55 PM

Patient

History

Medication

Reason for Admission:

Patient ID:

111

DOB: 01/01/1999

Age: 9

Patient History

Instructor Feedback:

## Neuro



Glasgow Coma Scale

Pupil

Limb, Sensation, Movement

Speech

Behavior

Assistive



### Glasgow Coma Scale Including orientation

Eyes

Verbal:

Best Motor Response:

Total Score:

Orientation:

1.

2.

3.

Responsiveness:



nursing\_bands (filemaker.mosacc.edu)

neuro\_help\_window

### Glasgow Coma Scale

#### Eyes Open

- 4 = Spontaneously
- 3 = To Verbal Command
- 2 = To Pain
- 1 = No Response

#### Verbal

- 5 = Oriented
- 4 = Confused
- 3 = Inappropriate words
- 2 = Incomprehensible Sounds

#### Best Motor Response

- 6 = Obeys Verbal Command
- 5 = Localized Pain to painful stimulus
- 4 = Flexion withdrawal to painful stimulus
- 3 = Flexion-abnormal (decorticate)
- 2 = Extension (decerebrate)

#### Orientation

- Part 1. Person
- Part 2. Place
- Part 3. Time
- All 3 = A & O x3

#### Responsiveness

- Alert
- Drowsy
- Stuporous
- Semi-comatose

## nursing Documentation System

GU MS SKIN FUNDAMENTALS IV's  
NCH MEDS NOTES CARE PLAN PATIENT NEW PATIENT

Creation Date / Time: 10/24/2008 3:19:55 PM  
Mod Stamp: 10/24/2008 3:19:55 PM

### Neuro

Glasgow Coma Scale Pupil Limb, Sensation, Movement Speech Behavior Assistive



#### Glasgow Coma Scale Including orientation

Eyes:

Verbal:

Best Motor Response:

Total Score:

Orientation:

1:

2:

3:

Responsiveness:



new window

# Health Assessment Nursing Documentation System

NEURO    CARDIAC    RESP    GU    MS    SKIN    FUNDAMENTALS    IV's

MEDS    NOTES    CARE PLAN    PATIENT    NEW PATIENT

Creation Date / Time: 10/24/2008 3:19:55 PM  
Mod Stamp: 10/24/2008 3:19:55 PM

### Cardiac Help Window

Close Window

If your patient has an abnormality of their cardiac assessment, you will want to further assess for the following:

- Fluid status (I/O, daily weights, signs of overload)
- Labs: K+, Mg+, Na+, BUN/Creat, Thyroid levels, Coagulation tests
- Diagnostic Tests: CXR, EKG, Echocardiogram, further cardiac tests
- Medications (HTN medications, Cardiac medications)

**If you identify cardiac abnormalities, you will want to write a focused note in the record including a DAR, ADPIE, or SBAR format**

100    Browse

## Cardiac

### Pulses

	Left	Rate	Right	Rate
Radial:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Dorsalis:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Posterior Pedis:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Popliteal Tibialis:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Femoral:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

### Capillary Refill

Capillary Refill:

### Edema/Location

Type:

Location:

Describe:

### Heart Rhythm

Rhythm:

Monitor:  Yes  No

### Heart Sounds

Heart Sounds:

### Assistive Devices



# Health Assessment Nursing Documentation System

NEURO

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Medication

Reason for Admission:

Patient ID:

111

DOB: 01/01/1999

Age:

9

Patient History

Instructor Feedback:

## Fundamentals

Vital

Precautions

Pain

Hygiene

Safety

Position/Activity

What I did



### Vital Signs - I/O

Vital Signs:



INTAKE

P.O.	
N/G	
IV #1	
IV #2	
OTHER	

Shift Total =

OUTPUT

Urine	
N/G	
CT	
EMESIS	
BM	

Shift Total =

# Health Assessment Nursing Documentation System

NEURO

CARDIAC

RESP

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GU

MS

SKIN

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DOB: 01/01/1999

Age: 9

Patient History

Instructor Feedback:

## Fundamentals

Vital

Precautions

Pain

Hygiene

Safety

Position/Activity

What I did



What I did today to prevent complications of hospitalization



# Health Assessment Nursing Documentation System

NEURO	CARDIAC	RESP	GI	GU	MS	SKIN	FUNDAMENTALS	IV's
LABS/Dx	PEDS	OB	PSYCH	MEDS	NOTES	CARE PLAN	PATIENT	NEW PATIENT

Creation User:  Creation Date / Time:  Mod Stamp:

**Patient** | History | Medication

Reason for Admission:

Patient ID:

DOB:  Age:

**Patient History**

**Instructor Feedback:**

## IV's and Lines

IV 1 | IV 2 | IV 3 | IV 4

**Location and Type**  
Location:   
Type:

**Date Inserted**  
Date Inserted:

**Dressing Intact**  
Dressing Intact:

**Dressing Changed**  
Dressing Changed:

**Site within normal limits**  
Description:

**Discontinued**  
Discontinued:

**Good bruit and thrill (for fistula)**  
Description:

**List what is infusing into line**

# Health Assessment Nursing Documentation System

NEURO CARDIAC RESP GI GU MS SKIN FUNDAMENTALS IV's  
LABS/Dx PEDS OB PSYCH MEDS NOTES CARE PLAN PATIENT NEW PATIENT

Creation User: sherrill  
Creation Date / Time: 10/24/2008 3:19:55 PM  
Mod Stamp: 10/24/2008 3:30:03 PM

Patient History Medication

Reason for Admission:

Patient ID: 1111  
DOB: 01/01/1999      Age: 9

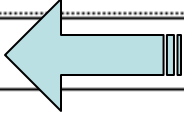
Patient History

Instructor Feedback:

## Meds

ADD A RECORD

Safe ?	Medication List: (dose, route, freq)	PRN:	Given:
No			
Yes			



# Health Assessment Nursing Documentation System

NEURO    CARDIAC    RESP    GI    GU    MS    SKIN    FUNDAMENTALS    IV's

LABS/Dx    PEDS    OB    PSYCH    MEDS    NOTES    CARE PLAN    PATIENT    NEW PATIENT

Creation User: sherrill    Creation Date / Time: 10/24/2008 3:19:55 PM    Mod Stamp: 10/24/2008 3:30:03 PM

**Patient    History    Medication**

Reason for Admission:

Patient ID: 111

DOB: 01/01/1999    Age: 9

**Patient History**

**Instructor Feedback:**

Allows for feedback as all tabs are viewed.

## PRIORITY NANDA NURSING DIAGNOSIS/COLLABRITIVE PROBLEMS

ND1    ND2

ND/CP

NANDA:

AEB:

R/T:

---

**Goals**

Short

Long Term:

---

**Interventions**

1:

2:

3:

4:

5:

---

**Evaluation**

Eval:

## Pilot and Evaluation

- Pilot group of 30 students and faculty (beta testing)
- Variation in computer use and comfort level

### Initial data:

- Overall rating = 3.08 (3.0 = Very Cool; 4.0 = Wow!)
- Do you feel this tool would be beneficial in clinical to replace the current documentation system? Yes = 97%
- Average time to complete on 1<sup>st</sup> attempt = 55 minutes

## **Pilot and Evaluation: Student's responses**

- “ I found it very easy to fill in my data, the “happiness” icons were a great tool for beginners”
- “ Good simulation of the complexity of documentation in the hospital”
- “ Good tool for getting ready for EMR verbiage”
- “ Definitely helped to learn documentation and what to look at in your patient”

## Future plans

- Work with agencies to integrate to their computers
  - Download software vs. web based usage
- Consider possibility of a PDA version
- Expand throughout Maricopa District Program

# Three Partnerships to Teach Nurses about Electronic Documentation and The EHR



## *Ball State University and Cardinal Health System: A Decade of Academic-Clinical Partnership*

**Kay Hodson**  
**Dlynn Melo**

**December 12, 2008**



# Cardinal Health System



- Ball Memorial Hospital Muncie, IN; Regional referral center for East Central Indiana; to be merged with Clarian Health Partners, 01-09
- Not-for-Profit university affiliated, 350+ bed teaching hospital
- JCAHO, CARF, ISO 9000, NIHO accredited
- McKesson Clinical solutions customer since 1996
- Site for clinical rotations for many health professions
- Nursing clinical rotations
  - BSU SON
  - Ivy Tech
    - AD
    - PN
  - Indiana Wesleyan University
  - IUPUI Richmond



# BSU School of Nursing



- **Program Enrollment**
  - **Baccalaureate: 370**
  - **Distance RN to BS: 100**
  - **Distance Master's: 380**
  - **Information Technology and Simulation Center**



## The Rationale for the Collaboration



- To provide documentation experience, when an Electronic Health Record (EHR) is used in a clinical rotation site, students need access.
- While serving in a Faculty role recently, Doreen Johnson, CNO and VP of Nursing at Ball Memorial had a student tell her this:
  - *“It was so much easier to make the transition as a student in clinicals when I did my clinicals at Ball after having the HED class at BSU – not nearly as easy when I had my clinicals at another local hospital who used a different electronic charting system.”*

# ***Ball State University and Cardinal Health System: A Decade of Academic-Clinical Partnership***



- At Ball State University, a collaborative model with Ball Memorial Hospital was developed to ensure an experience that met HIPAA regulations.
- Gave students real experience with EHRs.
- Students chart SimMan™ assessments and charted assessments on each other in LIVE electronic system.
- Resulted in minimal workflow interruption to the hospital staff.



BSU SON Simulation Center with mobile cart and laptop running Training unit in LIVE database

# Operational Details



Sheet - TRNG 222-1 - BSUTRAIN, PAPRIKA - (Unknown) - Ancillary Review (combined) Report

View Cell Report Chart Class Applications Results Reviews Report menu Meds/IVs Review CALL MD PMC Reviews Int Assessment Review  
 Center Reviews Peds/Teens Reviews CareProvider/Care Organizer Reports Links Help

ew Review LAB RAD TRAN I&O/WT V Review I and O VS Chart Doc View NIFICANT Refresh PAM Mom/Baby healthView

McKesson PCView for Windows No Allergy Info

File Edit Config Softkeys View Help

SE #1  
 Setting

F1 Help F2 Pop F3 Now F4 Erase F5 Undo F6 Add F7 Mark F8 Send F9 Rev F10 Quit F11 F12 F13 F14 F15 Home Enter

[Access ID]: **BSUA18** Staff Information <fe\_staff>

Last Name : BSUSTUDENT [Staff ID/Seq]: 100106 /100106  
 Middle Name : First Name : EIGHTEEN  
 Suffix : Title : NS  
 Initials : EB Prefix :  
 Dflt Review : Group ID : RN  
 Inactive Date : Provider Type: RN  
 Status : A

FACILITY ACCESS:	FAC	DB NAME	PROVIDER TYPE	CONF LEV	BROWSE	INACTIVE DATE
	B	ALL	RN	0		

DEPTS:	FAC	DEPT	PRI	INACTIVE DT	ALT IDS:	ALTERNATE ID	SOURCE
						BSUA18	NONE

[USR1]Login Information [USR2]Contacts, Credentials, Addresses  
 [USR3]Admin Privileges [DELETE] [INSERT] [SEND] [QUIT]  
 Enter the staff member's last name.  
 Count: 4 ^ v <Replace>

Ready CM(live): hpclini Connected

FIGURE 1. Sample screen shot showing student configuration.

# Operational Details: Tables



McKesson PCView for Windows

File Edit Config Softkeys View Help

Help Pop Now Erase Undo Add Mark Send Rev Quit Home Enter

**GROUPS Table**

Group ID	Description	Password	Sec Lev	Inactive	Hostname
LCSW	LIC CERT SOCIAL WORKER		0		hpn4000
LPN	LICENSED PRACTICAL NURSE		0		hpn4000
LSW	LICENSED SOCIAL WORKER		0		hpn4000
MCCD	Middletown Center for Che		0		hpn4000
MD	PHYSICIAN		99		hpn4000
MOD1	CM Mod1 trng	0	0		hpn4000
MR	Medical Records		0		hpn4000
MS	Med-Surg Signon		0		hpn4000
MTA	Multi-task Assistant		0		hpn4000
NA	NURSING AIDE		0		hpn4000
NM	NURSE MANAGER		0		hpn4000
NP10	Access to 10AB		0		hpn4000
NS	NURSING STUDENT		0		hpn4000
NTS	NURSING TROUBLE SHOOTER		0		hpn4000
NULL	NULL		0		hpn4000
OS	Office Staff proxy for MD		80		hpn4000

Enter value for : PASSWORD <Group password. Leave empty if not used.>  
Count: 42 ^ v <Replace>

Function Key 7 CM(live): hpclini Connected

FIGURE2. Screen shot showing use of groups in user database

# Operational Details: BMH Request Form

Request for ID Badges / Security Clearance ¶

School Name: <b>ivy Tech</b>		Program Type: <b>PTA</b>	Course #: <b>0000</b>
Start Date: <b>5/7/07</b>	End Date: <b>5/25/07</b>	Total # clinical hours per student: <b>0000</b>	
Clinical Areas (ex: L&D, 7N)..... <b>TCU</b>		Student Title (Ex: NS, SPN)..... <b>SPTA</b>	
Instructor(s) <b>Douglas B. Baker</b>			
System Access Requested: ..... <input type="checkbox"/> PYXIS (instructors only) ..... <input type="checkbox"/> STAR ..... <input checked="" type="checkbox"/> Clinical Documentation ¶ <small>Please place "X" in appropriate box(s) ..... <input type="checkbox"/> Pathways (homecare) ..... <input checked="" type="checkbox"/> Omnicell ..... <input type="checkbox"/> Other: Please name: <b></b></small>			

\*\*\*\*\*Please include the names & student ID # (IE: social security number) of all students and instructors even if they are currently employed by CHS. Clearly identify who are the instructors so access to PYXIS can be provided. ¶

#	Name	CHS Employee? ¶	Employee number ¶	Student ID Number ¶	Other Information ¶
1	<b>Christon Van Meter</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>6970</b> ¶	<b>0000</b> ¶
2	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
3	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
4	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
5	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
6	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
7	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
8	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
9	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
10	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
11	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
12	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
13	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶
14	<b>0000</b> ¶	Yes <input type="checkbox"/> No <input type="checkbox"/> (if NO go to student ID #) ¶	<b>0000</b> ¶	<b>0000</b> ¶	<b>0000</b> ¶

FIGURE 3. Request form used to communicate between university and hospital

# BSU SCHOOL OF NURSING

## McKesson HED™ TRAINING STATISTICS

### 1998-2008



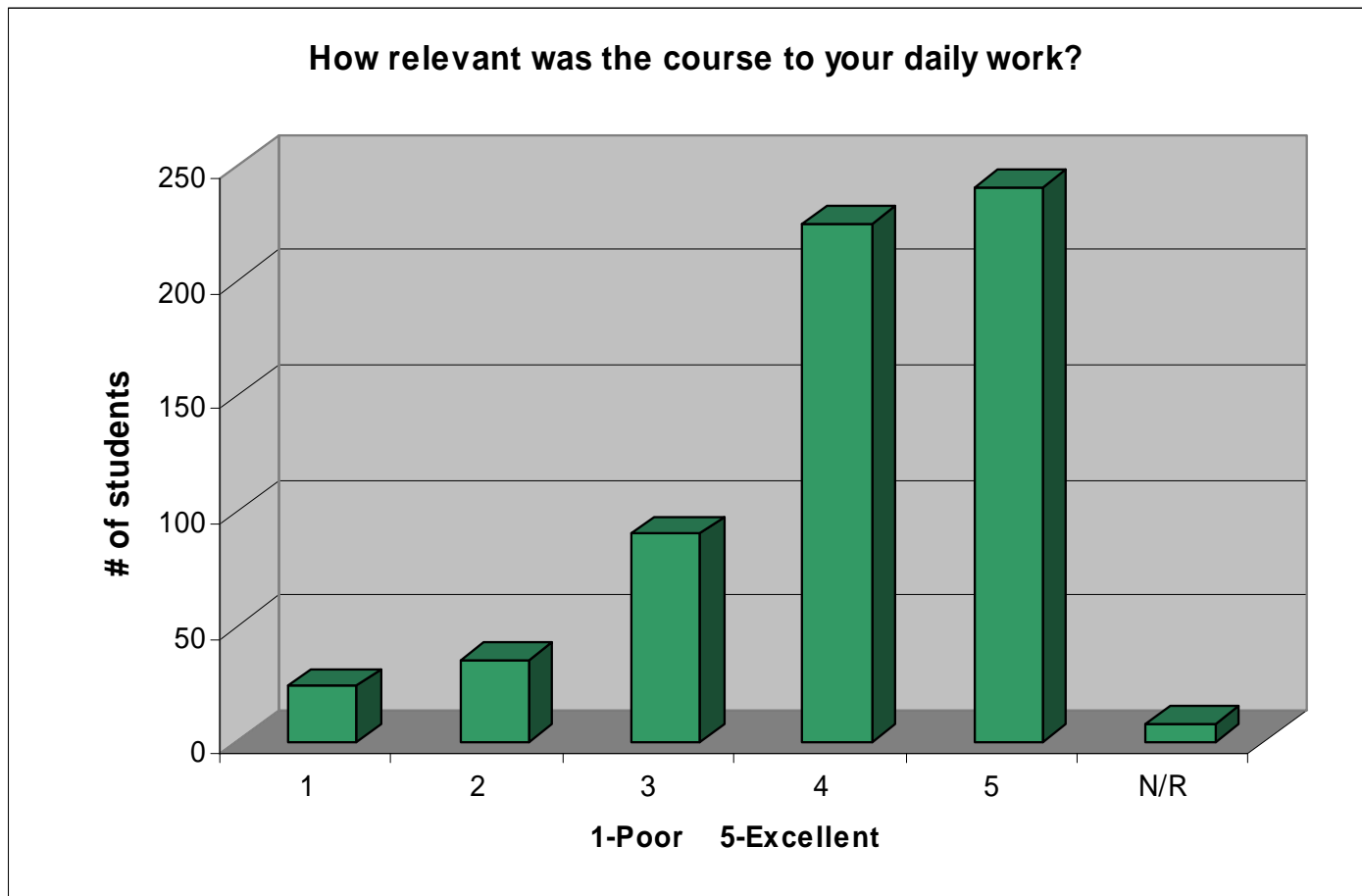
	<b>Ball State Baccalaureate Students</b>	<b>Ivy Tech and Indiana Wesleyan LPN &amp; RN Students</b>
<b>Spring 1998 – Spring 2004</b>	<b>410</b>	<b>313</b>
<b>Summer 2004 – Fall 2008</b>	<b>969</b>	<b>604</b>
<b>STUDENT TOTALS</b>	<b>1379</b>	<b>917</b>
<b>TOTAL</b>		<b>Cardinal Health System reimburses SON \$50/per non- BSU nursing student for training costs \$45,850</b>

# Student Evaluation Trends

## Relevant to Daily Work



- 75% of the students responses were good (4) or excellent (5)

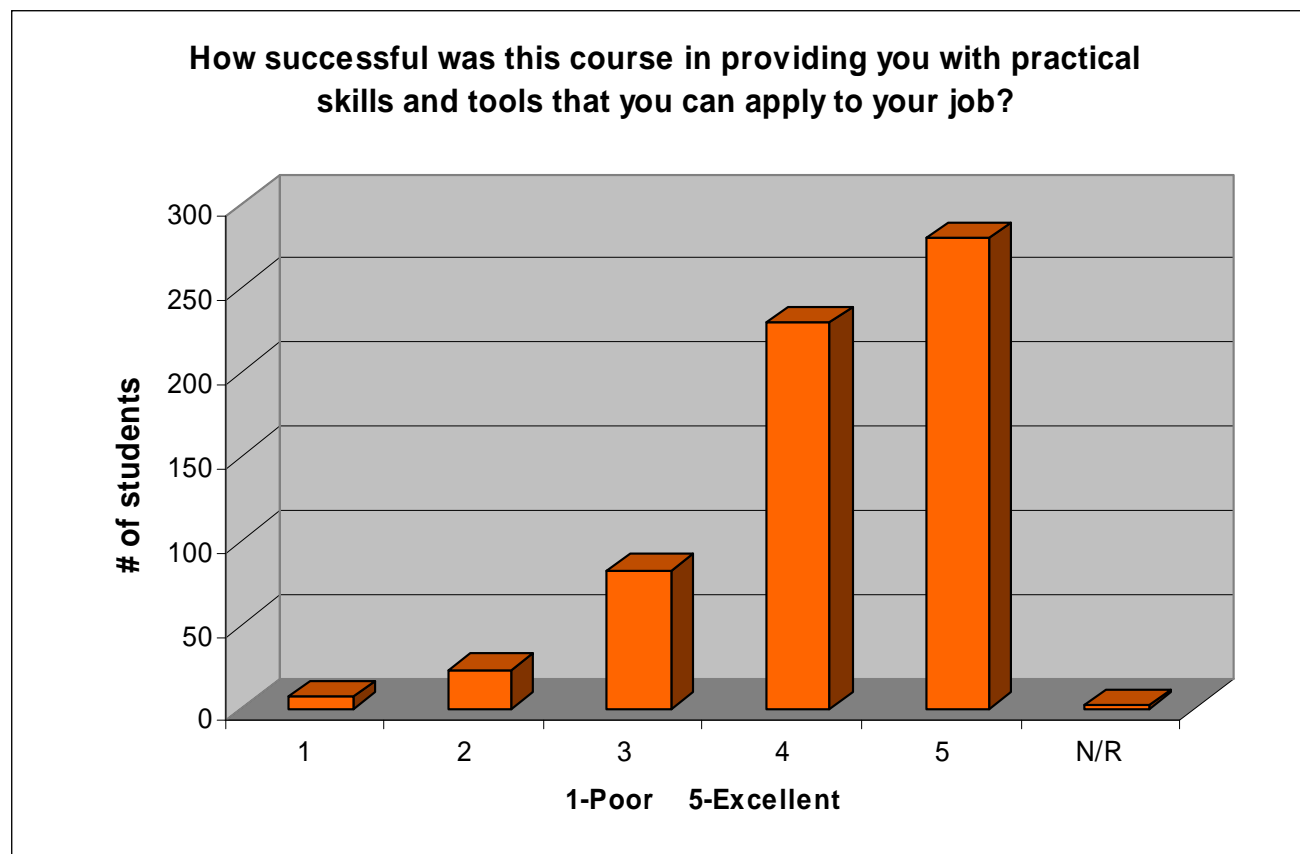




# Practical Skills & Tools



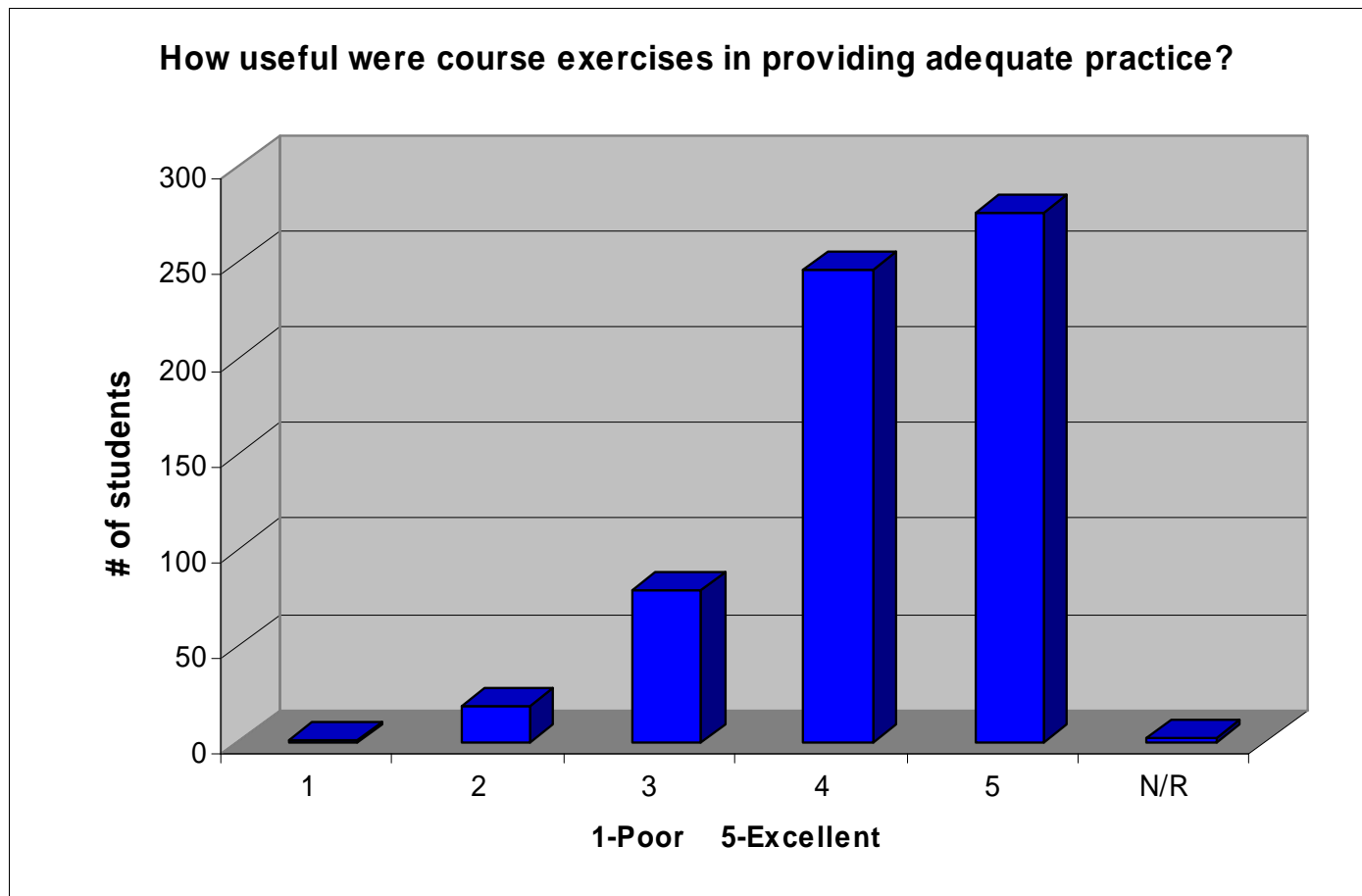
- 82% of the students responses were good (4) or excellent (5)



# Adequate Practice



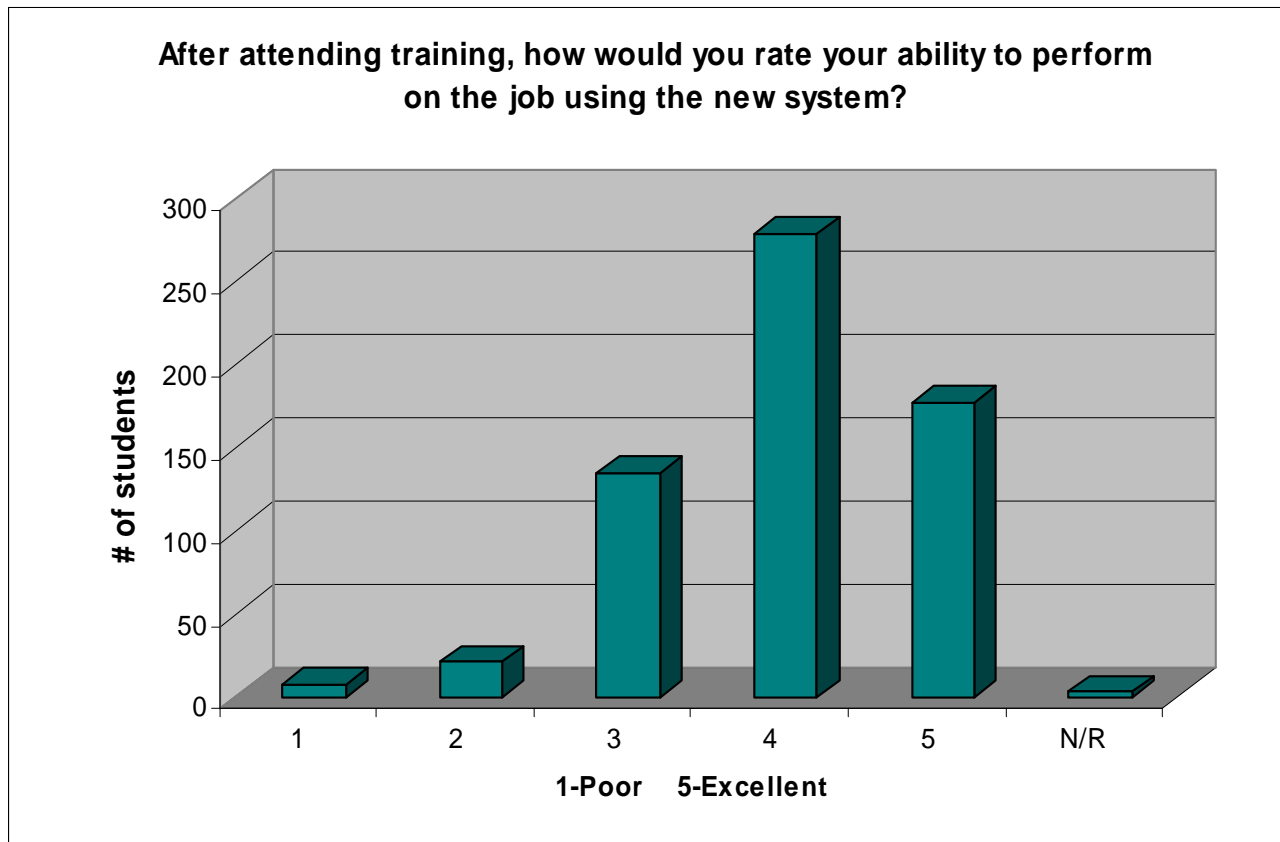
- **84% of the students responses were good (4) or excellent (5)**



# Job Performance



- **73% of the students responses were good (4) or excellent (5)**



# Key Requirements of this Style of Collaboration



- **Solid, professional, collegial relationships with at least one stakeholder at each site**
  - Kay and Dlynn
    - It helps to know each other and meet regularly
    - We meet quarterly at a minimum and review who is doing what at each location
    - Staff continuity is a big help: BMH clinical analysts and technical staff work together with SON Sim Lab staff
    - All add up to keeping momentum!
- **Maintain contacts with Clinicians/Consultants from your Vendor**
- **Organizational buy-in for the collaboration**
  - *"Some people have even responded that what we're doing here at Ball State makes them wish they were back in college, and that's a real testament to the work of our faculty and staff who dream of creative ways to give their students real-world experiences. I also hope these visits will spark discussions that lead to new partnerships and increased opportunities for our students."*
  - Jo Ann Gora, BSU, President who promotes immersive learning methods

# Win! Win! Win!



- You can't lose.
- Many organizations and their staff benefit from this convergence of education/service models.
  - The service setting of the acute care hospital gains the opportunity to recruit and hire top-notch students already computer savvy.
  - The university gains by showcasing not only their collaborations with community based services but also by incorporating cutting-edge information technologies.
- Another beneficial outcome of this mutual collaboration has been the opportunity to share new approaches, new ideas and winning strategies with each other, explore emerging technology together and keep the lines open between academic and service environments!



# University of Kansas: An Academic and Industry Partnership

Helen Connors PhD, RN FAAN

University of Kansas  
Center for Healthcare Informatics

<http://www2.kumc.edu/healthinformatics/video.html>

December 12, 2008



# Acknowledgements

## ***University of Kansas Center for Healthcare Informatics***

Judith Warren, RN, PhD, FAAN,  
FACMI,  
Director of Nursing Informatics

Timothy McNamara, MD, MPH  
Director of Medical Informatics

April Buchan, MBA  
Project Director and Application  
Analyst

## ***Cerner Corporation***

Brice Jewell, MEd

Phyllis Murray, RN, MSN, MAEd

Charlotte Weaver, RN, PhD  
Chief Nursing Officer and VP  
Patient Care Services  
(now with Gentiva Health Services)

# Collaboration: Guiding Principles



- Two or more people/groups/ organizations working together toward a **common goal**.
- Unleashes **creativity** and **innovation**.
- Provides a forum for **sharing knowledge** and **learning together**.
- Obtains greater **resources**, **recognition** and **rewards**.
- Promotes the **greater good**.



# Academic-Business Partnership



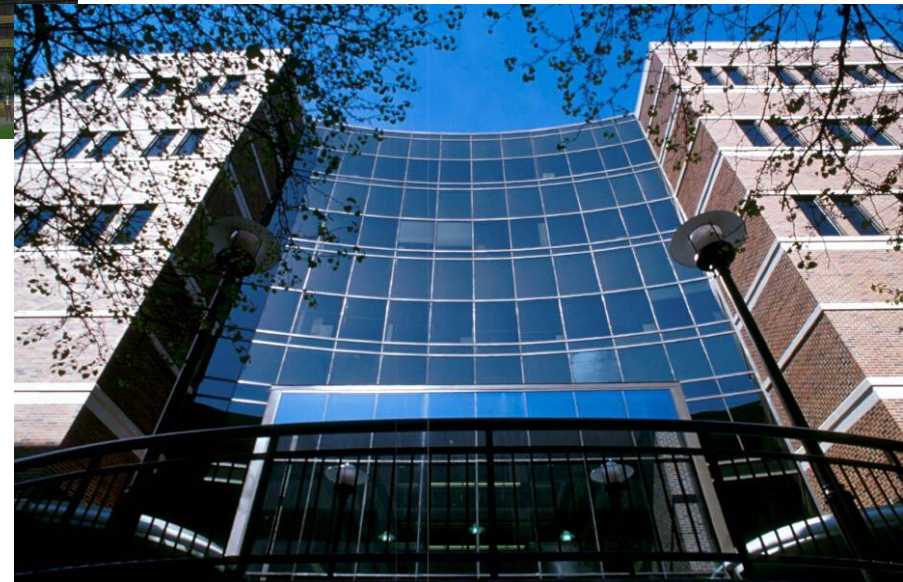
**Dean Karen  
Miller, RN,  
PhD, FAAN**



**Cerner Corporation  
Kansas City, MO**



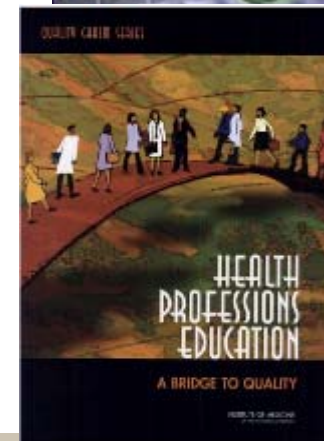
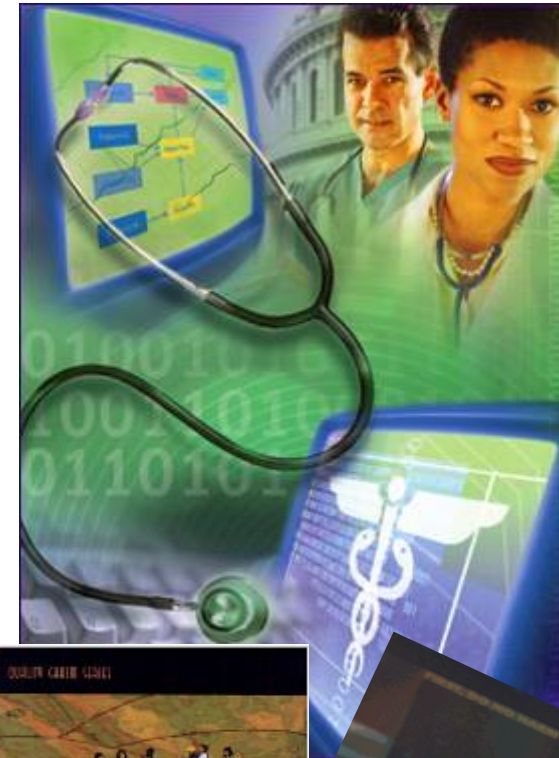
**Neal Patterson  
*Chairman of  
the Board,  
Chief  
Executive  
Officer***



**University of Kansas  
School of Nursing**

# Driving Forces for Technology

- Increasingly complex healthcare environments
- IOM Reports on Quality and Safety
- Automated work environments out of sync with education
- Commitment to use technology to transform healthcare system
- National Healthcare Information Infrastructure and other Government efforts - ONC
- Cultural change starts in the ***classroom***



# SEEDS



## Simulated E-hEalth Delivery System



### ***Academic Education Solution***

*Problem based Learning*

Designed to provide teaching and learning tools to assist health professional students to develop competencies to harness the power of information technology, thus improving the quality, efficiency and effectiveness of healthcare.

# SEEDS 2001- 2008



- Began pilot project in SON in Fall 2001 and all undergrads in Fall 2002
- Created a Virtual Health Sciences Center
  - Hospitals, clinics, health centers, schools, health fairs, community centers
  - Students (of nursing, medicine, pharmacy, and allied health) can interact with simulated patients and one another
- Rolled out in SOM in Fall 2004 and NP program
- Spring 2005 began consortium model
- Added EHR/lab mannequin simulations in Winter 2007



# Best Practices for Implementing the AES into Your Curriculum

Judith Warren, PhD, RN, BC, FAAN, FACMI

University of Kansas  
Center for Healthcare Informatics

December 12, 2008

# Best Practices for Implementing the AES



- Review the curriculum
  - Course content
  - How can the AES be integrated
    - **NOT ADDED!**
    - Identify assignments and activities
- Identify competencies to be met
  - QSEN and TIGER



# Faculty Orientation



- Navigating the EHR
- Design of AES
- Giving student feedback
- Providing support



# Adaptation to Education



Respiratory Assessment - Hernandez, Miguel Warren

\*Performed on: 04/03/2008 2110 CDT By: Warren, Judith

**Respiratory System**

- Respiratory Symptoms
- Respiratory Diagnostic Labs
- Incentive Spirometry
- Peak Expiratory Flow
- Complete Pain Assessment
- NIPS
- RIPS
- CHEOPS
- FLACC
- FACES
- Checklist of Non-Verbal Indicators
- Retractions
- Respiratory Conclusions**

## Respiratory Assessment

### Inspection

#### Respiratory Effort

<input type="checkbox"/> Abdominal breathing	<input type="checkbox"/> Grunting
<input type="checkbox"/> Diaphragmatic breathing	<input type="checkbox"/> Labored
<input type="checkbox"/> Dyspnea	<input type="checkbox"/> Nasal flaring
<input type="checkbox"/> Dyspnea on exertion	<input type="checkbox"/> Orthopnea
<input type="checkbox"/> Gasping	<input type="checkbox"/> Paroxysmal nocturnal dyspnea

Right click in box for reference text.

#### Chest Wall Configuration

<input type="checkbox"/> AP/lateral ratio 1:1	<input type="checkbox"/> Costal angle >90 deg
<input type="checkbox"/> AP/lateral ratio 1:2	<input type="checkbox"/> Crepitus
<input type="checkbox"/> Barrel chest	<input type="checkbox"/> Flail chest
<input type="checkbox"/> Bony structures asymmetrical	<input type="checkbox"/> Increased AP/lateral ratio
<input type="checkbox"/> Bony structures symmetrical	<input type="checkbox"/> Muscle tenderness
<input type="checkbox"/> Costal angle <90 deg	<input type="checkbox"/> Pectus excavatum

Right click in box for reference text.

#### Nailbeds and Mucous Membranes Assessment

	Cyanotic	Pale	P
<b>NAIL BEDS</b>			

Reference

**RESPIRATORY EFFORT**

CarePlan information   
 Chart guide   
 Nurse preparation   
 Policy and procedures   
 Scheduling information

**Respiratory Effort:**

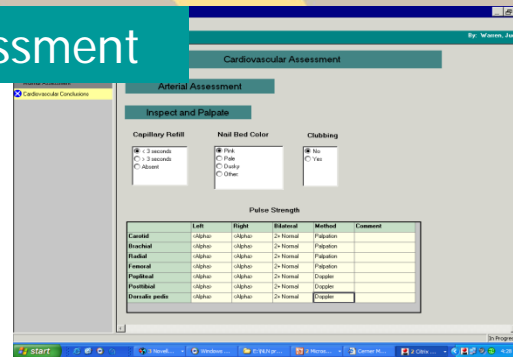
- Diaphragmatic breathing:** breathing that involves the contraction of the diaphragm (4)
- Dyspnea:** difficult or labored breathing (4)
- Grunting:** abnormal, short, audible grunt-like breaks in exhalation that accompany severe chest pain (3)
- Nasal Flaring:** a sign of respiratory distress, showing enlargement of the nostrils (4)
- Orthopnea:** ability to breathe only when in an upright position (4)
- Pursed lip breathing:** exhalation of air against resistance after a deep inspiration; performed by clients with COPD; carried out by forming a small "O" with the lips and exhaling slowly (4)
- Paroxysmal nocturnal dyspnea:** a disorder characterized by sudden episodes of respiratory distress, usually occurring after several hours of sleep in a recumbent position (3)
- Stertor:** Snoring or sonorous respiration, usually due to a partial obstruction of the upper airway (4)



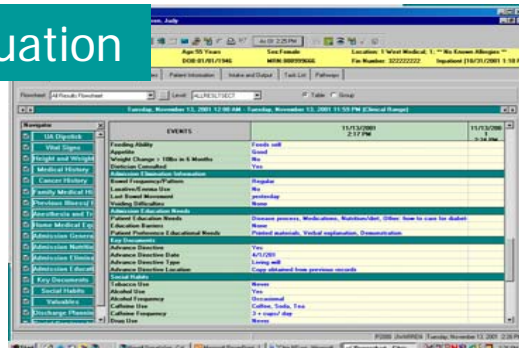
# Nursing Process in the EHR



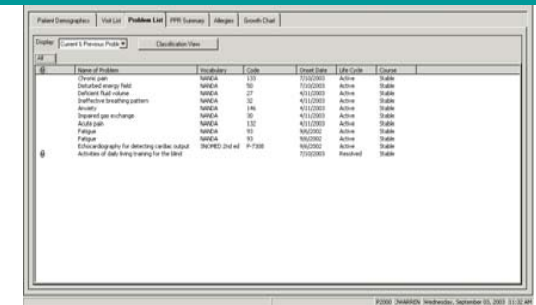
## Assessment



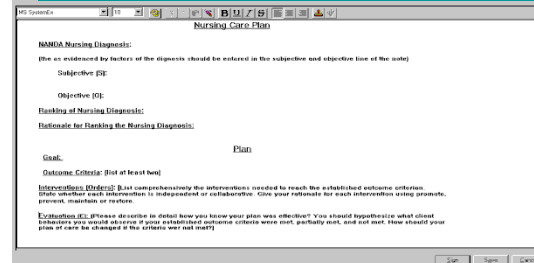
## Evaluation



## Diagnosis and Problem List



## Plan and Intervention



Students said SEEDS helped to visualize and learn the nursing process!

# Student Reactions



**Abdominal and GI Assessment - Warren, Judith A**

Performed on: 03/24/2003 14:15

**Palpation**

**Light Palpation**

Guarded  
 Mass palpated  
 Nontender  
 Rigid  
 Tender to palpation  
 Other:

**Deep Palpation**

Pain  
 Rebound tenderness  
 Tender to palpation  
 Other:

Right click to add comments about location and

**Abdominal Organs**

	Yes	No	Comment
Gallbladder		<input checked="" type="checkbox"/>	
Kidney	<input checked="" type="checkbox"/>		
Liver	<input checked="" type="checkbox"/>		
Spleen		<input checked="" type="checkbox"/>	
Umbilical sign		<input checked="" type="checkbox"/>	

**Abdominal Reflexes**

	Present	Diminished	Absent
Upper abdominal reflexes	<input checked="" type="checkbox"/>		
Lower abdominal reflexes		<input checked="" type="checkbox"/>	

**Respiratory Assessment - Warren, Judith A**

Performed on: 03/24/2003 14:12

**Respiratory System**

**Respiratory Symptoms**

**Respiratory Diagnostic Labs**

**Inspection**

**Respiratory Effort**

Abdominal breathing  
 Diaphragmatic breathing  
 Dyspnea  
 Dyspnea on exertion  
 Gasping

Grunting  
 Labored  
 Nasal flaring  
 Orthopnea  
 Paroxysmal nocturnal dyspnea

Pursed lips  
 Quiet  
 Shallow  
 Stertor  
 Stridor

Right click in box for Reference Text

**RESPIRATORY EFFORT**

**Policy and Procedures**

**Respiratory Effort:**

1. **Diaphragmatic breathing**: breathing that involves the constant relaxation of the diaphragm (4)
2. **Dyspnea**: difficult or labored breathing (4)
3. **Grunting**: abnormal, short, audible grunt-like breaks in exhalation accompany severe chest pain (3)
4. **Nasal Flaring**: a sign of respiratory distress, showing enlarged nostrils
5. **Orthopnea**: ability to breathe only when in an upright position
6. **Pursed lip breathing**: exhalation of air against resistance as performed by clients with COPD, carried out by forming a small and exhaling slowly (4)
7. **Paroxysmal nocturnal dyspnea**: a disorder characterized by

**Current Height and Weight - Warren, Judith A**

Performed on: 03/24/2003 1:57 By: Warren, Judith A

**Height and Weight**

Height: 53.00 in 5' 3" 160.0 cm 63.0 in  
Weight: 120.00 lb 54.4 kg 120.0 lb 120.0 oz 120.0 oz  
Waist Measurement: 24.00 in 24.0 cm 61.0 cm  
Hip Measurement: 36.00 in 36.0 cm 91.4 cm

Body Mass Index: 21.3  
Ideal Body Weight: 111.2 lb  
BSA: 1.56 m<sup>2</sup>  
% Ideal Body Weight: 102  
Waist to Hip Ratio: 0.67  
Body Frame Size:  Small  Medium  Large  Other

To add comments right click on the result entry box

**BMI**

**Policy and Procedures**

BMI	Weight Category
<18.5	Underweight
18.5-24.9	Healthy weight
25-29.9	Overweight
30-34.9	Mildly obese
35-39.9	Moderately obese
40+	Extremely obese

"I didn't know the terminology. EHR helped me learn this."

"Helps me to focus on what is important."

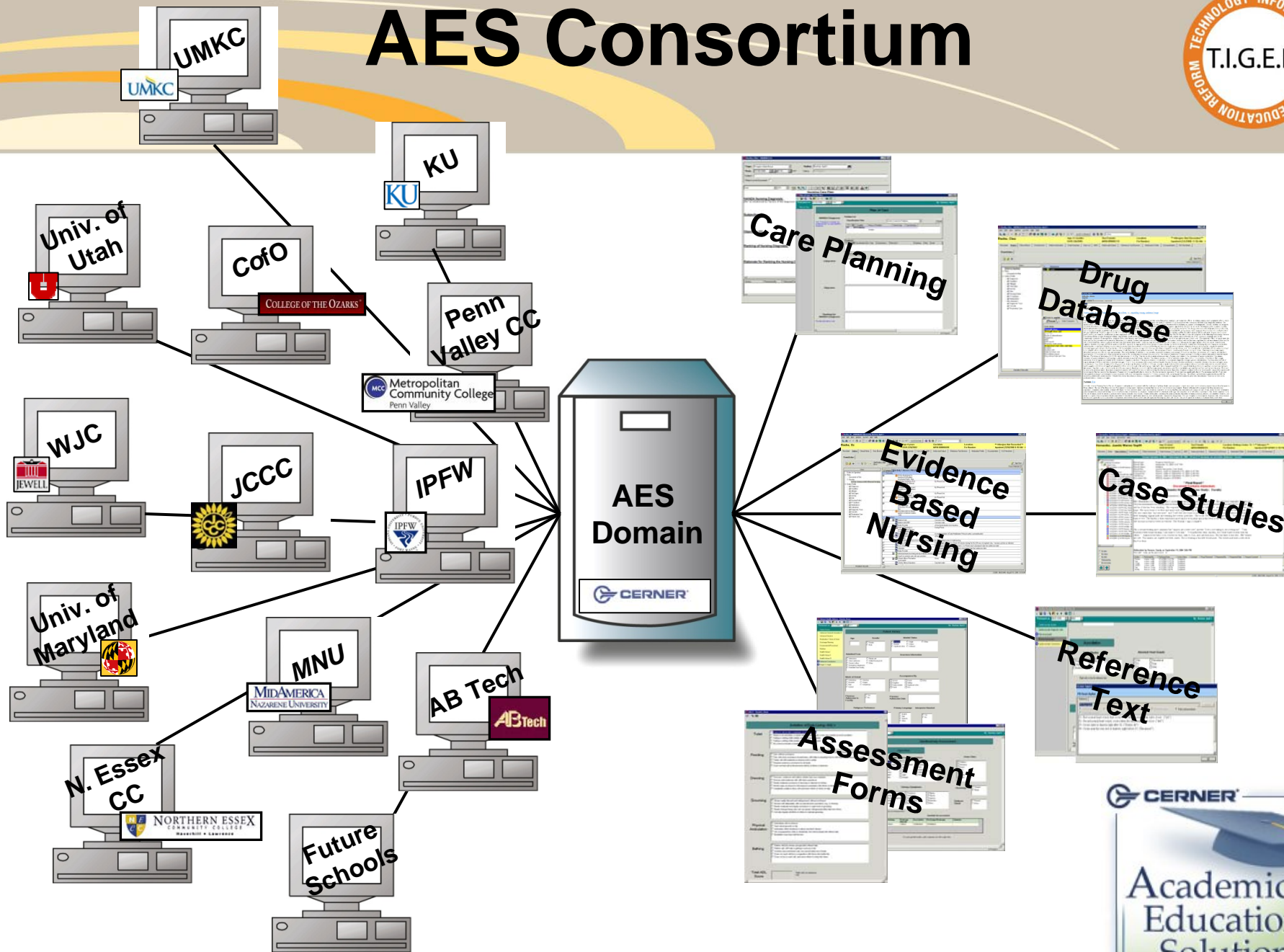
"Learned to ask more thorough questions of the patient."

# Simulations with the AES



- Adding the EHR makes simulation more real
  - Adds context
  - Patient has their own chart
- Teaches students to search for clinical information while caring for a patient
- Teaches documentation needs to be real time
- Enforces need for SBAR and safe hand-off activities

# AES Consortium



## Lessons Learned

- What advice would you offer the audience in terms of taking on a project such as yours?



Questions and Answers – please  
type your questions into the  
screen



**Thank you!**

**The slides will be available at  
[www.tigersummit.com](http://www.tigersummit.com) – go to the  
“Education” tab on the website.**