ATI Real Life Student Packet
N201 Nursing Care of Special Populations
2024

Student Name: Isabelle Azar

ATI Scenario: PEDS DM 1

To Be Completed Before the Simulation

*****Blue boxes should be completed using textbook information. What do you expect to find? This information should be collected before you start the ATI simulation*

Medical Diagnosis: DM1

NCLEX IV *(8)*: Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures

In normal glycemic control a person eats and the blood sugar rises the beta cells detect and release insulin the insulin is then utilized and the blood sugar drops. When there is hypoglycemia the alpha cells produce Glucagon which simulate deliver to use glycogenolysis and release stored glucose. Alphas are responsible for Glucagon, beta cells are responsible for insulin production. Storage hormone is produced by beta cells in the islet of Langerhans. It is continuously released into the bloodstream in small amounts but increases when food is ingested this is utilized to maintain normal blood glucose level of 70 to 110. Insulin promotes glucose transport from bloodstream across cell membranes and into the cells the cells then break down glucose for energy and liver and muscle cells store excess glucose as glycogen insulin receptor sites in the liver facilitate hepatic uptake of glucose and its conversion to glycogen insulin allows glucose to enter the cells the cells use the glucose for energy liver and muscle cells store excessive glucose as glycogen insulin receptor sites in the liver facilitate hepatic uptake of glucose and its conversion to glycogen. If you don't have enough insulin your glucose cannot get into the cells so it stays in the bloodstream which increases blood glucose levels. Insulin is like the key to unlock the receptor site to allow glucose into cells. Glucogenesis is the breakdown of stored glucose and gluconeogenesis is new glucose that is formed from amino acids in the liver

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

Diabetes type 1 is an autoimmune disorder where the body develops antibodies against insulin and the pancreatic beta cells that produce insulin. This results in not enough insulin to survive there is a genetic link and exposure to a virus that can be the cause of this. There is also latent autoimmune diabetes in adults that is a slowly progressing autoimmune form. Iselet cell and auto antibodies responsible for beta cell destruction happening for months to years before diagnosis signs and symptoms develop when the pancreas can no longer keep up.

In ketoacidosis the the body doesn't have enough insulin for the cells to utilize glucose for energy. The cells are then starved of energy and as the body mistakenly believes it is starving it starts to break down fat instead. Ketones is a subproduct of which is a acidic compound. When these ketones accumulate the blood becomes acidotic. Ketones are usually excreted by the kidney but since the ketones are being produced faster than the kidneys can remove them a condition known as ketoacidosis develops. Starts with a high blood glucose level because of the lack of beta cells which equals no insulin which equals fatty least fatty acids to the which equals ketones trying to be an alternative source of energy.

To Be Completed Before the Simulation

Anticipated Patient Problem: Unstable blood glucose levels

Goal 1 :Patient will not display signs of hyperglycemia such as polyphagia, polydipsia, and polyuria throughout my TOC

Goal 2: Patient will not display signs of hypoglycemia such as tremors, irritability and sweating throughout my TOC

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
Assess electrolyte levels and for signs of hypokalemia such as fatigue and dysrhythmias throughout my TOC	Administer potassium chloride as prescribed and monitor electrolyte balances through labs throughout my TOC
Assess for signs of acidosis such as Kussmaul respirations and fruity breath odor Q4	Report finding to provider, follow DKA protocol.
Evaluate mucous membranes, skin turgor, and cap refill Q4 hours	Administer prescribed IV fluids PRN
Assess BG Q4 hours	Administer IV insulin as prescribed to correct acidosis PRN
Monitor BP, HR, RR, O2 Q4 hours	Report a sudden drop in BP or Systolic < 120/80 to the provider and nursing instructor PRN
Assess for hypoglycemia BG<80	Give 8 oz of orange juice PRN

To Be Completed Before the Simulation

Anticipated Patient Problem: Deficient Knowledge

Goal 1:Will verbalize signs and symptoms of hyperglycemia such as polyuria, polydipsia, and polyphagia

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
Assess patients' previous knowledge of hyperglycemia Qshift	Discuss the signs and symptoms of hyperglycemia such as polyuria, polydipsia, and polyphagia with the patient Qshift
Assess patients' previous knowledge of hypoglycemia Qshift	Discuss the signs and symptoms of hypoglycemia such as tremors, sweating and irritability with the patient Qshift
Assess patients' previous knowledge of insulin Qshift	Educate on the importance of adhering to insulin prescription. Educate on rotating sites and inserting the needle at a 90 degree angle. PRN
Assess for previous diet patterns PRN	Educate on the importance of adhering to a healthy diet of high protein and low carbohydrates to prevent complications PRN
Assess for active wounds PRN	Educate on slow wound healing being a sign of diabetes and it is important to monitor wounds to prevent infections PRN
Assess prior knowledge of hemoglobin A1c	Educate the importance of having a A1c drawn and educate that it is the average glucose level for the past 3 months and is measures by assessing how much glucose is on a hemoglobin molecule Qshift

Goal 2:Will adhere to insulin prescription and rotate sites while inserting the needle at a 90 degree angle.

To Be Completed During the Simulation:

Actual Patient Problem #1: Unstable glucose levels

Goal:Patient will not display signs of hyperglycemia such as polyphagia, polydipsia, and polyuria throughout my TOC Met: X Unmet:☐
Goal:Patient will not display signs of hypoglycemia such as tremors, irritability and sweating throughout my TOC Met: ☐ Unmet:X

Actual Patient Problem #2: Deficient Knowledge

Goal::Will verbalize signs and symptoms of hyperglycemia such as polyuria, polydipsia, and polyphagia Met: X Unmet:☐

Goal:Will be able to recognize the symptoms of hypoglycemia and consume 10 -15 of simple carbohydrates and recheck BG Met: X Unmet:☐

Additional Patient Problems:

Below will be your notes, add more lines as needed. **Relevant Assessments:** Indicate pertinent assessment findings. **Multidisciplinary Team Intervention:** What interventions were done in response to your abnormal assessments? **Reassessment/Evaluation:** What was your patient's response to the intervention?

Patient Problem (#)	Time	Relevant Assessments	Time	Multidisciplinary Team Intervention	Time	Reassessment/ Evaluation
1	0900	Mother states "Derek doesn't have any energy lately". No fever, nocturia enuresis noted. Derek states he is thirsty "a lot". States he does have blurry vision.	0915	Notified provider of lack of energy, blurred vision, nocturia and weight loss. Urine dipstick ordered.	0930	Urine dipstick came positive for ketones
1	0930	Positive urine dipstick for ketones. Blood capillary glucose level 271.	0945	Educated on the signs and symptoms of diabetes. NP educated on the positive dipstick and blood glucose levels.	1000	Mother states "Its okay we will stay at the hospital".
2	1015	Mother states "Will he be giving insulin?"	1030	Educated on insulin to help lower blood glucose levels and prevent complications	1045	Mother states "Ok I want him to feel better"
2	1100	Mother states "I thought he just has the flu"	1115	Supplied educational pamphlet to mother on DM 1 in children.	1130	Mother reading pamphlet at bedside. States no further questions.
1	1145	Blood sugar 274	1200	Administered 4 units of insulin based on order of 0.4 unites/kg/day in	1215	

				4 divided doses.		
2	1230	Mother asks "What's a hemoglobin A1c?"	1245	Educated that a this level indicates how much glucose is attached to Derek's red blood cells and the average blood glucose levels for the previous three months.	1300	Mother states "That's a lot to remember" and verbalizes understanding. Confirmed this is a test he'll need to keep on having.
2	1315	Mother asked if lab results have come back and asked about the difference between fasting blood sugar and other tests.	1330	Educated that Derek should fast 8 hours prior to checking, and his fasting blood sugar should be between 70-110.	1345	Mother verbalizes understanding.
1	1400	Mother reports Derek is irritable and sweating.	1415	Gave Derek 4 oz of orange juice that is 10-15 grams of simple carbs.	1430	Derek states he feels better. Mother states "she will keep candy in her backpack and purse to prevent hypoglycemia.
2	1445	Mother questions about the use of an insulin pump, how often to check BG when Derek is sick, and if Derek can still play baseball.	1500	Educated that many children prefer and insulin pump and the needle is changed every 2 days. Derek should check his BG Q3 when sick, and he should eat a complex carbohydrate snack before exercise.	1515	Mother verbalizes understanding. States she will make a follow up appointment for Derek and will be taking the educational pamphlet home.
2	Next week	Derek states he feels embarrassed about doing BG checks in front of other kids. States his finger hurts also when poking it.	-	Used therapeutic communication and encourages Derek to talk about his feelings. Educated on using a lancet at the shallowest setting prior to the fingerstick. Educated on the importance of a medical alert bracelet.	-	Derek and his mother verbalizes understanding. Derek states "I'm just glad I'm feeling better and back to hanging out with my friends. Mother states she will pick up a bracelet on the way home.

To Be Completed After the Simulation

The orange boxes should be filled out with your simulation patient's actual results, assessments, medications, and recommendations

NCLEX IV *(7)*: Reduction of Risk

Actual Labs/ Diagnostics
Urine dipstick
Blood glucose capillary
Hemoglobin A1c

NCLEX II *(3)*: Health Promotion and Maintenance

Signs and Symptoms
- Lack of energy.
- Polyuria
- Polydipsia
- Polyphagia
- Nocturia

NCLEX II *(3)*: Health Promotion and Maintenance

Contributing Risk Factors
- Young age children/teen
- White demographic

NCLEX IV *(7)*: Reduction of Risk

Therapeutic Procedures
Non-surgical
Medical alert bracelet
Blood glucose fingerstick

Surgical
N/A

Prevention of Complications
(Any complications associated with the client's disease process? If not what are some complications you anticipate)
- Diabetic ketoacidosis
- Delayed wound healing
- Vision problems

NCLEX IV *(6)*: Pharmacological and Parenteral Therapies

Medication Management
Insulin

NCLEX IV *(5)*: Basic Care and Comfort

Non-Pharmacologic Care Measures
- Therapeutic communication
- Patient centered care

NCLEX III *(4)*: Psychosocial/Holistic Care Needs

Stressors the client experienced?
- Stress of being hospitalized
- Stress of a chronic illness
- Stress of being away from friends

Client/Family Education

Document 3 teaching topics specific for this client.
• Educate on the importance of adhering to strict glycemic control to maintain optimal health
• Educate on the signs as hyperglycemia such as polyuria, polydipsia, and polyphagia
•Educate on rotating sites when injecting insulin.

NCLEX I *(1)*: Safe and Effective Care Environment

Multidisciplinary Team Involvement
(Which other disciplines were involved in caring for this client?)
Deborah- Clints mother
Ty Harris- NP
Dietition

Patient Resources

Education pamphlet
Support groups for mother who's children have DM
Diabetic educator

Reflection Questions

Directions: Write reflection including the following:

1. What was your biggest “take away” from participating in the care of this client?
   My biggest take away is that a child does not have to present to the ER with diabetic ketoacidosis in order to get a diagnosis of diabetes. These children are often overlooked and missed until they have progressed to such a severe state where the disease is apparent. With good assessing skills you can intervene before a child has to reach that point.

2. What was something that surprised you in the care of this patient?
   I was surprised how fast the nurse caught on to it might be diabetes. We started asking all the questions assessing for signs and symptoms of this disease before just shrugging it off and thinking that he just has a cold or flu. She took the mother's concerns very seriously and knew exactly what to assess for.

3. What is something you would do differently with the care of this client?
   Along with giving him an educational pamphlet I would have also referred the mother to a diabetic educator and a dietitian so that she may develop a diet plan for Derek that will strictly keep his blood glucose in the appropriate range to prevent any complications from occurring.

4. How will this simulation experience impact your nursing practice?
   Children who come into the clinic with lack of energy will always be assessed for blurred vision or weight loss or if they have been using the bathroom more often or hungry more often. Will keep it on my mind that they may have diabetes and it's not always a cold or flu.

5. Discuss norms or deviations of growth and development that was experienced during the simulation, including developmental stage.

   Derek is in the age of industry versus inferiority according to the Ericsson stage theory of growth and development. The purpose of this is to really develop a sense of competence and being a young growing child. Derek now has to deal with having a new diagnosis of diabetes but still knows that he is competent enough to do anything and everything he wants to do including still playing baseball while maintaining straight glycemic control and taking care of his health.