



SIMULATION SCENARIO #4

"I'M TIRED, I NEED TO REST!"

Device: Glucometer III (Gluco Simulator)

Skills Progression Line



Simulation Level: Competent

Source: Benner, P. E. (1995). *De novice à expert : excellence en soins infirmiers*. InterEditions.

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THE GLUCO III



- Inspired by the Accu-Chek Inform II.
- Allows you to simulate various blood sugar measurements.
- Compatible with low, medium, high-fidelity manikins or with a simulated/standardized patient.
- Compatible with valid and expired Accu-Check Inform II lancets and ContourNext Test Strips.
- Works with artificial or real blood, or none at all.
- Comes with USB-C cable and a wall charger.
- Powered by a rechargeable Lithium-ion battery (4-hour autonomy).
- Available in mmol/L or mg/dL (must be mentioned when ordering).

THIS DEVICE IS



User-friendly



Remote-controlled via instant Bluetooth connection



Durable



Designed, manufactured and assembled in Canada



Environment-friendly
(1 device bought = 1 tree planted)



Controlled via Innov2Learn's free, easy-to-use app for all devices

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Device: Glucometer III (Gluco Simulator)

NURSING SKILLS

This simulation develops the nursing student's practical skills for monitoring and assisting a teenager with type 1 diabetes.

AUTHORS

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OVERVIEW OF THE CLINICAL SITUATION

The workday starts in an outpatient clinic offering support to teenagers with type 1 diabetes. The nursing student starts by measuring the patient's blood glucose levels. They notice the patient has had high HbA1c (glycated hemoglobin) levels for the past three months. The simulation starts when the nursing student meets the patient.

Violet, 14, has had diabetes since the age of 11. She has a good understanding of the treatment for her health condition, which she has been managing well for several years. Her menstruations started a year ago. Her parents are divorced and have been living in different towns for six months. She spends her weekdays at her mom's and visits her dad on the weekend. She reports feeling hungrier and thirstier than usual and has been complaining of fatigue. She also says she's been studying very hard and if she could just rest for a whole weekend, it would do her a world of good.

She has also had a few colds and other health problems but hasn't told her parents whom she believes already have enough worries as it is. She didn't want to worry her family, that's why she came here by herself this morning.

Violet has refused the insulin pump for the time being as she regularly plays sports.



EDUCATIONAL MATERIAL

- Innov2learn Glucometer III Simulator
- Mobile device (high result according to the blood glucose log)
- Innov2learn Glucometer III simulation glucose strips
- Lancet
- Fake blood drop on a high-fidelity manikin or standardized person
- Sphygmomanometer, stethoscope, oximeter, and thermometer
- The patient's pharmacological profile and blood glucose log
- Access to a cardiac monitor and equipment to obtain venous access, test blood and analyze urine

LEARNING GOALS

COGNITIVE LEVEL: Use the objective and subjective data collected to assess the situation. Create an educational plan for the patient and her family.

EMOTIONAL LEVEL: Build trust with the patient and exhibit empathy while communicating with her.

PROCEDURAL LEVEL: Implement the type of clinical monitoring that is appropriate to the caregiving situation in partnership with the patient.

PRE-REQUISITE KNOWLEDGE/SKILLS

- Pharmacological and pharmacotherapeutic treatment of type 1 diabetes in teenagers
- Recommended glycemic index for teenagers aged 13-18
- Taking vital signs/interpreting the data
- Using a glucometer/interpreting blood glucose readings
- Communication techniques and skills
- Common medical health issues (type 1 diabetes)
- Cognitive, social, psychological development and growth in teenagers
- Clinical signs of DKA (diabetic ketoacidosis)
- DKA treatment
- Teaching patient about insulin

PHARMACOLOGICAL PROFILE

- Violette Martin, 14. Reason for the visit: Unstable type 1 diabetes, frequent colds, fatigue.

Drug (class)	Administration Time	Long-acting	Rapid-acting
Rapid-acting insulin	7:30 AM		9 U
Rapid-acting insulin	NOON		8 U
Rapid-acting insulin	6 PM		8U
Long-acting insulin	9 PM	18U	

RECOMMENDED BLOOD GLUCOSE LOG

Date	Breakfast		Lunch		Dinner		Bedtime	Night	Comments
	Before	2 hr after	Before	2 hr after	Before	2 hr after			
Day before yesterday	8.1 mmol/dL	8 mmol/dL	9.5 mmol/dL	9 mmol/dL	10.1 mmol/dL	9.5 mmol/dL	11 mmol/dL		
Yesterday	10.9 mmol/dL	9.8 mmol/dL	12.4 mmol/dL	11 mmol/dL	12.2 mmol/dL	11 mmol/dL	12.4 mmol/dL		
This morning	14 mmol/dL	11.9 mmol/dL							

HBA1C RESULTS

- HbA1c 10% two months ago
- HbA1c 10% last month
- HbA1c 9% this morning
- Ketonemia: 1,4 mmol/L this morning

THIS MORNING'S PARAMETERS

- T: 37°C, sat 97%
- Pulse 92
- BP 110/70
- Weight: 55 kg / Height: 163 cm



SIMULATION TIMETABLE

EXPECTED INTERVENTIONS

- Transparent, reassuring, confident communications regarding the blood glucose level variations over the last few months
- Offering support and encouragements to offset the challenges encountered
- Setting up a partnership with the patient regarding their future care plan
- Informing the patient about the diabetic ketoacidosis signs & symptoms and behaviours to adopt (food intake, monitoring)
- Calling the hospital/doctor/parents whenever there are diabetic ketoacidosis developments

Briefing (suggested duration: 30 minutes)

1. Introduce the clinical situation, the skills to be developed and the learning goals.
2. Briefly discuss potential emotional reactions in this type of clinical situation.
3. Guide students towards situational analysis and clinical risk assessment.
4. Provide guidance and support to students about prioritizing proper monitoring and nursing care for the situation.
5. Expected Course of Action: Prioritizing vitals/glucose levels and other tests/nutritional and liquid intake/ingesta-excreta/Violet's emotional state.

Caregiving Situation

(suggested duration: 15 minutes)

Expected Assessments

- Targeted clinical assessment including:
 - Measuring blood glucose
 - PQRSTU of present (new) symptoms
 - Taking BP/Pulse/saturation %
 - Assessing glucose targets
 - Identifying issues pertaining to difficulties

Debriefing (suggested duration: 30 minutes)

- Roundtable discussion of emotions (as needed).
- Reviewing the learning goals and elements to be explored:
 - Cognitive Level: Thorough analysis of the blood glucose log; detecting diabetic ketoacidosis.
 - Emotional Level: Building trust to set up a partnership with the patient.
 - Procedural Level: Clinical monitoring plan: frequency of visits. Information for the parents/doctor: when? what? (monitoring the patient at home/warning signs/reviewing signs of complication) Parental consent is mandatory as per current child welfare laws.
 - Significant and durable competencies learned to be implemented in the professional practice.

CLINICAL TOOL: ASSESSING PAIN WITH PQRSTU

(TO USE AND ADAPT TO THE SYMPTOMS DISPLAYED DURING THIS SIMULATION)

- P: What caused your pain? What relieves it? What makes it worse? (movements, drugs, applying hot/cold therapy, etc.)
- Q: Describe your pain. What do you feel? (Throbbing, burning, numbing, electric shocks, deep, superficial)
- R: Where do you feel pain? Point to the painful area(s) with your finger.
- S: Do you feel discomfort elsewhere?
- T: When did the pain start? Is it intermittent or constant? If it is intermittent, when does it occur?
- U: What do you think is causing the pain? What does it mean to you?

SOURCES

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