

Simulation in Nursing Schools: Integrating Simulation into Nursing Curriculum

Gail Rea, RN, PhD, CNE

Assistant Dean, Pre-Licensure Programs

Beth Haas, MPH

Director, Clinical Simulation Institute

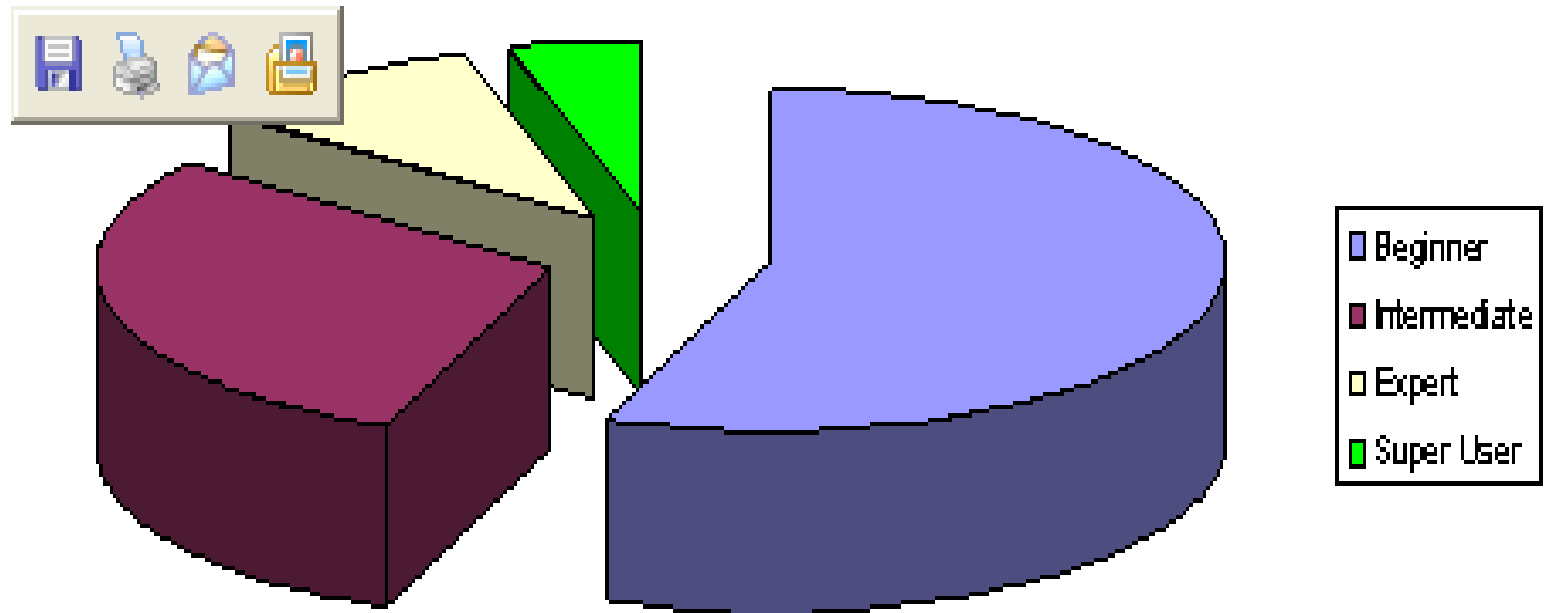
Course Description: Integrating Simulation into Nursing Curriculum

- The goal of delivering exceptional health care has been one of the key drivers for the use of simulation in the clinical training environment. Learn the benefits, challenges and emerging trends in the use of simulation technology and how to integrate simulation into your nursing curriculum.

Learning Objectives

- Understand drivers for the introduction of simulation
- Identify courses within your nursing curriculum to best leverage simulation
- Locate tools and resources for quick successes
- Create buy-in with faculty and / or other health care specialties
- Define measurable objectives for success

Who you are



Who we are



BARNES JEWISH
College
Goldfarb School of Nursing
BIC HealthCare

Mission

- Improve patient safety and quality of care through use of clinical simulation in education and research. We seek to provide our students an exceptional educational experience in a dynamic and diverse learning environment.



Goals

- Enhance and promote patient safety and quality health care by advocating use of simulation in clinical education of health care professionals.
- Enhance clinical competence of health care professionals.
- Assess and demonstrate competence of undergraduate and graduate health care providers.
- Maintain continuing competence of health care providers by using clinical simulation for continuing education
- Improve productivity and efficiency of health care professionals in clinical settings.
- Encourage research leading to improvement in clinical education of health care providers.

Goldfarb School of Nursing at Barnes-Jewish College

- State of the Art Facility

- 2 10-bed Med/Surg labs
- 10-bay Health Assessment lab
- OR/Anesthesia Lab
- 4-bed Simulation Theater
- 4-bed Maternal/Child Lab
- 2 Patient Examination Rooms

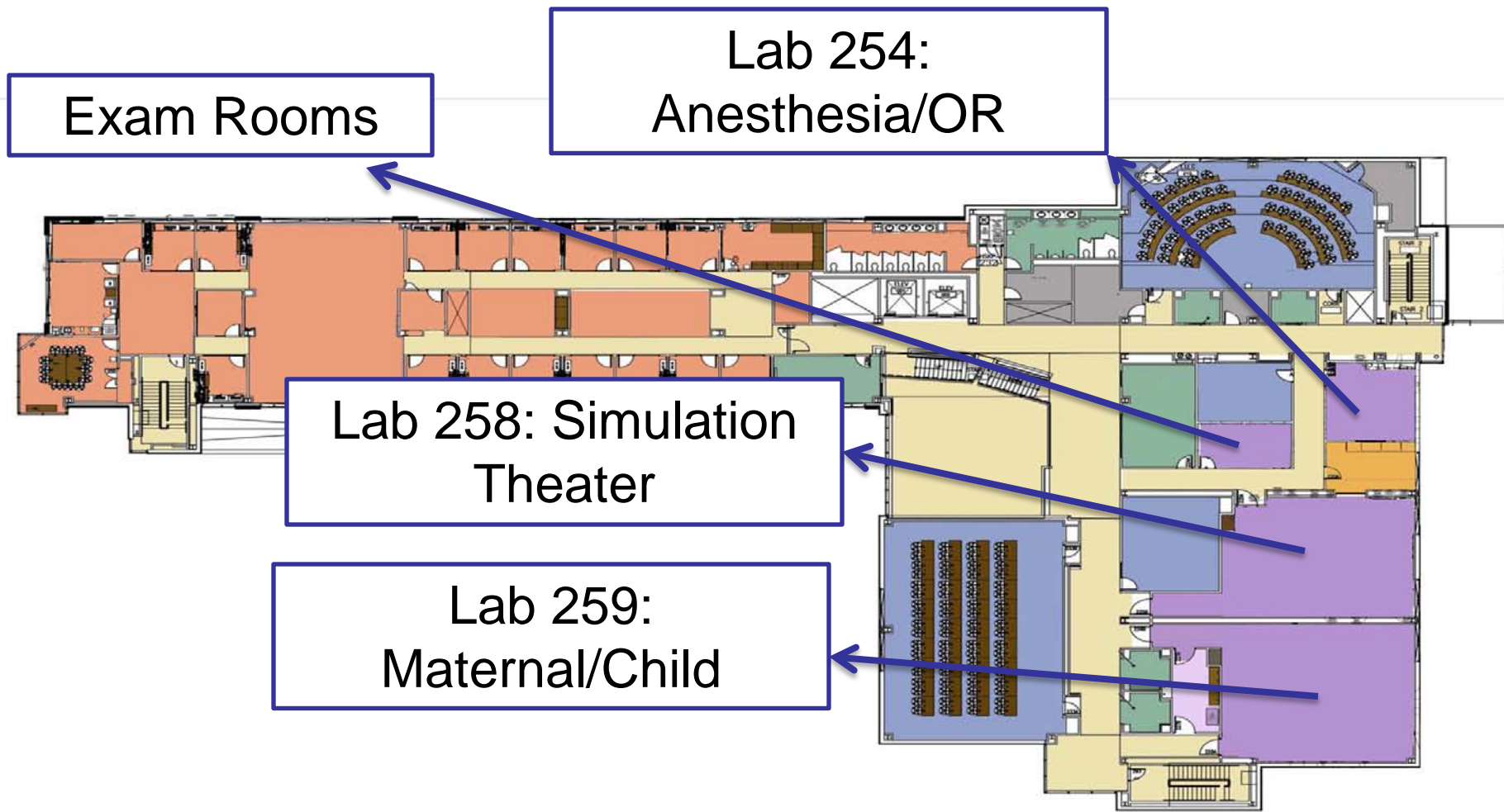
- Resources Dedicated to Simulation

Personnel: 4.0 FTE

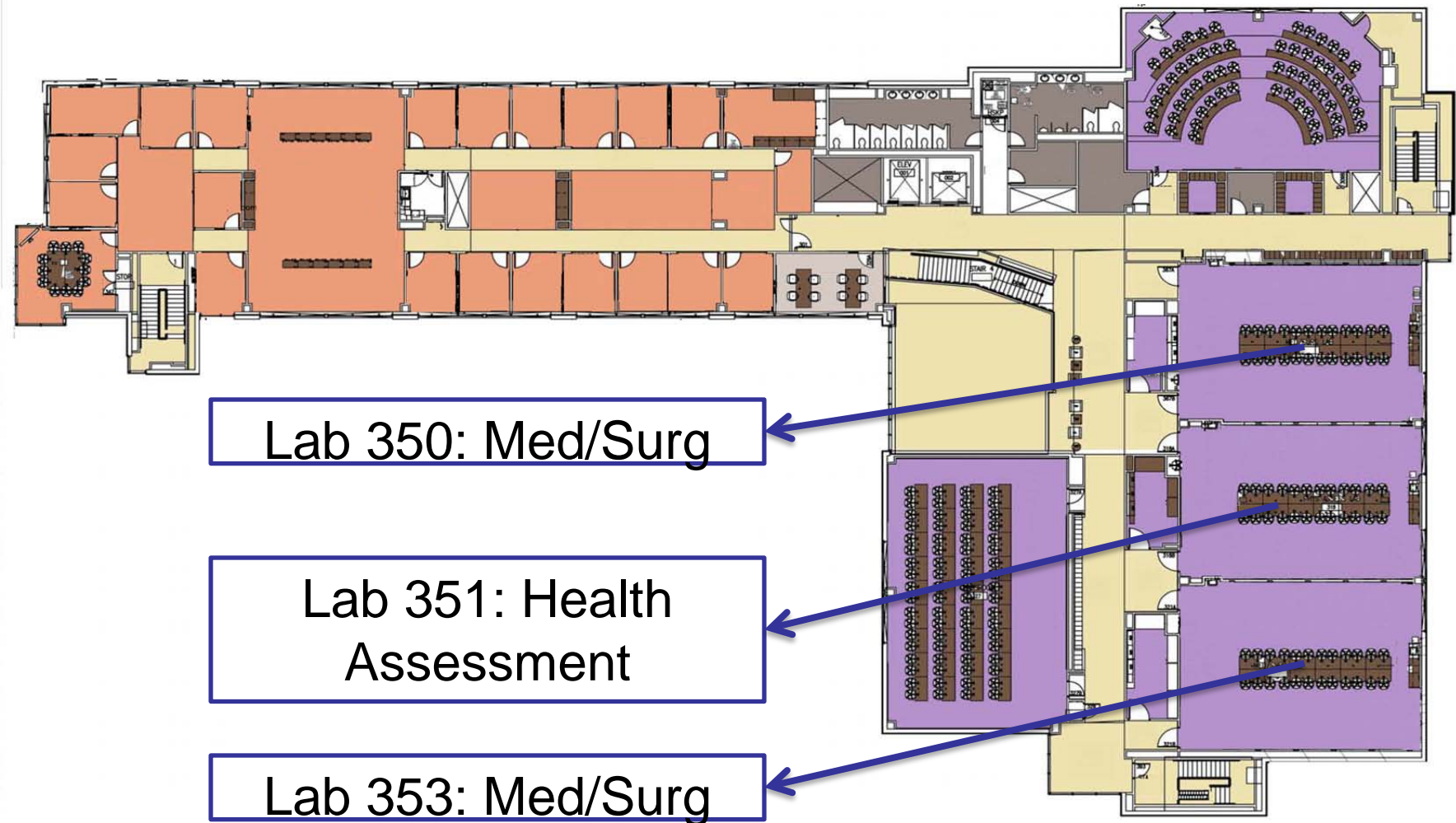
Support of Administration and IS Department



Second Floor: Simulation labs



Third Floor: Simulation labs



Why Integrate Simulation?

“The true value of simulation lies in its ability to offer experiences throughout the educational process that provide students with opportunities for repetition, pattern recognition, and faster decision making”

-Doyle & Leighton, 2010

Why Integrate Simulation?

- Bridging the gap between education and practice
 - “90% of nurse educators think their graduates are ready to safely practice VS. 10% of hospital administrators”



--JONA , November 2008

Reasons to Integrate

- Deliberate practice
- Healthcare Technologies
- Team training
- Quality and safety
- Delegation
- Therapeutic communication/Inter-professional
- Clinical Judgment/Decision-Making



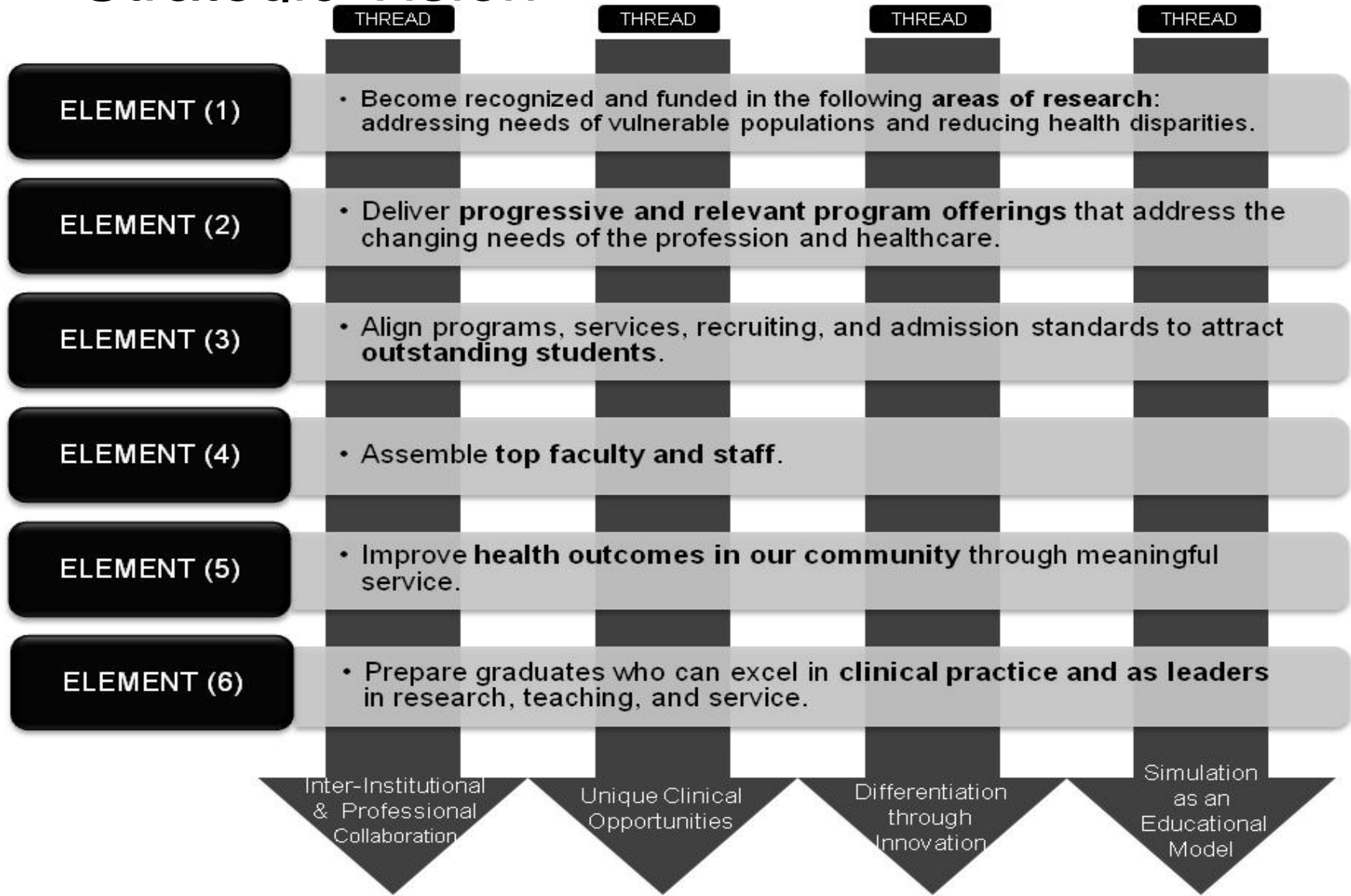
Demonstration

- It all starts in the classroom
 - Introduction of concepts and theory
 - Role Modeling
 - Demonstration
- Skills Labs
 - Realism
 - Demonstration
 - Apply to Practice



Curriculum Integration: Creating Buy-In

- Strategic Vision



Curriculum Integration: Engaging the Faculty

- Laying the Foundations: Training the End User
 - Laerdal Course 100
 - Working one on one to increase familiarity and confidence with equipment
 - Development of scenarios
 - Practice and Implementation in the simulation labs

Impact of Simulation on Faculty

- Stages of Change (Adoption)
- Realizing that teaching in simulation is not the same as teaching clinically
 - Differences in time commitments (practice and preparation time)
- Personality types

Curriculum Integration

- Integration
 - CCNE BSN Essentials
 - QSEN
 - IOM
 - The Joint Commission
 - The “never events”
 - Healthy People 2010

Curriculum Integration

- Development of Curricular Roadmap

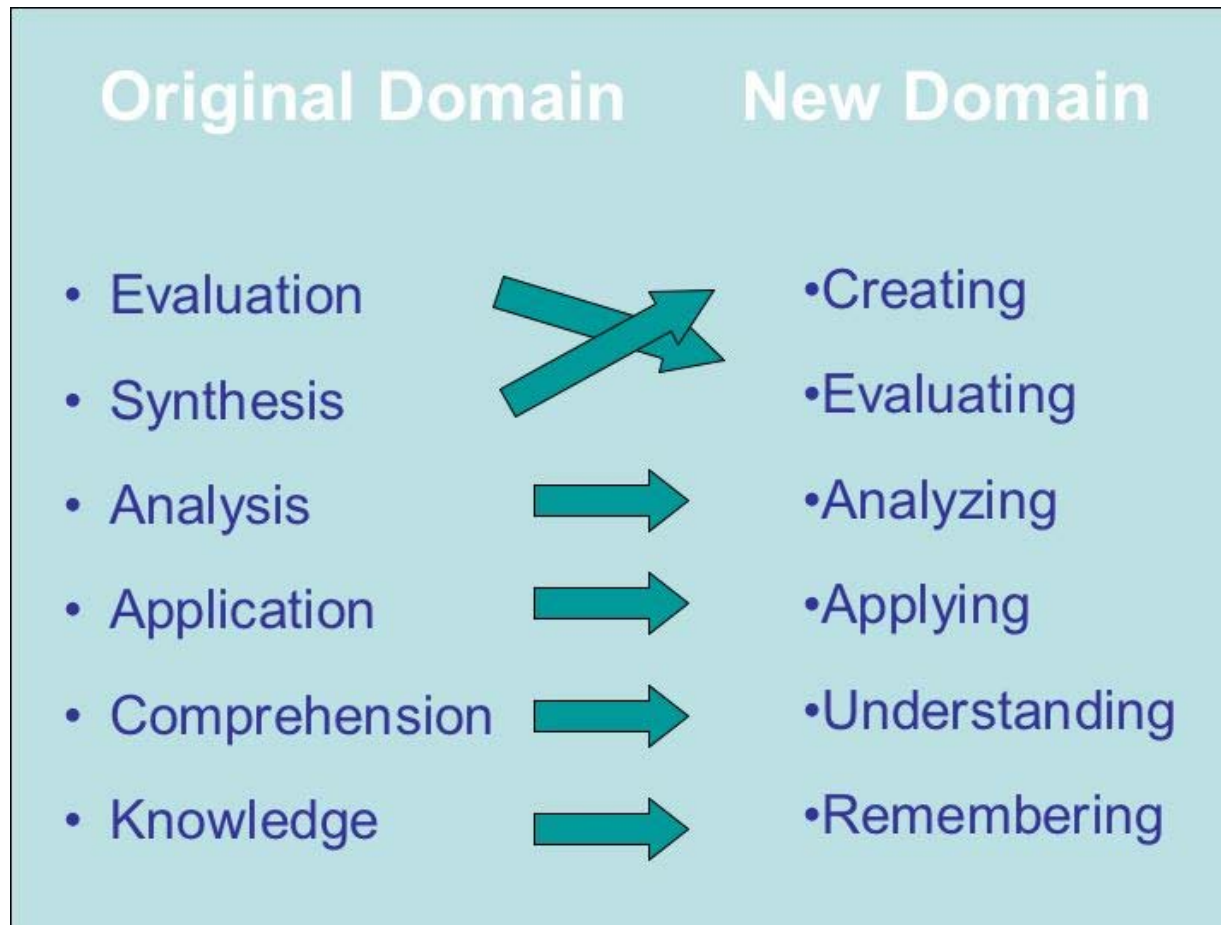
Accelerated Term III	Course Title	Content	Skills	Scenarios
3270	Leadership Role Development	Licensed & un-licensed personnel	Delegation and confrontation	Communication, delegation
4970	Pediatric Nursing	care of children: infant through adolescence	Pre clinical skill reviews to include: infant assessment, child assessment, iv pump, feeding pump, intake and output skills. Other skills and order interpretation to include: trach care/suctioning/sputum, urinary catheterizations, albuterol nebulization, g tube care and feeding, central line dressing change, iv set up, antibiotic set up and bld cultures.	post appendectomy and post op pain, rsv and respiratory care, injury prevention, seizure and seizure care, asthma and respiratory care for during lecture
4980	Community Health and Health Policy	Bioterrorism	Triage	Bioterrorism
4990	Nursing Management Adult Health Care II	Renal, Burns, Critical Care concepts, Neurological, Immunology, Cancer, HIV	CPR and defibrillation Stroke recognition and intervention Neurological Deficits Systemic Inflammatory Syndrome recognition and early intervention Burns Renal perfusion Spinal cord injury management Oncology emergencies	Femur fracture, CVA, C-Spine Injury, Seizures, Head Injury with ICP, Myasthenia Gravis/Respiratory Distress, Leukemia, Kidney - Renal Failure, Shock, Sepsis,

Curriculum Integration

- Defined Learning Outcomes
- Importance of Debriefing
- Confidentiality
- Safe Learning Environment
- Evaluation
- Assessment



Bloom's Taxonomy: New Vision



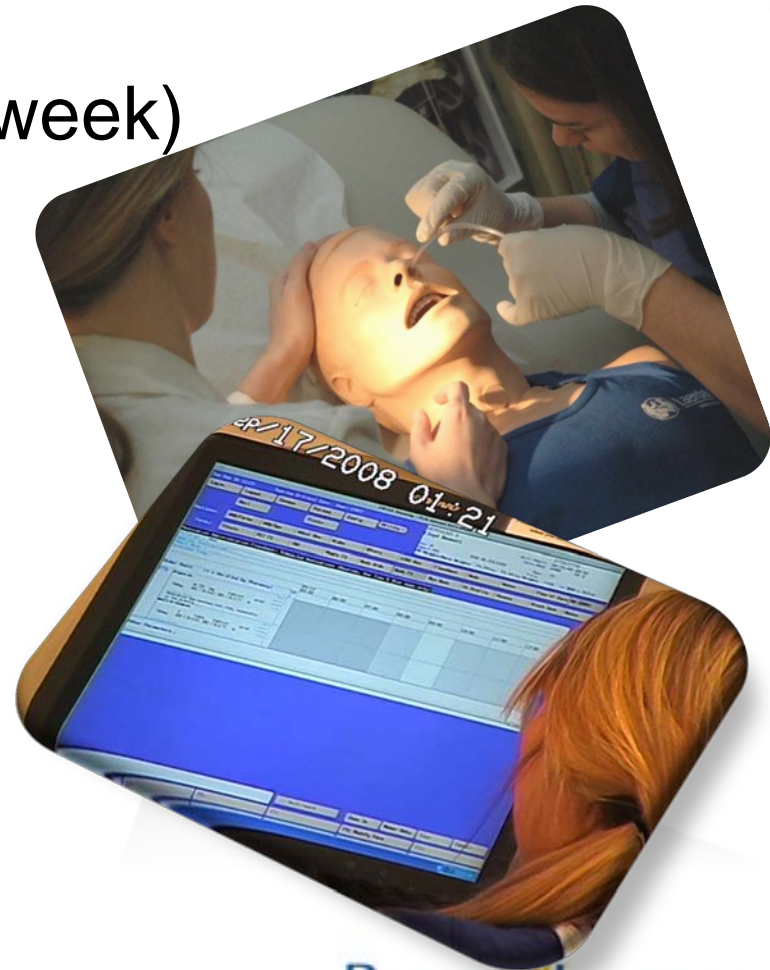
Curriculum Integration

- Health Assessment – 0.5 lab cr (2 hrs/week)
 - Interviewing skills
 - Focused systematic history and physical
 - Understanding the NEXT question
 - Vital Signs
 - Head to Toe Assessment
- Pharmacology – 0.5 lab cr (2 hrs/week)
 - Physiological response to medications
 - Early identification
 - Safety
 - Routes



Curriculum Integration

- Fundamentals – 2 cr (8 hrs/week)
 - Medication Administration
 - IV/Phlebotomy
 - Glucose Monitoring
 - Airway Management
 - Restraints
 - Wound Care and Management
 - NG
 - Foley Catheterization
 - Electronic documentation (MAR)
 - Therapeutic Communication



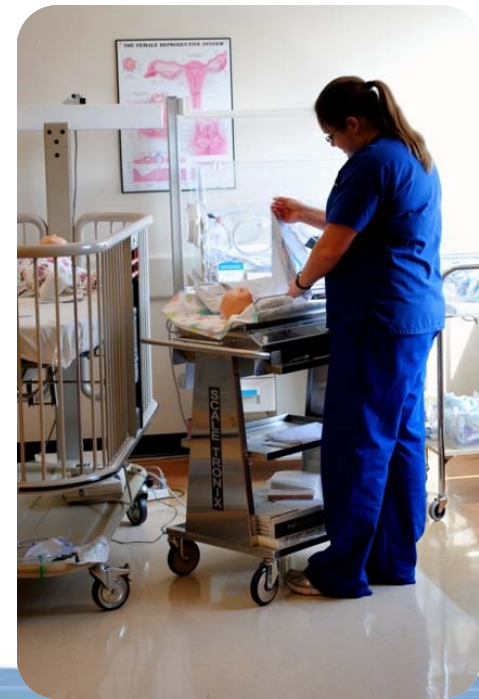
Curriculum Integration

- Adult Health I – 2 cr (8 hrs/week)
 - CHD
 - MI
 - Pain
 - Diabetes
- Adult Health II – 4 cr (16 hrs/week)
 - Sepsis
 - Shock
 - Burns
 - Neurological Deficits
 - Oncology Emergencies
 - Transfusion Reaction
 - Patient Management
 - Interprofessional Simulation



Curriculum Integration

- Psych/Mental Health – 1 cr (4 hrs/week)
 - Safe Assessment and Intervention
 - Combative, addicted, abusive
 - Suicidal, delusional
 - Maintaining airways during ECT and withdrawals
- Women's Health – 1 cr (4 hrs/week)
 - Normal delivery
 - Maternal/New Born Assessment
 - Post partum hemorrhage



Curriculum Integration

- Nursing of Children – 1 cr (4 hrs/week)
 - Asthma Management
 - Dog bite
 - RSV
 - Viral Meningitis and Rapid Intervention
 - Assessment and Intervention during seizures
- Public/Community Health – 1 cr (4 hrs/week)
 - Safe Intervention in Abuse Situations
 - Disaster Preparedness
 - Intervening in the Infectious Disease Outbreaks or Bio-terrorist Attacks



Let's break it down

FAQ's: simulation replacement and clinical hours

One Hour Simulation = 3 Clinical Hours

- **5 -10 minutes:** Introduction and orientation to situation, review outcomes, learning objectives, explain set up, assign roles
- **5-20 minutes:** scenario
- **20-30 minutes:** DEBRIEF:
 - FACULTY Facilitate
 - Resources: de-briefing guide
- **5-10 minutes:** repeat scenario
- **10 minutes:** DEBRIEF:
- **5 minutes:** repeat specific part of scenario
- **5 minutes:** DEBRIEF: RECAP Learning Outcomes

TOTAL TIME DEVOTED to one scenario: 55-90 minutes

Now it's your turn

- Find a partner, and take the next 10 minutes to think about the class(es) you teach, and how have/are/could/should/want to/dream of integrating simulation
- How could you tweak ideas that we've talked about today? Make them your own? Improve?

Discussion

- Share what you developed

Evaluation: Measuring Outcomes for Success

- Simulation Evaluation Form
- Student Engagement Survey
 - Completed each term
- Student Exit Interview
 - Includes simulation component

Simulation Experience Evaluation Tool: 2009 Mean Scores

#	Question	Mean Score Spring 2009 n=98	Mean Score Summer 2009 n=86	Mean Score Fall 2009 n=255	Mean Score Spring 2010 n=304	Mean Score Summer 2010 n=409
	5 = Strongly Agree 4= Agree 3= Neutral 2= Disagree 1=Strongly Disagree					
1	I was an active participant in the scenario	4.3	4.5	4.3	4.5	4.4
2	The scenario was realistic	4.3	4.5	4.3	4.5	4.4
3	The environment was realistic	4.3	4.5	4.3	4.5	4.4
4	I was able to identify patient problems and initiate the interventions	4.3	4.5	4.3	4.5	4.4
5	I was able to incorporate theory into hands-on practice	4.3	4.5	4.3	4.5	4.4
6	This experience has enabled me to identify areas of practice that I feel comfortable with and areas that I feel I need more practice	4.3	4.5	4.3	4.5	4.4
7	I was prepared to participate in the scenario	4.3	4.5	4.3	4.5	4.4
8	The simulation environment was a safe place for learning to take place	4.3	4.5	4.3	4.5	4.4
9	Everyone was respectful of each other during the debriefing process	4.3	4.5	4.3	4.5	4.4
10	The debriefing/reflection session provided valuable feedback	4.3	4.5	4.3	4.5	4.4
11	This was a valuable learning experience	4.3	4.5	4.3	4.5	4.4
12	I am more confident to practice in an actual clinical environment	4.3	4.5	4.3	4.5	4.4

Tools for Success

- <http://www.laerdal.com/>
 - Simulation Forums
 - Pre-programmed scenarios
 - Course 100 Training for faculty/simulation support staff
- <http://sirc.nln.org/>
- AACN Toolkit
 - <http://www.aacn.nche.edu/education/pdf/BacEssToolkit.pdf>
- List Serves (membership fees may apply)
 - SSIH
 - INACSL
- Journals
- Books

Interprofessional Simulation Opportunities

- WUSM MD/GSON RN Students: Interprofessional Communication
- Interprofessional Mock Code
- Safe Medication Delivery
- WUSM OT

Contact Information

- **Gail Rea, RN, PhD, CNE**
Assistant Dean, Pre-Licensure Programs
(314) 454-8848
Grea@bjc.org
- **Beth Haas, MPH**
Director, Clinical Simulation Institute
(314) 454-8457
BHaas@bjc.org

Questions?

