

# Montgomery College Nursing Simulation Scenario Library

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**Scenario File:** Diabetes Education

**Discipline:** Nursing

**Student Level:** Intermediate

**Expected Simulation Run Time:** 20 minutes **Guided Reflection Time:** 40 minutes

<p><b>Admission Date:</b> X/XX/XX <b>Today's Date:</b> X/XX/XX</p> <p><b>Brief Description of Client</b>  <b>Name:</b> Mr. Rusty Zoreb      <b>Gender:</b> M  <b>Age:</b> 23      <b>DOB:</b> 11/06/1989  <b>Race:</b> Caucasian</p> <p><b>Weight:</b> 135 lbs      <b>Height:</b> 70 in</p> <p><b>Religion:</b> Jewish      <b>Major</b>  <b>Support:</b> Parents  <b>Phone:</b> 301-555-5555</p> <p><b>Code Status:</b> Full</p> <p><b>Allergies:</b> NKDA  <b>Immunizations:</b> All childhood immunizations</p> <p><b>Attending Physician/Team:</b> Dr. Langerhans</p> <p><b>Past Medical History:</b> None</p> <p><b>History of Present illness:</b> Headaches X 3 weeks, Complaining of extreme thirst, blurred vision, 10 lbs. weight loss in the past 3 months. Increased hunger and urination for two weeks. It has increased in severity over time. Unable to concentrate on preparation for class. Fasting blood glucose &gt;700 mg/dL on admission to ER</p> <p><b>Social History:</b> Single Non smoker. No recreational drugs, drinks 1-2 beers/week  <b>Runner:</b> 4 days /week</p>	<p><b>Psychomotor Skills Required Prior to Simulation</b>  <b>Physical assessment skills</b>  <b>Vital signs</b>  <b>Injections:</b> subcutaneous  <b>IV therapy</b></p> <p><b>Insulin administration.</b>  <b>Fingerstick glucose</b></p> <p><b>Cognitive Activities Required prior to Simulation</b>          [i.e. independent reading (R), video review (V), computer simulations (CS), lecture (L)]</p> <p><b>Review pathophysiology of Type 1 DM</b>  <b>Review Unit 5 Lecture material:</b>  <b>Powerpoint slides and notes on Blackboard</b></p> <ul style="list-style-type: none"> <li>• Insulin actions slide [onset peak &amp; duration]</li> <li>• Fingerstick glucose monitoring</li> <li>• CHO counting</li> </ul> <p><b>View YouTube presentation of insulin pen &amp; principles:</b>  <a href="http://www.youtube.com/watch?v=LxpbO15TipY">http://www.youtube.com/watch?v=LxpbO15TipY</a></p> <p><b>Review health assessment skills.</b>  <b>Review for insulin and sliding scale process.</b></p>
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**Primary Medical Diagnosis:**  
Hyperglycemia, New onset Type 1  
DM

**Surgeries/Procedures & Dates:** T &  
A 1994

## Simulation Learning Objectives

The student will:

1. prioritize and delegate care for an insulin dependent client.
2. perform a focused assessment on client with hyperglycemia.
3. intervene appropriately with client:
  - Client Mr. Zoreb: Type 1 DM needing 7:30am fingerstick, evaluation of the sliding scale order and administration of correct insulin dose with the insulin pen
4. communicate effectively with the client, health care team and family.
5. correctly demonstrate use of glucose monitor.
6. accurately identify the onset, peak, and duration of short, intermediate and long-acting insulins.
7. accurately assess signs and symptoms of hypo/hyperglycemia.
8. successfully teach client/family survival skills [s/s hypo/hyperglycemia, how to use the self monitoring glucose machine, and how to inject insulin using the insulin pen] across the lifespan.
9. correctly administer insulin using the insulin pen.
10. accurately discusses outpatient diabetic education

**Fidelity (choose all that apply to this simulation)**

<p><b>Setting/Environment</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> ER</li> <li><input checked="" type="radio"/> Med-Surg</li> <li><input type="radio"/> Peds</li> <li><input type="radio"/> ICU</li> <li><input type="radio"/> OR / PACU</li> <li><input type="radio"/> Women's Center</li> <li><input type="radio"/> Behavioral Health</li> <li><input type="radio"/> Home Health</li> <li><input type="radio"/> Pre-Hospital</li> <li><input type="radio"/> Other _____</li> </ul> <p><b>Simulator Manikin/s Needed:</b> Low Fidelity live student thin young male</p> <p><b>Props:</b></p> <p><b>Equipment attached to manikin:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> IV tubing with primary line NS IV running at 150 mL/hr</li> <li><input checked="" type="radio"/> IV pump for Mr. Zoreb</li> <li><input type="radio"/> Foley catheter _____ cc output</li> <li><input type="radio"/> PCA pump running</li> <li><input type="radio"/> IVPB with ____ running at ____ cc/hr</li> <li><input type="radio"/> O2 _____</li> <li><input type="radio"/> Monitor attached</li> <li><input checked="" type="radio"/> ID band:</li> <li><input checked="" type="radio"/> Other:</li> </ul> <p><b>Equipment available in room</b></p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> Bedpan/Urinal</li> <li><input type="radio"/> Foley kit</li> <li><input type="radio"/> Straight Catheter Kit</li> <li><input type="radio"/> Incentive Spirometer</li> <li><input checked="" type="radio"/> Fluids:</li> <li><input type="radio"/> IV start kit</li> <li><input type="radio"/> IV tubing</li> <li><input type="radio"/> IVPB Tubing</li> <li><input checked="" type="radio"/> IV Pump</li> <li><input type="radio"/> Feeding Pump</li> <li><input type="radio"/> Pressure Bag</li> <li><input type="radio"/> O2 delivery device (type)</li> <li><input type="radio"/> Crash cart with airway devices and emergency medications</li> <li><input type="radio"/> Defibrillator/Pacer</li> </ul>	<p><b>Medications and Fluids</b></p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> IV Fluids</li> <li>Insulin _____</li> <li><input type="radio"/> Oral Meds:</li> <li><input type="radio"/> IV Push:</li> <li><input checked="" type="radio"/> IM or SC: Novolog Insulin Mr. Zoreb</li> </ul> <p><b>Diagnostics Available</b></p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> Labs:</li> <li><input type="radio"/> X-rays (Images)</li> <li><input type="radio"/> 12-Lead EKG</li> <li><input type="radio"/> Other sliding scale orders _____</li> </ul> <p><b>Documentation Forms</b></p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> Physician Orders</li> <li><input type="radio"/> Admit Orders</li> <li><input type="radio"/> Flow sheet</li> <li><input checked="" type="radio"/> Medication Administration Record</li> <li><input checked="" type="radio"/> Kardex</li> <li><input type="radio"/> Graphic Record</li> <li><input checked="" type="radio"/> Shift Assessment</li> <li><input type="radio"/> Triage Forms</li> <li><input type="radio"/> Code Record</li> <li><input type="radio"/> Anesthesia / PACU Record</li> <li><input type="radio"/> Standing (Protocol) Orders</li> <li><input type="radio"/> Transfer Orders</li> <li><input type="radio"/> Other: I/O record</li> <li><input checked="" type="radio"/> Accucheck record</li> <li><input type="radio"/> CBI record (I/O)</li> </ul> <p><b>Recommended Mode for Simulation (i.e. manual, programmed, etc.)</b> Live patient</p>
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## Montgomery College Nursing Simulation Scenario Library

<ul style="list-style-type: none"> <li>○ Suction</li> </ul>	
<p><b>Roles / Guidelines for Roles</b></p> <ul style="list-style-type: none"> <li>○ <b>Primary Nurse</b></li> <li>○ Secondary Nurse</li> <li>○ Clinical Instructor</li> <li>○ <b>Family Member #1</b></li> <li>○ Family Member #2</li> <li>○ <b>Observer/s</b></li> <li>○ Recorder</li> <li>○ Physician / Advanced Practice Nurse</li> <li>○ Respiratory Therapy</li> <li>○ Anesthesia</li> <li>○ Pharmacy Tech</li> <li>○ Lab</li> <li>○ Imaging</li> <li>○ Social Services</li> <li>○ Clergy</li> <li>○ Unlicensed Assistive Personne PCT</li> <li>○ Code Team</li> <li>○ Other_Dietary</li> </ul> <p><b>Important Information Related to Roles</b>  <b>Primary nurse</b> Create cards for each role  <b>Family member</b> Create cards for each role  will be in Mr. Johnson's room worried about weight loss, thirst, and high blood glucose level.</p> <p><b>Significant Lab Values</b>  <b>Mr. Rusty Zoreb: FBG at 0730 is 726 mg/dL on admit to ER</b>  <b>Day 3 MedSurg unit: 0730 Accucheck: 344 mg/dL</b></p> <p><b>Physician Orders: See attached</b>  <b>Sliding Scale</b>  <b>NS @ 150 mL/hr.</b>  <b>ADA diet</b>  <b>Endocrinology consult</b></p>	<p><b>Student Information Needed Prior to Scenario:</b></p> <ul style="list-style-type: none"> <li>○ Has been oriented to simulator</li> <li>○ Understands guidelines /expectations for scenario</li> <li>○ Has accomplished all pre-simulation requirements [see objectives]</li> <li>○ All participants understand their assigned roles</li> </ul> <p><b>Report Students Will Receive Before Simulation</b></p> <p><b>Time: Attached</b></p>

## Montgomery College Nursing Simulation Scenario Library

<p>CBC w/differential Chem 7 C peptide Diabetic Education consult Teach client/family:</p> <ul style="list-style-type: none"><li>○ s/s hyper/hypoglycemia</li><li>○ administration &amp; parameters for glucagon</li><li>○ operation of the glucometer</li></ul>	
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### References, Evidence-Based Practice Guidelines, Protocols, or Algorithms Used For This Scenario: (site source, author, year, and page)

Abrams, A., [2009] *Clinical drug therapy*, 9th Ed., Lippincott

Doenges, M.E., and Moorhouse, A.C. [2008], *Nurse's pocket guide: Diagnosis, prioritized interventions, and rationales*, 11<sup>th</sup> Ed., F.A. Davis (also available in 12<sup>th</sup> ed.)

Lewis, Heitkemper and Dirksen et.al, [2011], *Medical surgical nursing assessment and management of clinical problems*, 8<sup>th</sup> Ed., Mosby.

Pagana, K. and Pagana, T. [2010] *Mosby's manual of diagnostic and laboratory tests*, 4th Ed., Mosby.

Potter & Perry [2009] *Fundamentals of nursing*, 7<sup>th</sup> Ed., Mosby.

## 2007 NCLEX-RN Test Plan Categories and Subcategories

Choose all areas included in the simulation

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### Safe and Effective Care Environment

#### Management of Care

- Advance Directives
- Advocacy
- Case Management
- Client Rights
- Collaboration with Interdisciplinary Team
- Concepts of Management
- Confidentiality / Information Security
- Consultation
- Continuity of Care
- Delegation
- Establishing Priorities
- Ethical Practice
- Informed Consent
- Information Technology
- Legal Rights and Responsibilities
- Performance Improvement (QI)
- Referrals
- Resource Management
- Staff Education
- Supervision

#### Safety and Infection Control

- Accident Prevention
- Disaster Planning
- Emergency Response Plan
- Ergonomic Response Plan
- Error Prevention
- Handling Hazardous and Infectious Materials
- Home Safety
- Injury Prevention
- Medical and Surgical Asepsis
- Reporting of Incident/Event/Irregular Occurrence/Variance
- Security Plan
- Standard /Transmission-Based / Other Precautions
- Use of Restraints/Safety Devices
- Safe Use of Equipment

### Health Promotion and Maintenance

- Aging Process
- Ante/Intra/Postpartum and Newborn Care
- Developmental Stages and Transitions
- Disease Prevention
- Expected Body Image Changes
- Family Planning
- Family Systems
- Growth and Development
- Health and Wellness
- Health Promotion Programs
- Health Screening
- High Risk Behaviors
- Human Sexuality
- Immunizations
- Lifestyle Choices
- Principles of Teaching/Learning
- Self-Care
- Techniques of Physical Assessment

### Psychosocial Integrity

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- Abuse/Neglect
- Behavioral Interventions
- Chemical and Other Dependencies
- Coping Mechanisms
- Crisis Intervention
- Cultural Diversity
- End of Life Care
- Family Dynamics
- Grief and Loss
- Mental Health Concepts
- Psychopathology
- Religious and Spiritual Influences on Health
- Sensory/Perceptual Alterations
- Situational Role Changes
- Stress Management
- Support Systems
- Therapeutic Communications
- Therapeutic Environment
- Unexpected Body Image Changes

## Physiologic Integrity

### Basic Care and Comfort

- Assistive Devices
- Complementary and Alternative Therapies
- Elimination
- Mobility/Immobility
- Non-Pharmacological Comfort Interventions
- Nutrition and Oral Hydration
- Palliative/Comfort Care
- Personal Hygiene
- Rest and Sleep

### Pharmacological and Parenteral Therapies

- Adverse Effects/Contraindications
- Blood and Blood Products
- Central Venous Access Devices
- Dosage Calculation
- Expected Effects/Outcomes
- Medication Administration
- Parenteral/Intravenous Therapies
- Pharmacological Agents/Actions
- Pharmacological Interactions
- Pharmacological Pain Management
- Total Parenteral Nutrition

### Reduction of Risk Potential

- Diagnostic Tests
- Lab Values
- Monitoring Conscious Sedation
- Potential for Alterations in Body Systems
- Potential for Complications of Diagnostic Tests/Treatments/Procedures
- Potential for Complications from Surgical Procedures and Health Alterations
- System Specific Assessments
- Therapeutic Procedures
- Vital Signs

### Physiologic Adaptation

- Alterations in Body Systems
- Fluid and Electrolyte Imbalances
- Hemodynamics
- Illness Management
- Infectious Diseases
- Medical Emergencies
- Pathophysiology
- Radiation Therapy
- Unexpected Response to Therapies

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### Scenario Progression Outline

Timing (approximate)	Manikin Actions	Expected Interventions	May Use the Following Cues
0-15 minutes	Mr. Zoreb	<b>*WIPERS</b> Remove tray and explain rationale. Delegate accucheck to PCT	Role member providing cue:  Cue: Mr. Zoreb asks if he can eat.
15-30 minutes	Mr. Zoreb	Administer sliding scale insulin and give breakfast tray.	Role member providing cue:  Cue: Mr. Zoreb states he is hungry OR rings his bell.
30-45 minutes	Mr. Zoreb	Review labs for: Mr. Zoreb: Blood glucose level and trend for Accuchecks Call MD for BG > 350	Role member providing cue:  Cue: How are my lab values? (Any client can state this?)

**\*WIPERS:** Wash hands, Identify client and self, Provides privacy, Explains procedure, Record, and Safety.

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### Debriefing / Guided Reflection Questions for This Simulation

(Remember to identify important concepts or curricular threads that are specific to your program)

1. How did you feel throughout the simulation experience?
2. Describe the objectives you were able to achieve?
3. Which ones were you unable to achieve (if any)?
4. Did you have the knowledge and skills to meet objectives?
5. Were you satisfied with your ability to work through the simulation?
6. To Observer: Could the nurses have handled any aspects of the simulation differently?
7. If you were able to do this again, how could you have handled the situation differently?
8. What did the group do well?
9. What did the team feel was the primary nursing diagnosis?
10. What were the key assessments and interventions?
11. Is there anything else you would like to discuss?

### Complexity – Simple to Complex

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**Suggestions for Changing the Complexity of This Scenario to Adapt to Different Levels of Learners:** Currently we have established a group of faculty members from each nursing course to develop this across the curriculum.