

# Growing Your Own Critical Care Nurses in a Rural Setting Using Technology and Innovation.



Renee Steffen DNP,RN –Chief Nursing Officer  
Sharon Roy RN BA-Simulation Coordinator  
Ashley Carlson RN BA- Critical Care Nurse

# Objectives:

1. Identify the changing needs of the new nurses.
2. Learn new strategies and partnerships that are needed to address the growing workforce challenges facing Minnesota's aging services.
3. Understand how an innovative training program at Cuyuna Regional Medical Center develops and trains critical care and labor and delivery nurses using simulation and hands-on learning.
4. Explore the developmental approach that has helped the hospital go from serving one to two ICU patients - to six - by developing their own local nursing staff.

# Who we are > > >

- ▶ Public District Hospital
- ▶ 25-bed critical access
- ▶ 117 Licensed skilled nursing home
- ▶ 3 Primary care clinic locations
- ▶ Thriving campus – providing comprehensive services
  - 13 Primary Care Physicians
  - 4 General Surgeons and 2 Orthopedic
  - 4 OB/GYN–
  - 15 with specialist in several areas
  - 7 NP, PA and Advance Clinicians
  - Full Boarded Emergency Physicians
  - 24/7 Hospitalist Program
- ▶ Support services provided by 950+ CRMC employees!



- ▶ The nursing education department initiated several new processes to help decrease cost related to nursing orientation in response to these conditions. These cost saving efforts include a redesigned and shortened central nursing orientation process, using blended learning, and the use of simulation.

# New Learners Learn Differently!

- ▶ In *I Brain*, Dr. Gary Small and Gigi Vorgan (2008) explored how technology has affected how the new generation's brain functions and interprets information.
- ▶ Research that shows this continuous exposure to technology is altering the neural wiring of tech-savvy young people's brain and compared it to the less tech-savvy older adults calling it the "brain gap".
- ▶ Two generations of learners, the digital natives, those born in the age of technology and the digital immigrants, those who have had to adapt to it.
- ▶ Learning itself has also transformed, and an example of this is, if a student wants to research something, he, or she simply does a Google search and instantaneously has new information that in the past might have taken hours to retrieve.
- ▶ The full ramifications of this change in our new learners is unclear, but we do know that unless preceptors understand and can function in this manner, further delay will occur in the application of knowledge that is needed in orientation (Palfrey & Gasser, 2008).

## *Learning Needs of New Nurses.*

- ▶ Nursing is a marriage of theory and experiential learning.
- ▶ The Experiential Learning theoretical framework (Kolb, 1984) was successful when used in a new orientation program for preoperative nurses (Sewuchuck, 2005).
- ▶ They found that the new learner prefers to be more active in his or her learning.
- ▶ Skiba and Barton (2006) found new nurses to be part of the *Net Generation Learners* and suggested we need to change how we educate this generation of new nurses. Learning experiences need to be more self-directed and hands-on using more technology.
- ▶ If this change does not occur, the new nurse may be unsatisfied with the orientation process and terminate prematurely.

Kolb, D. A., (1984). *Experiential learning: experienced as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

Sewchuk, D. (2005). Experiential learning –A theoretical framework for perioperative education. *AORN Journal*, 81(6) 1311-1316, 1318.

Skiba, D., & Barton, A. (2006). Adapting your teaching to accommodate the net generation of learners. *The Online Journal of Issues in Nursing*, 11(2), Retrieved September 20, 2008 from [http://www.nursingworld.org/ojin/topic30\\_4.htm](http://www.nursingworld.org/ojin/topic30_4.htm)

- ▶ The orientation evaluations from the past six months support that the new nurses hired are, as Altimier (2006) describes:
  - ▶ technologically competent,
  - ▶ needing immediate feedback and
  - ▶ wanting very interactive, engaging orientation and training methods.
- ▶ The new nurse prefers to participate in a self-directed and hands-on learning process during orientation.

# Principles of Teaching and Learning

( Hymovich & Hagopian 1989)

## Characteristics of the learner will influence learning.

- A comfortable, quiet environment without distractions will enhance learning.
- Motivation will influence learning.
- Effective communication is essential.
- It is essential to set aside time for learning. Teach new information in short sessions and make information meaningful.
- Keep the learner active.
- Build new information on what the learner already knows.
- Provide practice time when teaching a skill.
- Provide positive reinforcement.
- Evaluate the person's learning periodically

**Characteristics of Adult Learners**  
**Who are we teaching.....**

- **Adults command respect as mature individuals.**
- **Don't want to be talked down to.**
- **Insecure in learning/performing situations**
- **Fear failure and appearing foolish**
- **Adults have numerous concurrent responsibilities  
and place a high value on their time.**
- **Adults have a vast amount of life experiences.**

## **Characteristics of Adult Learners**

- **Adults possess established values and beliefs.**
- **Adults may be less flexible in thinking and doing.**
- **Adults learn by own and others' experiences.**
- **Adults have many motives for learning.**
- **Adults are problem-centered more than subject-centered learners.**
- **Adults have a need for immediate application of knowledge.**
- **Adults of different ages need varying degrees of support in learning**

# Outcomes

- ▶ Increased capacity to 4–6 patients in ICU
- ▶ Decreased transfers to other hospitals.
- ▶ Identify and treat sepsis patients much sooner.
- ▶ Increased staff engagement and satisfaction–  
“Opportunity to learn and grow”.
- ▶ Retention increased
- ▶ Potential to become Regional Training Center

## Cuyuna Regional Medical Center Contract Nursing Costs Fiscal Years 2015 and 2016

Department	Contract Labor \$\$ FYE 3/31/2015	Contract Labor \$\$ FYE 3/31/2016	2 Year Totals
Med/Surg	26,070	58,522	84,592
ICU	318,977	120,535	439,512
OB	69,726	41,705	111,431
Emergency Room	45,737	118,616	164,353
	<b>\$ 460,510</b>	<b>\$ 339,378</b>	<b>\$ 799,888</b>

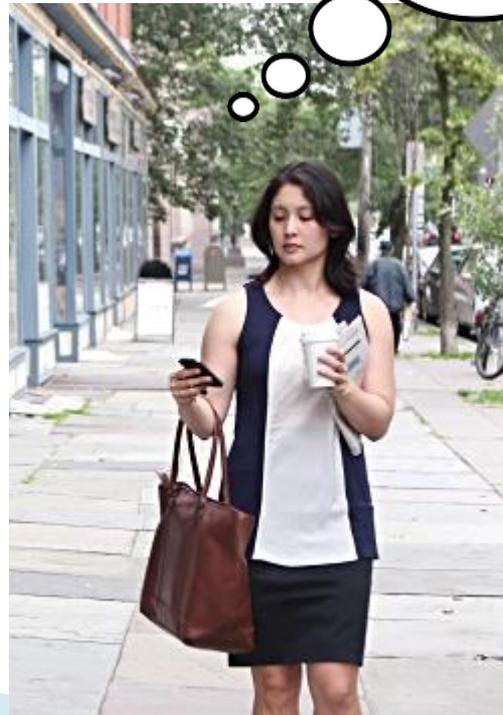
Overall Case Mix - 1.2677- 1.43

# So, I want to be a nurse...

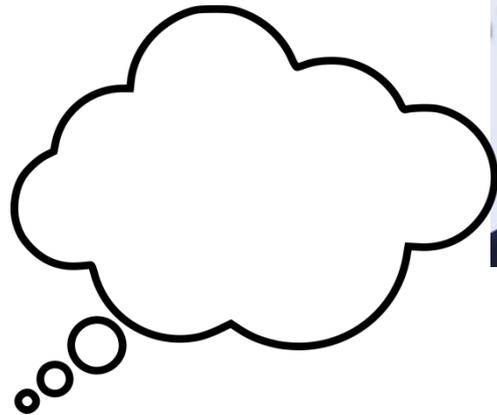




Brainerd Campus



**CRMC**  
CUYUNA REGIONAL  
MEDICAL CENTER  
*Dedicated to You. Every Day.*

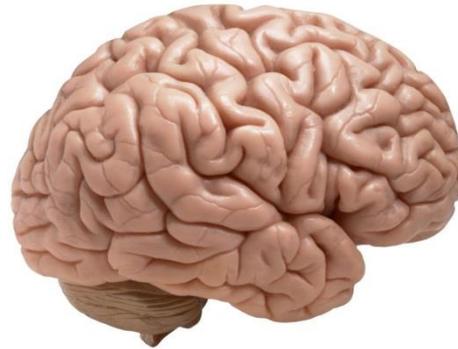


**CRMC**  
CUYUNA REGIONAL  
MEDICAL CENTER  
*Dedicated to You. Every Day.*

Same Brain

Same Heart

Same Ambition

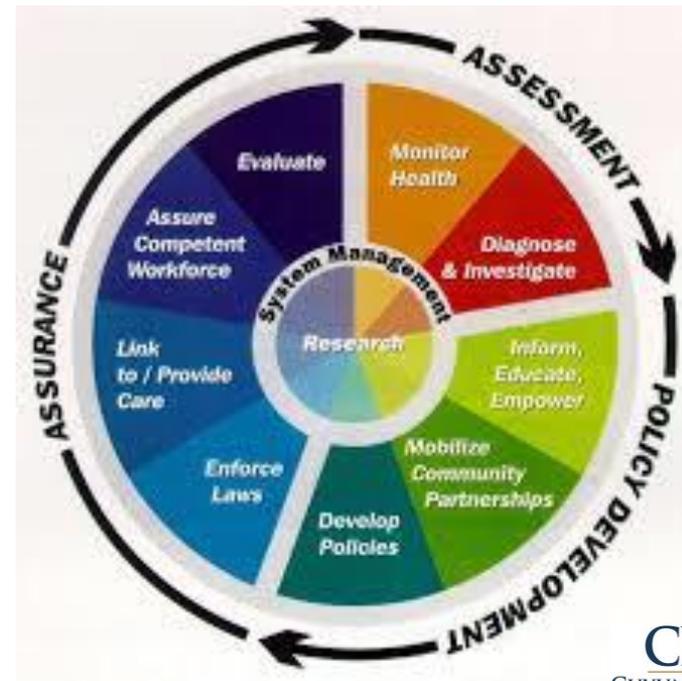


# Rural Nurse vs Metro Nurse What's the Same?



Same Boards

Same Scope  
of Practice



# Rural Nurse vs Metro Nurse

## What's the Difference?

- Experience & Exposure
- Jack of all Trades
- Managing unmanaged illnesses
- Less resources

- Experience & Exposure
- Masters in their specialty
- Managing acute illness
- More resources

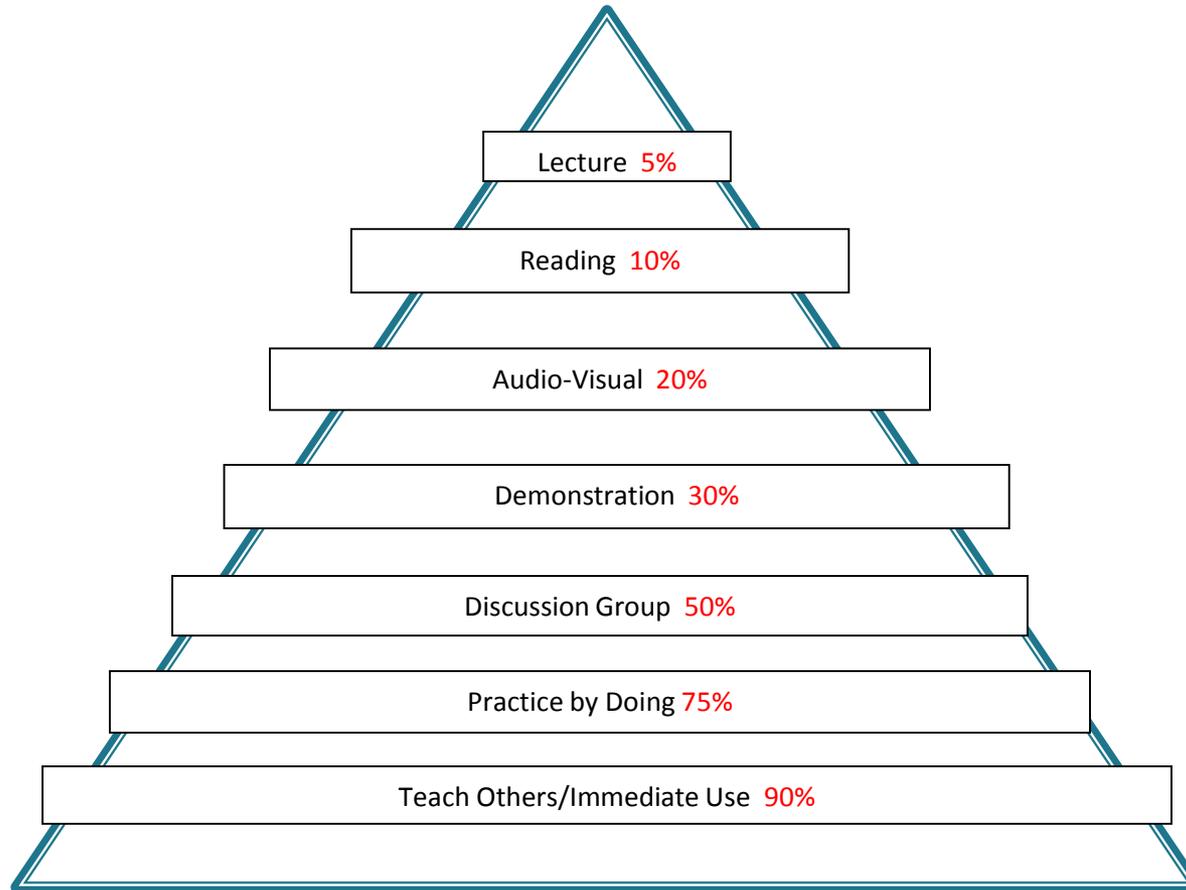
# WE ALL CARE ABOUT PATIENT OUTCOMES



# Goal of Simulation

- ▶ Preparing Nurses with the competencies necessary to continuously improve the quality and safety of the healthcare systems in which they work.
- ▶ Reflection on one's own practice is a crucial step in the experiential learning process. It helps trainees develop and integrate insights from direct experience into later action.

# The Learning Pyramid



Teaching Method/Retention Percentage

# Simulation Center Usage

- ▶ Professional Nursing Orientation
- ▶ Achieve / Maintain Competency
- ▶ Professional Development
  - Entry level RN to Critical Care RN



# Needs Assessment

- ▶ BKAT – Basic Knowledge Assessment Test for Critical Care Nurses
- ▶ SWOT – Strengths, Weaknesses, Opportunities, Threats
- ▶ Staff Needs Surveys
- ▶ New & Updated Processes

# Professional Nursing Orientation

- ▶ Orientation Combines Didactic, Skills and Simulations
- ▶ ECCO – American Association of Critical Care Nurses
- ▶ Emergency Nursing Association Orientation Modules



# Professional Development Entry Level RN to Critical Care RN

- ▶ Long Term Care RN
- ▶ Med/Surg RN
- ▶ ICU RN
- ▶ OB RN



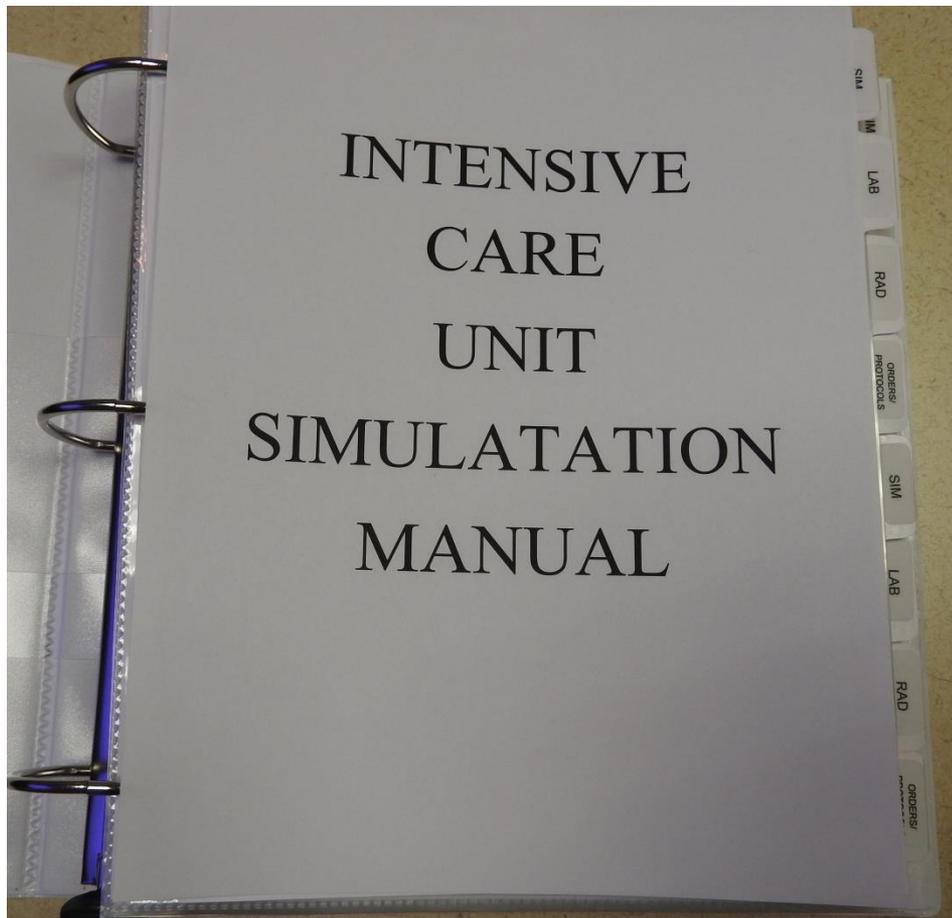
# Achieve/Maintain Competency

- ▶ Emergency Department RN
- ▶ Intensive Care Unit RN



# Simulation Development

- ▶ Foreshadowing Didactic Content
- ▶ Foreshadowing Skills
- ▶ Simulation Considerations:
  - Learner Objectives
  - Need Based
  - Relevant Patient Case vs. Patient Case Review



## CRMC Simulation Scenario Template

**I. Patient Name:** LOIS HATCHER

**II. Case Title/Topic/Diagnosis:** SEPSIS PNEUMONIA

**III. Author/Affiliation:** Ashley Carlson, CCRT

**IV. Target Audience:** Intensive Care Unit Registered Nurses

### **V. Learning Objectives or Assessment Objectives**

A. Primary Objectives (*what you want the learners to do, apply, analyze, create, etc*)

1. Sepsis Recognition
2. Initiate Sepsis Bundle/Protocol
3. Care for the patient following Sepsis Maintenance Protocol
4. Apply hemodynamic concepts to patient outcomes
5. Properly set up and assist in the following sterile procedures:
  - Central Line Placement
  - Arterial Line Placement
6. Recognize Signs and Symptoms of Respiratory Deterioration and Intervene appropriately
7. Recognize need for BiPAP and Manage BiPAP machine
8. Assist in Rapid Sequence Intubation
9. Demonstrate competence in Pharmacology (RSI Meds, Vasopressors)
10. Demonstrate competence in Laboratory interpretation

### **VI. Personnel Required**

1. SIM Jockey
2. Physician
3. Respiratory Therapist

C. Scenario branch points / Play of Case Guidelines

IF: THEN	Critical Actions	Notes
<p>If, they do not recognize sepsis criteria,</p> <p>Then, pt. VS decompensate further</p>	<ul style="list-style-type: none"> <li>-Recognize Sepsis Criteria</li> <li>-SBAR MD</li> <li>-Follow <i>Initial</i> Sepsis Bundle</li> <li>-Establish 2<sup>nd</sup> IV – draw labs</li> <li>-stO2 monitor use/importance of trends</li> <li>-Foley placement for UA/UC and strict I&amp;O</li> </ul>	
<p>Pts respiratory status begins to decline and pt. becomes increasingly lethargic</p> <p><i>If</i>, they do not recognize decline</p> <p><i>Then</i>, continue to decompensate</p>	<ul style="list-style-type: none"> <li>-Recognize respiratory decline and intervene with BiPAP (pt. has exhausted their efforts – lethargic – need for PEEP)</li> <li>May obtain ABG prior (discuss use of VBG)</li> </ul>	
<p>Pt. is beginning to stabilize, but not necessarily improve to desired criteria</p> <p>Diminished bases, Coarse Crackles</p>	<ul style="list-style-type: none"> <li>-Follow <i>Maintenance</i> Sepsis Bundle</li> <li>-Recognize usefulness of NICOM during this period (fluid responsive??)</li> <li>-Recognize Pt. is no longer fluid responsive and may be fluid overloaded</li> </ul>	
<p>Pt. has rebound hypotension – persistent, not improving after Fluid Resuscitation is complete</p>	<ul style="list-style-type: none"> <li>-Recognize need for pressors</li> <li>-Initiate artline and central line placement for pressors – recognize value in CVP monitoring and continued NICOM monitoring</li> </ul>	
<p>Pts respiratory status further declines during central line placement with pt. in slight trendelenberg and does not recover and pt. becomes lethargic, no longer answering questions, breathing is shallow and rapid</p>	<ul style="list-style-type: none"> <li>-Recognize need for intubation</li> <li>-Initiates Team for RSI</li> <li>-Takes responsibility for Meds</li> <li>---Etomidate = 20</li> <li>----Ketamine 140</li> <li>-----Versed = 7</li> <li>---Succs = 140 (consider K+)</li> <li>-----Vec = 7</li> </ul>	



# SIMULATION PREBRIEF

*“...it is essential to set the stage for the experience to follow. If Learning is to occur, the creation of a safe and inquisitive environment is essential for learners to be willing and able to risk practicing at the edge of their competence.” (Maxworthy & Waxman, 2015)*

- ▶ Welcome
- ▶ Establish a non-threatening environment
- ▶ Goals & Objectives of Simulation
- ▶ Fidelity & Fiction Contract
- ▶ Mannequin Features
- ▶ Assumptions
- ▶ Answer Questions



# SIMULATION IMPLEMENTATION

- ▶ SIM Jockey
- ▶ Confederates
- ▶ Learners



# SIMULATION IMPLEMENTATION

## Learner Teaching Learner





## TEAM BUILDING



## Establishing Professional Relationships



## Increasing Confidence with Competence

# SIMULATION DEBRIEF

*Arguably the most important component of Simulation as “...it is the setting where the learning actually takes place...where the learner’s thinking is illuminated” and understanding of the decisions made occurs. (Maxworthy & Waxman, 2015)*

## ▶ 3 Phases of Debrief

- Reaction: Emotions are Defused
- Analysis: Performance is reflected on and evidence based practice is applied. Performance Gaps are recognized and rationale is facilitated
- Summary: Learning is reviewed for transfer to the clinical setting

# SIMULATION DEBRIEF

How did the experience of caring for this patient feel for you and the team?

Discuss roles and responsibilities during a crisis.

How would you handle the scenario differently if you could?

Did you have the knowledge and skills to meet the learning objectives of the scenario?



# Measuring Success

- ▶ BKAT
- ▶ Peer Review
- ▶ Participant Evaluations
- ▶ Increased Patient Population and Census
- ▶ Increased Patient Acuity
- ▶ Increased Employee Satisfaction and Retention



“Hands on Experience!”



“Non-Judgmental”



“Real Life Situations”



“Fun Learning Environment!”

# Simulation Center Vision

- ▶ Incorporating Simulation into Orientation
  - Reinforce ECCO courses with Simulation Scenarios
  - Reinforce ENA courses with Simulation Scenarios
- ▶ Professional Nursing Orientation Integration Campus Wide
- ▶ Regional Simulation Training Opportunities

QUESTIONS?

THANK  
YOU!

