

Developing Complex Simulations:

Layering Concepts from Nursing
Specialty Areas to Enhance Learning

Faculty

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Agenda

- Review the INACSL Standards of Best Practice: Simulation
- Apply standards to process used to design and implement simulations
- Analyze Exemplars

Session Objectives

- Describe how simulation standards and course and program objectives drive the design and facilitation of complex simulations
- Discuss ways to integrate essential components into complex simulation scenarios
- Analyze multifaceted simulations used in a nursing academic setting as an exemplar

Needs Assessment

- Clinical Course
 - Multi-specialty course
 - Pediatrics
 - Psych-Mental Health
 - Maternal-Newborn
- Outcomes
 - Course
 - Program
- Participants
 - Pre-licensure nursing students
 - Prior knowledge & experiences
 - Inconsistent clinical opportunities

Needs Assessment – our experience

- Pre-licensure students
 - Completed Med-Surg didactic and clinical course
 - Completed Peds and Maternal-Newborn didactic course
 - Concurrent Psych-Mental Health course
- Priorities
 - Developmental Considerations (Peds, Maternal Newborn, Adult)
 - Mental Health (Assessments – Suicide, depression, safety)
 - Maternal-Newborn (Safety, interventions for neglect, abuse)
 - Transfer previous knowledge to new situation (apply med surg knowledge to peds)
- Consistent expectations
 - Communication
 - Interdisciplinary team

Objectives

- Based on needs assessment
 - Participant will be able to...
- Guide design of simulation
 - Expected Actions/outcomes
- Domains
 - Psychomotor
 - Cognitive
 - Affective

Objectives – our experience

STUDENT LEARNING OBJECTIVES FOR ENTIRE 2-DAY SIMULATION EXPERIENCE:

- Apply theoretical knowledge to make sound clinical decisions in the simulation experience.
- Demonstrate effective communication to facilitate teamwork.
- Demonstrate synthesis and integration of nursing knowledge to provide holistic care to patients and families in complex situations.
- Perform nursing interventions to promote safety and quality in diverse clinical situations.
- Provide culturally sensitive care to clients and families in a simulation experience.
- Participate actively in de-briefing sessions to provide useful feedback to student colleagues.

Exemplar #1 Teen in Motor Vehicle Accident

- Student Nurse(s) in Emergency Department (ED)
- Assigned to care for client arriving in ED via ambulance - Teen in MVA with possible:
 - Fractures to left wrist – left arm immobilized
 - Wearing neck collar
 - Facial bruising and abrasions noted
 - Bleeding from mouth; lost one tooth
- Participants in simulation get report from EMS.

Objectives – Exemplar #1 (Teen in MVA):

STUDENT LEARNING OBJECTIVES (given to students 2 weeks before sim):

- Perform physical and psychosocial assessments for adolescent recently involved in a motor vehicle accident
- Safely administer medications as indicated
- Communicate effectively with adolescent and family members
- Collaborate effectively with other team members in an emergency situation

Expected Actions/Outcomes – our experience

- Simulation Scenario is called “complete” when the following occur:
 - Student will complete focused assessment based on report
 - Student will do suicide assessment

Resources – to achieve desired fidelity

- Human
 - Standardized Patient
 - Confederates (How many? What roles?)
- Physical
 - Manikin
 - Equipment (bed, med dispensing system, code cart, EHR, etc.)
 - Furniture
- Space
- Time
- Miscellaneous
 - Recording (video/audio) equipment
 - Be creative if there are gaps

Resources – our experience

- Manikin
 - on gurney with c-collar and back-board,
 - arm splinted,
 - bloodied face & hair.
 - Client talking, responding to questions
- Confederates
 - EMS
 - Parents (arrive individually)
 - Charge RN
 - ED Physician
 - Radiology tech
- Simulation room set up as ED bay
 - Med Dispensing system
 - Code cart
 - X-ray
- Video capabilities
 - Participants without active role watching live-feed
- Timing
 - 15 – 20 minutes for simulation
 - 30 – 45 minutes for debrief

Facilitation

- Pre-brief
- Environment
 - Learner focused
 - Evaluative (formative or summative)
- Objectives (review)
- Observer roles
- Facilitators know expected actions/outcomes

Pre-brief

- What do participants need to know to engage?
- Timing
 - When do participants need this?
- Preparation
 - Assigned reading – journal, text, policy, etc.
- Introduction of simulationists, faculty, others they may see
 - Remind participants that they may be playing various roles (listen for introduction)
- Orientation to simulation space
 - Where to find supplies
 - How to operate equipment
 - What manikin can/can't do – how to adapt

Pre-brief – our experience

- Students have had Psych-Mental Health didactic content front-loaded
- Timing of simulation
 - Mid-semester
 - Some clinical rotations completed
- Information provided to students 2-3 weeks before simulation experience (see handout)
- Information is purposefully vague – requiring students to “think like a nurse” in real time
- Orientation to simulation center, equipment
- Introduction to facilitators, confederates, etc.
 - Explained some may be seen several times in various roles, will introduce self, including role, as appropriate
 - Try to keep roles same (one person plays provider in all simulations, another assistive personnel, etc.)

Exemplar #1 Teen in Motor Vehicle Accident

- Situation - Student Nurse in ED
 - Admit to ED. Participant gets report from EMS
 - Report: Single car accident – hit tree. Brady, 16 years old. Possible fractured arm, C-collar for possible spine injury, alert at scene. No loss of consciousness. ETOH smell noted at scene. Parents notified, on the way.

Teen in MVA – Our experience with facilitation

SIMULATION DETAILS:

- Client is talking, answering questions appropriately – no significant past health history
- Complaining of pain
- Verbalizing disappointment about outcome of accident
- Parents notified; arrive during simulation and are worried / emotional
- As simulations unfolds there are several clues to suicidality: break-up with girlfriend, recent suicides at school, potential sexual abuse, etc.

DEBRIEFING DETAILS:

- Difficult family dynamics – teamwork with discordant family during emergency
- Critical thinking and synthesis of considerable amount of data in case – strengths / areas for improvement
- Complexity of the simulation: Observers pick-up on suicidality faster than “nurse” participants in the sim

Exemplar #2 Post-partum client with known mood disorder

- Situation – Roles for students are Public Health Nurse, Psychiatric Partial-Hospital Program Nurse, and Psychiatric Nurse Case manager
 - Client in home post-partum. Participants receive report from Outpatient Psych Program that she is not attending and/or OB office that she missed post-partum check appointment. Has Public Health Nurse referral for post-partum evaluation.
 - Report: Marta is a 26-yo female who gave birth to a healthy son after a planned, uneventful pregnancy. Marta has bipolar disorder and has utilized a psychiatric partial-hospital program prior to and during her pregnancy. Since giving birth she has not returned to the program and she has now missed her post-partum check-up. Two nurses from the partial-hospital program and a public health nurse assigned to Marta's son are to visit her in her home today.

Objectives – our experience Exemplar #2

STUDENT LEARNING OBJECTIVES (given to students 2 weeks ahead of sim):

- Perform physical and psychosocial assessments for postpartum woman with bipolar affective disorder (BPAD)
- Perform physical assessment on infant
- Communicate effectively with client
- Collaborate with nursing team members to promote safety of client and her newborn

Note: Students “meet” Marta in a previous simulation when she discusses with psych nurse case manager concerns about planning a pregnancy, BPAD medication use during pregnancy, psych med use during breast-feeding, etc.

Resources – our experience Exemplar #2

- Manikin
 - Crying infant with soiled diaper, dirty pajamas
 - In crib with empty bottles
 - Crib distant from sofa/living space
- Standardized Patient
 - Adult woman wearing dirty housecoat, hair disheveled, dirty
 - Client talking slowly, delayed response to questions
- Confederates
 - None
 - Be prepared for participant to attempt call for assistance
- Simulation room set up as home (living room)
 - Sofa, tables, tablet/laptop/TV playing video, TV or other entertainment, dirty formula bottles
 - Soda cans, empty or half empty food containers, magazines, etc. in disarray around the room
 - Meds (prescribed) on counter/table. Rx label indicates date of refill. Contains several pills, more than expected if meds taken as prescribed
 - Clean infant clothing, fresh formula, clean bottles available in cabinet or counter off to the side
 - Phone with name and number of neighbor on side table
- Timing
 - 15 – 20 minutes for simulation
 - 30 – 45 minutes for debrief

Post-partum client with mood disorder: Our experience with facilitation

SIMULATION DETAILS:

- Marta is lying on sofa with delayed responses to questions; vague about cares of baby
- Minimal support (husband is traveling out of the country; neighbor has advised she stop all meds when breast-feeding; no other family nearby)
- Newborn is crying unconsolably and is in dirty and wet clothing
- Marta eventually asks nurse to “Take my baby. He likes you better.”
- Unwilling to clearly answer questions about suicidality and safety

DEBRIEFING DETAILS:

- Depression unexpected as Marta was euthymic / hypomanic in first simulation (pre-pregnancy)
- Utilization of resources in a home-setting (scope of practice for nurses)
- Team collaboration
- Mandated reporting (newborn) – ethical and legal issues