N433 Care Plan #1

Lakeview College of Nursing

Bao Cuong Tran

Demographics (3 points)

Date of Admission 4/7/22	**Client Initials** J.A.	**Age (in years & months)** 9	**Gender** Male
Code Status FULL	**Weight (in kg)** 29.1 kg	**BMI** n/a	**Allergies/Sensitivities (include reactions)** None

Medical History (5 Points)

Past Medical History: None

Illnesses: N/A

Hospitalizations: N/A

Past Surgical History: None

Immunizations: All immunizations are up to date.

Birth History: His mother reports a normal full-term pregnancy

Complications (if any): N/A

Assistive Devices: None

Living Situation: The patient lives with both parents and two siblings; a younger sister four years old and a 12-year-old brother.

Admission Assessment

Chief Complaint (2 points): Deeper and faster breathing.

Other Co-Existing Conditions (if any): The patient is more sleepy than usual along with abdominal pain, headache, muscle aches, and consistently being hungry and thirsty

Pertinent Events during this admission/hospitalization (1 points):

- Patient presented to the ED.
- The patient received 2 IV.

- The patient was kept NPO, and monitored

History of present Illness (OLD CARTS) (10 points):

According to his parents, the patient is a 9-year-old kid who presents to the emergency department because he has been more tired and his breathing is "not normal," meaning it is deeper and faster. Jack was sick two weeks ago with a respiratory virus, but he has since recovered. When Jack began to complain of being fatigued a few days ago, he began to feel more exhausted. Consistent hunger and thirst, as well as abdominal pain, headaches, and muscle aches. He's urinating more frequently than usual at all hours of the day and night.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Diabetes mellitus type 1

Secondary Diagnosis (if applicable): DKA due to untreated DM

Pathophysiology of the Disease, APA format (20 points):

Diabetes mellitus (DM) is a disease in which glucose metabolism is disrupted, resulting in compromised metabolic activities in the body (Mayo Clinic, 2019). Because the body cannot create enough insulin in type 1 diabetes, a person must take insulin injections for the rest of his or her life. Insulin-dependent diabetes, often known as juvenile diabetes, is a kind of type 1 diabetes (Jones, 2020).

Diabetic ketoacidosis is a decompensated form of diabetes mellitus marked by elevated blood glucose levels (hyperglycemia) and ketone bodies (ketonemia). This is one of the most prevalent diabetic complications. It is marked by thirst (polydipsia), increased urination (polyuria), dry skin, acetone breath (fruity breath), and abdominal pain; headaches, lethargy,

irritability, drowsiness, and lethargy are symptoms of the central nervous system (Mayo Clinic, 2017).

Fluids, electrolytes (such as sodium, potassium, and chloride), and insulin are used to treat diabetic ketoacidosis. Surprisingly, the most prevalent diabetic ketoacidosis consequences are linked to this life-saving medication.

A physical exam and blood tests will be ordered if the doctor suspects diabetic ketoacidosis. Additional testing, such as blood electrolyte tests and urinalysis, may be required in some situations to determine what caused the diabetic ketoacidosis.

Pathophysiology References (2) (APA):

Jones & Bartlett Learning. (2020). 2020 *Nurse's drug handbook* (19th ed.). Jones & Bartlett Learning.

Mayo Clinic. (2019). *Diabetic ketoacidosis*. Retrieved from https://www.mayoclinic.org/diseases-conditions/diabetic-ketoacidosis/symptoms-causes/syc-20371551

Mayo Clinic. (2017). *Type 1 diabetes*. Retrieved from https://www.mayoclinic.org/diseases-conditions/type-1-diabetes/symptoms-causes/syc-20353011

Active Orders (2 points)

Order(s)	Comments/Results/Completion
Activity: n/a (I expect the patient to be on bed rest due to lethargy)	The patient feels sleepier
Diet/Nutrition: NPO	
Frequent Assessments: Vital signs every 30	Neuro assessment:

minutes with neurological checks every hour. Continuous cardiac monitor. STAT finger stick for blood glucose then every one hour.	• One neuro assessment completed being alert and oriented x 4, overall good appearance with distress. • Vitals: o Pulse = 136, blood pressure = 80/48, respiratory rate = 44, temperature = 100.4F, and oxygen saturation = 98% Pain confined to the abdomen, generalized within the abdominal region, quality dull and aching, made worse with solid food, 4/10 on the numeric scale. He states his pain is an "All the time".
Labs/Diagnostic Tests: CBC, BMP, Urinalysis	
Treatments: Manage glucose level	
Other: n/a	
New Order(s) for Clinical Day	
Order(s)	**Comments/Results/Completion**
n/a	
n/a	
n/a	

Laboratory Data (15 points)

CBC Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range (specific to the age of the child)	Admission or Prior Value	Today's Value	Reason for Abnormal Value
RBC	**3.90-4.90**	N/A	N/A	
Hgb	**10.6-13.2**	**16.1**	**14.2**	Hgb aids in the transportation of oxygen from the lungs to the rest of the body, as well as carbon dioxide back to the lungs for exhalation. High. There is no anemia. It could be linked to difficulty breathing, headaches, and a general feeling of weakness and exhaustion.
Hct	**35.0-42%**	N/A	N/A	
Platelets	**160-358**	**252**	210	
WBC	**4.0-9.6**	**6.2**	**7.2**	
Neutrophils	**1.70-6.50**	**5.8**	5.2	
Lymphocytes	**1.10-3.30**	N/A	N/A	
Monocytes	**0.20-0.80**	N/A	N/A	
Eosinophils	**0.03-0.45**	N/A	N/A	
Basophils	**0.01-0.09**	N/A	N/A	
Bands	**<10%**	**0**	0	

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission or Prior Value	Today's Value	Reason For Abnormal
Na-	**136-145**	**130**	**138**	The excretion of -hydroxybutyrate and acetoacetate causes obligatory urinary sodium losses in diabetic ketoacidosis patients, worsening hypovolemia.
K+	**3.5-5.1**	**5.5**	**4.1**	High blood sugar harms the kidneys, which are responsible for removing excess potassium from the body. Diabetics with high potassium levels are more likely to have heart issues and other difficulties.
Cl-	**98-107**	N/A	N/A	
Glucose	**76-106**	**680**	118	The body does not produce or use enough insulin, which is a hormone that absorbs glucose into cells for use as energy.
BUN	**7-18**	N/A	N/A	
Creatinine	**0.55-1.02**	**1.4**	0.7	
Albumin	**3.4-5.0**	N/A	N/A	
Total Protein	**6.4-8.2**	N/A	N/A	
Calcium	**8.5-10.1**	N/A	N/A	
Bilirubin	**0.2-1.0**	N/A	N/A	
Alk Phos	**45-117**	N/A	N/A	
AST	**15-37**	N/A	N/A	
ALT	**13-56**	N/A	N/A	
Amylase	**9-35**	N/A	N/A	

Lipase	**13-60**	N/A	N/A	
Phosphorous	**2.5-4.9**	2.8	N/A	
Magnesium	**1.6-2.6**	**2.4**	N/A	

Other Tests Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Admission or Prior Value	Today's Value	Reason for Abnormal
ESR	**<20**	**N/A**	N/A	
CRP	**<10**	**N/A**	N/A	
Hgb A1c	**<7.5%**	**N/A**	N/A	
TSH	**0.358-3.740**	**N/A**	N/A	
CK	**26-192**	**N/A**	N/A	
Ethanol	**<0.003**	**N/A**	N/A	
Salicylate	**7.8-20.0**	**N/A**	N/A	

Urinalysis Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Admission or Prior Value	Today's Value	Reason for Abnormal
Color & Clarity	**Clear or yellow**	**Clear and yellow**	N/A	
pH	**5.0 – 9.0**	**5.5**	N/A	
Specific Gravity	**1.003-1.030**	**1.015**	N/A	
Glucose	**Normal**	**4+**	N/A	It measures the amount of glucose in a urine sample. The presence of glucose in the urine is called glycosuria or glucosuria due to diabetes/DKA

Protein	**Negative**	**Negative**	N/A	
Ketones	**Negative**	**4+**	N/A	It measures the amount of ketone in a urine sample. The presence of ketone is because of diabetes/DKA
WBC	**Negative**	**Negative**	N/A	
RBC	**Negative**	**Negative**	N/A	
Leukoesterase	**Negative**	**Negative**	**N/A**	
Drug Screen	**Negative**	**Negative**	**N/A**	
Pregnancy	**Negative**	**Negative**	**N/A**	

Cultures Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Admission or Prior Value	Today's Value	Explanation of Findings
Urine Culture	**Negative**	N/A	N/A	
Blood Culture	**Negative**	N/A	N/A	
Sputum Culture	**Negative**	N/A	N/A	
Stool Culture	**Negative**	N/A	N/A	
Respiratory ID Panel	**Negative**	N/A	N/A	
COVID-19 Screen	**Negative**	**N/A**	**N/A**	

Lab Correlations Reference (1) (APA):

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2019). *Mosby's diagnostic and laboratory test reference*. St. Louis, MO: Elsevier.

Diagnostic Imaging

All Other Diagnostic Tests (5 points): n/a

Diagnostic Test Correlation (5 points): n/a

Diagnostic Test Reference (1) (APA):

Current Medications (8 points)
****Complete *ALL* of your Client's medications****

Brand/Generic	**Tylenol/acetaminophen**				
Dose	**350 mg**				
Frequency	**PRN**				
Route	**rectal**				
Classification	**nonopioid**				
Mechanism of Action	**binds with the opioid receptors in the brain and block the release of excitatory neurotransmitters**				
Reason Client Taking	**reduce fever**				
Concentration Available	**350/500 mg**				
Safe Dose Range Calculation					
Maximum 24-hour Dose	**1400mg**				
Contraindications (2)	**Liver damage, allergic reaction**				
Side Effects/Adverse Reactions (2)	**dizziness, difficulty in breathing**				
Nursing Considerations (2)	**Liver impairment, kidney impairment**				
Client Teaching needs (2)	**Taking right amount of does based on patient weight. Teach**				

	the patient caregiver to watch out for sign and symptoms of liver damage.				

Institute for Safe Medication Practice: ISMP Medication Safety Alert. http://www.ismp.org/.

Jones & Barlett Learning. (2020). 2020 Nurse's Drug Handbook. Burlington, MA

Assessment

Physical Exam (18 points) Highlight Abnormal Pertinent Assessment Findings

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Lying on the bed with eyes closed, whimpers with touch, recognizes mom and dad. Fruity odor to the breath. The patient seems out of energy, is probably in pain, and show the sign of DKA.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** 4 **Drains present: Y☐ N ☒** **Type:** **(The student guesses the information below)** **IV Assessment (If applicable to child):** **Size of IV:** Right and left: 22 gauge **Location of IV:** Right median cubital and left hand **Date on IV:** Both on 4/10/22 **Patency of IV:** Both are clear **Signs of erythema, drainage, etc.:** None **IV dressing assessment:** Good **IV Fluid Rate or Saline Lock:** Insuline therapy	Skin warm, dry, itchy, flushed, intact, skin turgor nonelastic.
HEENT:	Head atraumatic and normocephalic

Head/Neck: **Ears:** **Eyes:** **Nose:** **Teeth:** **Thyroid:**	Neck supple No ear discharge, no facial swelling, no external otitis/rhinitis/pharyngitis/oral thrush. Eyes appear "sunken," mucus membranes dry, tacky mucosa, chapped lips. This is sign of dehydration.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	Normal heart rate and rhythm with an S1 and S2. Pulses slightly weak/thread. This is sign of dehydration.
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Respirations are deep and rapid. Kussmaul breathing - a deep and labored breathing pattern often associated with DKA.
GASTROINTESTINAL: **Diet at home:** Regular. **Current diet:** NPO **Height (in cm):** n/a **Auscultation Bowel sounds:** **Last BM:** n/a **Palpation: Pain, Mass etc.:** abdominal **Inspection:** **Distention:** None **Incisions:** None **Scars:** None **Drains:** None **Wounds:** None **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	Abdominal pain and nausea due to DKA. Tender to light palpation; feeling nauseated.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:**	Voiding large amounts of urine.

Catheter: Y ☐ N ☒ **Type:** **Size:**	
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** Yes **Supportive devices:** None **Strength:** **ADL Assistance: Y☐ N ☒** **Fall Risk: Y ☐ N☒** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib): Yes** **Needs assistance with equipment: No** **Needs support to stand and walk: No**	The patient seems to be very tired and does not have enough strength to move extremities freely and regularly.
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation:** ANOx4 **Mental Status:** Distressed **Speech:** Good **Sensory:** Unaffected **LOC:** Yes, this morning	.
PSYCHOSOCIAL/CULTURAL: **Coping method(s) of caregiver(s):** **Social needs (transportation, food, medication assistance, home equipment/care):** **Personal/Family Data (Think about home environment, family structure, and available family support):**	The patient is an active and smart student.

Vital Signs, 2 sets – (2.5 points) Highlight All Abnormal Vital Signs

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
	136	80/48	44	100.4F	98%

Vital Sign Trends: The patient's pulse, respiratory rate, and temperature slightly decreased but these findings are insignificant.

Normal Vital Sign Ranges (2.5 points)
****Need to be specific to the age of the child****

Pulse Rate	**60 - 100**
Blood Pressure	**110/65 – 135/85**
Respiratory Rate	**12 - 18**
Temperature	**98.6F**
Oxygen Saturation	**95 – 100%**

Normal Vital Sign Range Reference (1) (APA):

University of Michigan Health Children's Hospital. (2020). *Vital signs in children*.

https://www.mottchildren.org/health-library/abo2987

Pain Assessment, 2 sets (2 points)

Time	**Scale**	**Location**	**Severity**	**Characteristics**	**Interventions**
	0-10	Abdominal	4	Aching , dull	Therapeutic communication
	0-10				
Evaluation of pain status *after* intervention	The patient feels the pain less due to his parents presence and support.				
Precipitating factors: Abdominal pain due to DKA **Physiological/behavioral signs:** Patient stated the pain is "all the time"					

Intake and Output (1 points)

Intake (in mL)	**Output (in mL)**

	Large amount of urine

Developmental Assessment (6 points)

Age-Appropriate Growth & Development Milestones

1. Support from authority figures
2. Moral development
3. Language development

Age-Appropriate Diversional Activities

1. Sport
2. Food
3. Games

Psychosocial Development:

Which of Erikson's stages does this child fit?

- industry and inferiority

What behaviors would you expect?

The child is becoming conscious of their identity at this stage. They look for praise and support from those around them when they achieve success in school or athletics.

What did you observe?

- The patient's is active in sports and is a good student.

Cognitive Development:

Which stage does this child fit, using Piaget as a reference?

Concrete operational

What behaviors would you expect?

- Children grow less egocentric at this age and begin to consider what other people might think and feel (Ricci et al, 2021).

What did you observe?

n/a

Vocalization/Vocabulary:

Development expected for child's age and any concerns?

- The patient has a good vocabulary. Their use of words and life experiences suggest a highly intelligent adolescent.

Any concerns regarding growth and development?

- No concerns.

Ricci, S. S., Kyle, T., & Carman, S. (2021). *Maternity and pediatric nursing* (4th ed.). Wolters Kluwer.

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis and listed in order of priority

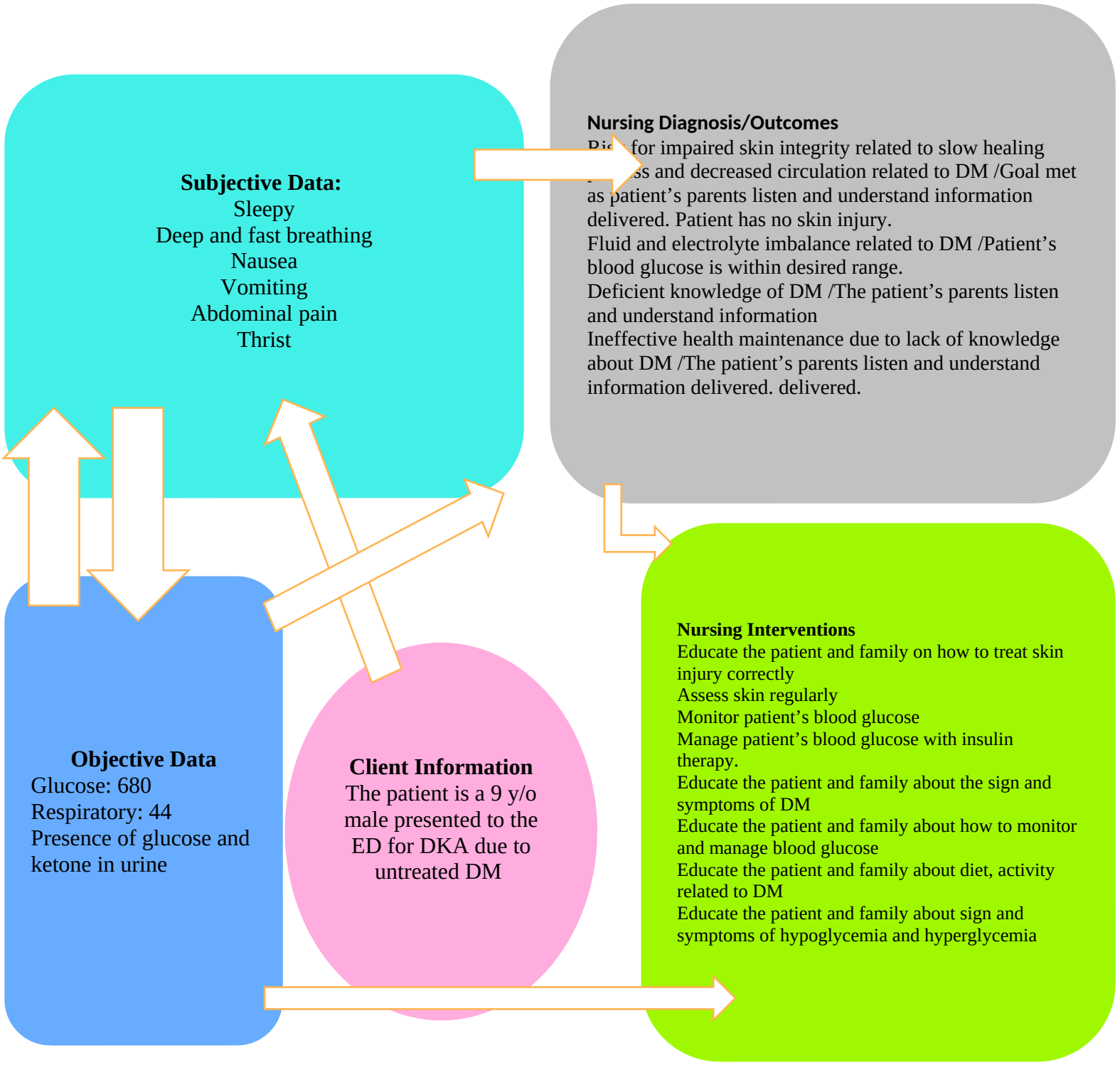
Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client.	**Rational** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcomes**	**Evaluation** • How did the Client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
Risk for impaired skin integrity related to slow	The patient is in a sports team, so the	Educate the patient and family on how	Goal met as patient's parents	The patient has no skin injury during his stay. The family is

healing process and decreased circulation related to DM	chance of getting skin injury is high	to treat skin injury correctly Assess skin regularly	listen and understand information delivered. Patient has no skin injury.	active in learning.
Fluid and electrolyte imbalance related to DM	Hyponatremia, hyperkalemia	Monitor patient's blood glucose Manage patient's blood glucose with insulin therapy.	Patient's blood glucose is within desired range.	Goal met. Patient's blood glucose is 118
Deficient knowledge of DM	The family did not recognize the sign of DM	Educate the patient and family about the sign and symptoms of DM Educate the patient and family about how to monitor and manage blood glucose	The patient's parents listen and understand information delivered.	The family is active in learning.
Ineffective health maintenance due to lack of knowledge about DM	The patient had DKA due to untreated DM	Educate the patient and family about diet, activity related to DM Educate the patient and family about sign and symptoms of hypoglycemia and hyperglycemia	The patient's parents listen and understand information delivered.	The family is active in learning.

Other References (APA):

Pamela, Swearingen L. and Jacqueline, Wright D, “All-in-One Nursing Care Planning Resource” (2019). *Faculty Bookshelf 75.*

Concept Map (20 Points):


Subjective Data:
Sleepy
Deep and fast breathing
Nausea
Vomiting
Abdominal pain
Thrist
Nursing Diagnosis/Outcomes
Ri for impaired skin integrity related to slow healing
ss and decreased circulation related to DM /Goal met
as patient's parents listen and understand information delivered. Patient has no skin injury.
Fluid and electrolyte imbalance related to DM /Patient's blood glucose is within desired range.
Deficient knowledge of DM /The patient's parents listen and understand information
Ineffective health maintenance due to lack of knowledge about DM /The patient's parents listen and understand information delivered. delivered.
Objective Data
Glucose: 680
Respiratory: 44
Presence of glucose and ketone in urine
Client Information
The patient is a 9 y/o male presented to the ED for DKA due to untreated DM
Nursing Interventions
Educate the patient and family on how to treat skin injury correctly
Assess skin regularly
Monitor patient's blood glucose
Manage patient's blood glucose with insulin therapy.
Educate the patient and family about the sign and symptoms of DM
Educate the patient and family about how to monitor and manage blood glucose
Educate the patient and family about diet, activity related to DM
Educate the patient and family about sign and symptoms of hypoglycemia and hyperglycemia