"Nuts and Bolts" of Integrating Human Patient Simulation into the PharmD Curriculum

AACP Annual Meeting
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Who are we?

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Session Overview

- HPS scenario construction (utilizing template)
- Review resources required for HPS programs and determine "best" technology for intended use.
- Inter-professional simulation discussion

Learning Objectives

- Construct a pharmacy focused human patient simulation (HPS) patient case scenario.
- Distinguish important factors to consider during a cost analysis of adopting HPS into the Doctor of Pharmacy curriculum.
- Match programmatic and curricular outcomes with the right "level" of simulation technology.
- Develop strategies for partnering with other healthcare disciplines to create inter-professional HPS learning opportunities for student pharmacists.

HPS Scenario Construction

Brenda S. Bray, BPharm, MPH
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Key elements of running a HPS scenario

- Prepare!!
- Identify target audience
- Learning (assessment) objectives
  - **ONLY** 3-4
- Setting: where, length of scenario
- Patient case script
- Equipment, supplies, props
  - Programming simulator
  - Medications
  - Medical record

Key elements of running a HPS scenario

- Roles: may need students to play different roles i.e. nurse, significant other or spouse
- Evaluation/assessment tools
- Debriefing plan
- Pre-scenario preparation & logistics:
  - Students
  - Facilitators/faculty
  - Scheduling – see sample

Emergencies in the Community Pharmacy Simulation

- Target Audience: PY-2 student pharmacists
- Learning Objectives:
  - Correctly assess patient by identifying the emergency in a timely manner.
  - Implement emergency procedure for specific emergency as outlined in the required reading.
  - Correctly utilize the contents of the patient's prescription and OTC medications.
  - Administer appropriate intervention/treatment for specific patient.
  - Provide patient with appropriate follow-up instructions.

Emergencies in the Community Pharmacy Simulation

Setting: Community Pharmacy Counter

Emergencies in the Community Pharmacy Simulation

Patient Case:

Samuel Adams is a 55 year-old white male. He works as an engineer with Schweitzer Engineering Laboratories. He is at the community pharmacy today to pick up a refill prescription. Mr. Adam's medical record indicates that he has allergies to penicillin and bee stings. He is being treated for the following medical problems: hypertension (which has been well controlled with a diuretic) for the past 5 years; his blood pressure is usually about 125/80, diabetes, asthma. PMH: post-MI and post-stroke. Most recent prescription (filled yesterday) was for amoxicillin prescribed by his dentist for a dental procedure

Emergencies in the Community Pharmacy Simulation

- Equipment, supplies and props
  - Manikin in casual clothes sitting in a wheel chair
  - Refill medication bag
  - Blood glucose meter
  - Computerized medication profile
  - Telephone
  - Stethoscope and BP cuff
  - Curtain
  - Clock with second hand

Emergencies in the Community Pharmacy Simulation

- Roles in the pharmacy:
  - Counter pharmacist
  - Pharmacist coming off shift
  - Pharmacist beginning shift
- Evaluation/assessment tool (used in debrief)
  - See sample

Emergencies in the Community Pharmacy Simulation

- Logistics
  - Facilitator/faculty training
    - Not everyone knows how to facilitate vs. teach
  - Student pharmacist instruction
    - How should they prepare?
    - Assigned readings?
  - Schedule – see sample provided

Sample Scenario – Emergencies in the Community Pharmacy

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World Class. Face to Face.

College of Pharmacy

Sample Scenario – Emergencies in the Community Pharmacy – Debriefing

If time allows…..

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Your turn!
Constructing a Scenario

- Utilize template provided
- Form small groups
- First steps
  - Determine scenario topic (focus and content)
  - Identify target participants
  - Develop three to four learning objectives
- Report back in 5 minutes

Your turn! Constructing a Scenario

- Next steps – Scenario development
  - Establish setting for scenario
  - Define roles for students
  - Patient case narrative
  - Information to include in simulated patient data
  - Initial manikin settings
  - Supplies and equipment
- Report back in 10 minutes

Your turn! Constructing a Scenario

- Next steps
  - Student instruction/preparation
  - Evaluation
    - Develop Debriefing plan
    - Grading Rubric (see example provided)

Lessons Learned after Conducting a HPS Scenario

- Student survey data
- Student performance on meeting learning objectives
- Feedback from facilitators
- Identify strengths, weaknesses and revisions for next time!

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University of Pittsburgh

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Cost Implications of HPS

- Resources
  Partial Task Trainers

Full body human simulators

Simulation environment

http://www.laerdal.com/doc/42045480/SimMan-3G.html
http://www.laerdal.com/nav/7144139/Task-Trainers.html

Cost Implications of HPS

- Personnel
  - Training
  - Computer access
  - Availability
  - Troubleshooting
- Planning
- Faculty Resources
- Student Assessment Needs

Cost Implications of HPS

- Keys to Success
  - Share resources
  - Interprofessional collaboration
  - Patient care
  - Pharmacy expertise

Technology Selection

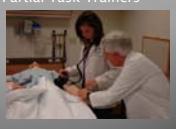
Matching "right" technology to intended outcomes

- Formative assessment
- Summative assessment

Technology Selection

Matching "right" technology to intended outcomes

- Foundational skill
  - Communication
    - Standardized patient
    - Patient actor
    - Faculty
    - Peer
    - Written communication
    - Many other examples
- Decision making skill
  - Patient care
    - Partial Task Trainers



    - Simulators
    - Actual patients
      - Experiential learning
    - Patient cases

Technology Selection

- Examples
  - **Profession of Pharmacy**
    - Partial Task Trainers
  - **Therapeutic Disease Modules**
    - Standardized patients
    - Actors
    - High-fidelity human patient simulators
  - **Acute Care Pharmacotherapy**
    - High-fidelity human patient simulators
  - **Experiential Learning**
    - Patients
  - **Residency Training**
    - Patients
    - High-fidelity human patient simulators
    - Standardized patients

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Interprofessional Opportunities for Simulation Learning

Peggy S. Odegard, BS, PharmD, BCPS, CDE FASCP
University of Washington

Why use simulation for IPE? SWOT analysis

Strengths	Weaknesses
• Health care is provided in teams • Good simulation technology is available • Evidence basis to support simulation • Well-received by participants • No reliance on SP scheduling	• Requires training on simulator • Requires dedicated faculty • Preparation and case development • Finding common time in student schedules • Faculty may initially feel challenged providing feedback to other health science students
Opportunities	**Threats**
• Improves team communication skill • Increases awareness and appreciation of health care provider roles • Enhances professional role development in individual participants • Demystifies "real world" stress	• Simulator expense, prep, and maintenance • Curricular overload may threaten open common times • Educational administration may not appreciate need for IPE

In the beginning, there are silos…

Program	Credits for Graduation	Advanced Clinical Training
Medicine	313	Years 3&4 of 4
Medex	162	Year 2 of 2
Nursing	180	Year 4 of 4
Pharmacy	206	Year 4 of 4

And… then there is shared learning

1. Identify shared competencies (39 for UW!)
   - Team collaboration
     - TeamSTEPPS program for UW
   - Clinical competency
     - reasoning and critical thinking
   - Health systems, professionalism, ethics, legal
     - Professional identify and role development
2. Identify educational content and timing overlap between programs
   - Experiential training
   - Coursework
     - Health and society
   - OSCEs, standardized patients, simulations
3. Identify gaps in competency development amongst programs
   - Speaking up against a perceived power gradient
   - Disagreement and negotiation

Participants are referred to the UW poster at AACP 2010

Finding Common Ground for Learning Together

- Classroom
  - Common topics
- Clerkship
  - The patient
- Practice
  - The patient
    - Diabetes
    - Geriatrics
    - Intensive care
    - Emergency medicine
    - Disaster response

UW Macy Simulations

- Cases
  - 15 year old with acute asthma in the emergency room
  - Heart failure and shortness of breath on the medical floor
  - Code ACLS in the ICU

Prep: Each case includes a knowledge primer

Macy Grant, Capstone IPE Simulation June 2010

Lessons Learned

- Attitudes and preconceived notions are key players
  - Faculty or clinicians are at different levels of interprofessional experience and attitude
  - Workshops or group facilitation are helpful for unpacking beliefs, correcting assumptions and providing "ground rules" for working together
- Curriculum can lead or get in the way
  - Curricular mapping is a critical first step to interprofessional education
  - Curricular change requires top-down support
  - Champions in each school are vital
  - More than just the "early adapters" are needed to facilitate true curricular change
  - Non-practice faculty are an important part of the interprofessional education discussion
- Simulation
  - A great tool for facilitating practice & skill development
  - Practice is needed to be successful in the simulation
  - Well received by students and faculty

Tuesday, July 13, 2010

Special Session: "Nuts and Bolts" of Integrating Human Patient Simulation into the Pharm.D Curriculum

Activity Code: SWG3X9

Questions??