ATI Real Life Student Packet
N201 Nursing Care of Special Populations
2022

Student Name: Madisyn Williams

ATI Scenario: PED2 Type 1 diabetes mellitus

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: Type 1 diabetes mellitus

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

Anatomy and Physiology
Normal Structures

Anatomy: the pancreas is an elongated organ that is broken down into three sections; head, body, and tail. This organ is lobular and has many ducts that consist of digestive enzyme secreting cells, capillaries, hormone secreting islet cells and pancreatic islets (islet of Langerhans) where alpha cells, beta cells and exocrine acinus are housed. The pancreas is an accessory organ and exocrine gland to the digestive system, as well as an endocrine gland producing the following hormones insulin and glucagon.

Physiology: insulin is made by the beta cells in the islet of Langerhans of the pancreas. Insulin is normally continuously released into the blood stream in small amounts. An increased amount released is related to when food is eaten. Insulin's purpose is to lower blood glucose levels and maintain a stable level of 74-106 mg/dL. Insulin promotes glucose transport by essentially pushing it into cells to be broken down for energy. Glucagon which is the other hormone produced by the pancreas is considered a counterregulatory hormone. Glucagon works against the effects of insulin and increases the blood glucose level by stimulating the release of stored glucose from the liver and decreases the amount of glucose moving into the cells which basically raises the level of glucose floating in the blood stream. Glucagon and insulin work together to maintain a blood glucose level that's WNL during periods of eating food and fasting.

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

Type 1 diabetes is an autoimmune disorder where the body develops antibodies against insulin or the beta cells that make insulin. This results in not enough insulin being produced to survive. This could be due to a genetic predisposition → leukocyte antigens (HLA-DR3, HLA-DR4) or from exposure to a virus. Insulin is not being produced so glucose from ingested food is not being pushed into cells to be broken down for energy so the glucose circulating in the blood continues to rise. Since cells are not using glucose for energy, they begin to breakdown fat and protein for energy, and this leads to weight loss. This continuous cycle can lead to DKA and even death.

Anticipated Patient Problems, Goals, & Interventions Based on Medical Diagnosis

** This worksheet should be completed before you begin the ATI simulation.

Problem #1: Deficient knowledge

Patient Goals:

1. Patient will teach back and verbally acknowledge type 1 diabetes is a lifelong autoimmune disorder and will require the use of exogenous insulin for life, during my time of care.
2. Patient will teach back the manifestations of hypoglycemia (cold, clammy, shaky, irritable, weak) during my time of care.

Assessments: assess for the type of learning style the patient learns best from (verbal, auditorial, visual, tactically) during my care, determine who will be the learner whether that's the patient or patient's caregiver during my care, assess preexisting knowledge of type 1 diabetes during my care, assess outlook about learning new information during my care, observe for any signs of confusion when discussing type 1 diabetes during my care.

Interventions (In priority order):

1. Facilitate an appropriate learning environment (quiet room, appropriate seating, comfortable temperature etc.) during my time of care.
2. Encourage the involvement in the treatment plan (setting goals, asking questions, establishing objectives) during my time of care.
3. Provide clear and appropriate for development explanations and demonstrations during my care.
4. Maintain an appropriate pace of teaching during my time of care.
5. Encourage the teach back method throughout educational times during my care.
6. Encourage questions throughout educational periods.

Problem #2: Risk for unstable blood glucose level

Patient Goals:

1. Patient will maintain a glucose level WNL (70-104 mg/dL) during my care.
2. Patient will recognize signs of hypoglycemia (cold, clammy, shaky) and hyperglycemia (polydipsia, polyuria, polyphagia) during my care.

Assessments: assess for signs of hypoglycemia and hyperglycemia throughout my care, assess for adherence to insulin administration during my care, assess blood glucose levels QIDASCH or when s/s are presenting, assess eating patterns during my care, assess feet for temperature, pulses and sensation during my care.

Interventions (In priority order):

1. Administer rapid acting insulin via sub-q injection PRN during my care.
2. Ensure the food on tray follows a diabetic diet during my care.
3. Follow the 15-15 (15g of sugar so 4 oz of OJ and wait 15 minutes) rule for hypoglycemia PRN during my care.

4. Educate/ demonstrate how to self-monitor blood glucose during my care.
5. Educated about the importance of following an appropriate diet for type 1 diabetes and the importance of incorporating exercise during my care.
6. Consult with the dietitian and diabetic educator throughout my care.

To Be Completed During the Simulation

Nursing Notes

Time	*I or E*	Notes	Specify NDx #
1000	E	Mom states he hasn't been himself lately, he has no energy, denies a fever, and the past few nights he has wet the bed, which is unusual, T 37.3 P 88 R 18 BP 102/70 O2 98%, WT 40kg ---------- mw	1
1008	I	Questioned if there was an increase in thirst or hunger as of recent and if he has blurry vision ----------mw	1,3
1010	E	States he is snacking more but thought it was due to a growth spurt. States he is very thirsty, and sometimes things are blurry, the mom noticed him squinting here and there. There was a 2-week-old abrasion on the left knee that had no signs of infection but was not healed yet. mw	1,3
1020	I	Discussed with provider the signs and symptoms including lack of energy, polydipsia, polyphagia, new onset of enuresis nocturia, blurred vision and the recent weight loss of 8 pounds ----------mw	1,3
1050	E	Provider suspects diabetes mellitus and requested a urine sample-----mw	1
1100	I	Provided urine sample and explained how to collect the urine sample.mw	1
1110	E	Urine sample came back positive with ketones, provider ordered glucose reading via finger stick ----------mw	1
1115	I	Performed glucose check ----------mw	1
1118	E	Blood glucose level was 271 mg/dL provider decided there was a need to be admitted to the hospital ----------mw	1
		At hospital…	
1400	I	Encouraged questions and concerns to be discussed and provided a checklist for skills and handouts for additional information, performed blood glucose check ----------mw	2
1415	E	Blood glucose was 274 mg/dL----------mw	1
	I	Administered 4 units of insulin in the posterior sub-q tissue of right arm ----------mw	1
	E	Tolerated injection well, states he is hungry ----------mw	1

	I	Educated about the importance of snacking in between meals and at bedtime to prevent his blood sugar from dropping too low after the insulin, provided crackers and cheese ---------- mw	1,2,3
1425	E	Ate 90% of his snack ----------mw	3
1530	E	Moderate amounts of ketones present in urine ----------mw	1
1650	E	Blood glucose 138 mg/dL----------mw	1
1800	E	Ate 90% of his dinner ----------mw	3
18120	E	Small amounts of ketones in urine ----------mw	1
1945	E	Blood glucose 142 mg/dL ----------mw	1
2100	E	Ate 100% of his snack ----------mw	3
		The next day	
0300	E	Blood glucose 118 mg/dL ----------mw	1
0700	E	Concerned about the results from the A1 C and is curious about the difference between fasting blood sugar and a fingerstick check that is done throughout the day ----------mw	1,2
0730	I	Provided results of A1C (12%) and educated that <8% is considered WNL so 12% is slightly elevated. Educated about a fasting blood glucose being taken whenever nothing has been consumed for 12+ hours and the expected result is a value of 70-110 mg/dL. ----------mw	1,2
0810	E	Ate 10% of breakfast ----------mw	3
0915	E	Upon entering notable diuresis, tearfulness, and mom states “he’s not acting like himself” blood glucose 58 mg/dL ----------mw	1
0920	I	Provided 4 oz of orange juice ----------mw	1
0935	E	States he feels much better ----------mw	1
0940	E	Blood glucose was 82 mg/dL----------mw	1
1000	I	Educated about the signs and symptoms of hypoglycemia and encouraged the mom to carry around candy or orange juice in case these symptoms reoccur one day. Educated about the importance of following up insulin with a simple carbohydrate to prevent hypoglycemia. ----mw	1,2,3
1010	E	Verbalizes understanding. trace amounts of ketones in urine ----------mw	2
		Next Day…	

0300	E	Blood glucose 114 mg/dL ----------mw	1
0735	E	Ate 90% of his breakfast ----------mw	3
0800	I	Educated about site rotation and demonstrated how to inject insulin. mw	1,2
0810	E	States “I should inject the insulin straight in at a ninety-degree-angle” and demonstrates understanding ----------mw	2
0812	E	Curious about an insulin pen and asked for more information regarding this ----------mw	2
0814	I	Educated about insulin pens and how they should be stored at room temperature once opened ----------mw	2
0830	E	Verbalizes understanding and teaches back information, also curious about insulin pumps ----------mw	2
0840	I	Provided education on insulin pumps and gave handouts for additional information, educated about how to manage diabetes when sick	2
0845	E	Verbalizes understanding and teaches back that blood sugars should be checked every 3 hours when sick. Concerned about being able to play baseball with diabetes ----------mw	2
0900	I	Educated that he can continue to play baseball, but it’s recommended to eat a complex carb snack before practice or games ----------mw	2
0945	E	No further questions or concerns, urine came back negative for ketones. Discharged from hospital ----------mw	2
		Next week	
1000	E	States blood sugar has been under control but says that kids have already made fun of him while checking his blood glucose publicly ---------mw	1
1005	I	Asked if he ever feels embarrassed when taking his blood sugar ------mw	1
1010	E	States yes sometimes and that it doesn’t help that his finger hurts all the time ----------mw	1
1020	I	Reviewed and demonstrated how to check blood glucose via a finger stick ----------mw	2
1030	E	Verbalizes understanding and states he’s glad he feels better and can hang out with friends ----------mw	2
1035	I	Educated about the importance of wearing a medical bracelet with a diagnosis like diabetes ----------mw	2
1100	E	Mom states she just forgot to get one but plans to get one today ------mw	2

Initials/ Signature mw/m.williams son

Actual Patient Problems & Goals

** This worksheet should be completed after you complete the ATI simulation.

Problem #1: risk for unstable blood glucose

Patient Goals:

1. Patient will maintain a glucose level WNL (70-104 mg/dL) during my care. Met ☐ Unmet ☐

2. Patient will recognize signs of hypoglycemia (cold, clammy, shaky) and hyperglycemia (polydipsia, polyuria, polyphagia) during my care. Met ☐ Unmet ☐

Problem #2: deficient knowledge

Patient Goals:

1. Patient will teach back and verbally acknowledge type 1 diabetes is a lifelong autoimmune disorder and will require the use of exogenous insulin for life, during my time of care. Met ☐ Unmet ☐

2. Patient will teach back the manifestations of hypoglycemia (cold, clammy, shaky, irritable, weak) during my time of care. Met ☐ Unmet ☐

Problem #3: Imbalanced nutrition: less than body requirements

Patient Goals:

1. Patient will eat > 70% of meals and snacks during my care Met ☐ Unmet ☐

2. Patient will not fall below 40kg during my care Met ☐ Unmet ☐

Problem #4: _____

Patient Goals:

1. _____ Met ☐ Unmet ☐

2. _____ Met ☐ Unmet ☐

Problem #5: _____

Patient Goals:

1. _____ Met ☐ Unmet ☐

2. _____ Met ☐ Unmet ☐

Patient Resources: diabetic educator, pediatrician

Patient Teaching: educated about the signs and symptoms of hypoglycemia and the protocol to follow.

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

Fasting blood glucose
A1C
Urine analysis
Fingerstick glucose
CBC
BMP

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

Signs and Symptoms

Polydipsia, polyuria (enuresis nocturia), polyphagia, blurry vision, weight loss, lack of energy, A1C 12%, blood glucose 274 mg/dL

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

Contributing Risk Factors

Age 12 years old
Recently went to clinic because of flu like symptoms

NCLEX IV *(7)*: Reduction of Risk

Therapeutic Procedures

Non-surgical
Insulin pump/pen

Surgical
n/a

Prevention of Complications
(Any complications associated with the client's disease process? If not what are some complications you anticipate)

DKA
Atherosclerosis→ can lead to kidney, eye, and nerve problems along with heart, brain, and blood vessel complications

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

Medication Management

Regular insulin (Humulin)

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

Non-Pharmacologic Care Measures

Balanced diet
Exercise
15-15 rule (15g of carbohydrates [4oz of oj] and recheck in 15 min)

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

Stressors the client experienced?

Embarrassment
Bullying from peers
Not being able to play sports
Life not being the same
Learning so much new information
Giving himself injections

Client/Family Education

Document 3 teaching topics specific for this client.

•Educated about insulin pens and how to store them

•educated about hypoglycemia, the s/s, and treatment

• educated about eating a simple carbohydrate after the administration of insulin

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

Multidisciplinary Team Involvement
(Which other disciplines were involved in caring for this client?)

Diabetic educator
Pharmacy
Doctor
Nurses
Laboratory

Reflection Paper

Directions: Write a 1-page reflection paper for each patient using Times New Roman, 12 pt. font and double-spaced. Include the following:

1. Describe an "Aha" moment you experienced during this learning experience.
2. What were the most important aspects of this simulation and what did you learn?
3. How will this simulation experience impact your nursing practice?

This simulation took place in an outpatient setting and inpatient setting. It was cool to see how the family doctor and health care workers from the outpatient practice correlated with the hospital staff to achieve a continuity of care and provide support and education to the family and patient who newly got diagnosed with type 1 diabetes. An aha moment I had was when the patient was beginning to feel symptoms of hypoglycemia. Learning about the sings and symptoms is one thing but being able to see them and see how the nurse carries out orders to help make the patient feel better and resolve the hypoglycemic state, brings it full circle. Another aha moment was when the child came to the outpatient office because of suspected flu like symptoms. In this scenario the flu like symptoms turned out to be something more serious so it was an eye-opening moment, to not hyperfocus on one thing but rather take into consideration the numerous of diagnoses it could be. I appreciated all the questions the mom had because it shows that a new diagnosis of type 1 diabetes is not only a change to the patient and his life but also his family's life and it can be an overwhelming one. The questions that we had to answer in the simulation were put in good spots, so it felt like we were the nurse responding to the questions the family/patient had. This set up will help in situations like this when I am practicing as a nurse. The most important aspect of this simulation was seeing a patient who came into the outpatient setting due to having a suspected flu and presenting with flu like symptoms but instead having tests ran for type one diabetes. This simulation showed the starting point of suspecting type one diabetes to urgent treatment followed by education about long term education and ended back in an outpatient setting where routine check ups were being completed. I found it very valuable to see a patient and family go from being overwhelmed and uneducated about type 1 diabetes to being able to control blood sugars and still live a happy and healthy life. This simulation experience impacted my nursing practice by showing me a way to educate about a lifelong diagnosis to someone young. The nurse in this simulation made sure to answer any questions or concerns and this really eased the mom's anxiety and helped decrease some of the overwhelming feelings she was experiencing. I will

take the communication skills and resources that were shown in this video and apply them to my practice one day.