N431 Care Plan #1

Dakota Clayton

Lakeview College of Nursing

N431: Adult Health II

Christina Smalley, RN

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Demographics (3 points)

Date of Admission	**Client Initials**	**Age**	**Gender**
6/2/23	A.R.	19	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White	Car wash attendant	Single	No known allergies
Code Status	**Height**	**Weight**	
Full code	188 cm	79.8 Kg	

Medical History (5 Points)

Past Medical History: Diagnosed with attention deficit hyperactivity disorder (ADHD) at the age of 7.

Diagnosed with cystic acne at age 16.

Past Surgical History: Patient stated no past surgical history.

Family History: Diabetes mellitus (father; brother). Patient stated his brother was type 1 diabetes mellitus (DM), but he was unsure if his father was type 1 or type 2.

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use):

- Patient stated they drink alcohol "on occasion." Patient stated when they do drink, they consume "a couple of beers." Patient stated they have been drinking alcohol occasionally for 2 years.
- Patient denied use of tobacco or other drugs.

Assistive Devices: Eyeglasses.

Living Situation: Patient currently lives with his girlfriend in a house close to his family.

Education Level: High school diploma.

Admission Assessment

Chief Complaint (2 points): Excessive fatigue, thirst, and urination

History of Present Illness – OLD CARTS (10 points):

Patient presented to the emergency department (ED) with complaints of fatigue, hunger, thirst, and frequent urination. Patient stated they decided to come into the ED after waking up feeling "especially sick" and experiencing a near-syncopal episode in his home. The patient stated that he has been feeling "tired, thirsty, and been peeing all the time" for approximately 3 months now, and that these symptoms have been continuous for those three months. The patient stated that he was in no pain, but just "tired and thirsty." The patient did not state any methods that provide relief to his symptoms, or any activities that make them worse. The patient has not sought treatment for this condition before.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Diabetes ketoacidosis

Secondary Diagnosis (if applicable): Type 1 diabetes mellitus

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

According to Ghimire and Dhamoon (2022), the term ketoacidosis is defined as, "a metabolic state associated with pathologically high serum and urine concentrations of ketone bodies (para. 1)." Diabetic ketoacidosis (DKA) is a form of ketoacidosis associated with uncontrolled diabetes mellitus (DM) and is a potentially life-threatening complication of the disease (Ghimire & Dhamoon, 2022). Mayo Clinic (2022) explains that when the body cannot produce enough insulin it begins to use fat as a metabolic fuel source, which can cause an accumulation of acids in the blood called ketones. As ketones continue to build in the bloodstream, metabolic acidosis can occur (Capriotti & Frizzell, 2020). Additionally, the body's blood severely increases in osmolarity, leading to loss of intracellular fluid in the brain and

possible coma (Capriotti & Frizzell, 2020). According to Capriotti and Frizzell (2020), DKA is most often associated with severe hyperglycemia and type 1 DM, although the condition can occur in type 2 DM under the right conditions.

Initial signs and symptoms of DKA are consistent with the "3 P's" of DM – polyuria, polyphagia, and polydipsia (Capriotti & Frizzell, 2020). Capriotti and Frizzell (2020) explain that other signs and symptoms of DKA include "weakness, abdominal pain, Kussmaul's respirations, nausea, and vomiting (p. 605)." A patient experiencing DKA may also be fatigued, dehydrated, and have a sweet-smelling ketone breath or body odor (Capriotti & Frizzell, 2020).

According to Capriotti and Frizzell (2020), expected physical assessment findings for an individual in DKA include dry mucous membranes, low blood pressure, and tachycardia. It is also likely that the client will be found to have an extremely high blood glucose reading, as DKA is associated with severe hyperglycemia and uncontrolled DM. Other diagnostic criteria for DKA includes arterial pH less than 7.3, serum bicarbonate less than 18 mEq/L, the presence of ketones in the urine, and the presence of ketones in the blood (Capriotti & Frizzell, 2020).

According to Ghimire and Dhamoon (2022), diagnosis of DKA is evaluated through measurement of blood glucose levels, blood ketone levels, urine ketone levels, anion gap, atrial blood gases, and electrolytes, among others. Various tests and diagnostics were completed to contribute to this client's diagnosis of DKA. Soon after presenting to the ED, a point-of-care blood glucose test yielded a blood glucose level of over 500 mg/dL, prompting the staff to investigate further. Further laboratory blood testing returned a blood glucose level of 1141 mg/dL, indicating severe hyperglycemia. A urinalysis was also completed on the client and showed 3+ glucose and 3+ ketones in the urine, indicating significantly increased levels.

According to Ghimire and Dhamoon (2022), initial treatment of DKA begins with correction of hyperglycemia with intravenous insulin. Additional treatments for DKA include electrolyte correction, intravenous fluids, and correction of acid-base balance (Ghimire & Dhamoon, 2022). According to Mayo Clinic (2022), later treatment of DKA includes DM management, insulin adjustment, and periodic ketone monitoring. For this client, he received subcutaneous regular insulin while in the ED, which corrected his blood glucose enough to delay intravenous insulin from treatment. The client also received two 1000 mL bolus of 0.9% normal saline to treat dehydration. The client's treatment plan was continued after inpatient admittance for observation. Listed clinical data that correlates to the client's DKA diagnosis includes a blood glucose of 1141 mg/dL glucose and ketones present in the urinalysis.

Pathophysiology References (2) (APA):

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Ghimire, P. & Dhamoon, A. S. (2022). *Ketoacidosis*. StatPearls. https://www.ncbi.nlm.nih.gov/books/NBK534848/

Mayo Clinic. (2022, October 6). *Diabetic ketoacidosis*. Mayo Clinic. https://www.mayoclinic.org/diseases-conditions/diabetic-ketoacidosis/symptoms-causes/syc-20371551

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	Admission Value	Today's Value	Reason for Abnormal Value
RBC ($x10^6/\mu L$)	4.40-5.80	5.67	N/A	*Value is not abnormal
Hgb (g/dL)	13.0-16.5	16.1	N/A	*Value is not abnormal
Hct (%)	38.0-50.0	49.5	N/A	*Value is not abnormal
Platelets ($x10^3/\mu L$)	140-440	232	N/A	*Value is not abnormal
WBC ($x10^3/\mu L$)	4.0-12.0	6.0	N/A	*Value is not abnormal
Neutrophils (%)	40-68	72.1	N/A	According to Van Leeuwen and Bladh (2021), neutrophil count is increased in various metabolic disorders, including states of ketoacidosis.
Lymphocytes (%)	19-49	19.3	N/A	*Value is not abnormal
Monocytes (%)	3-13	7.8	N/A	*Value is not abnormal
Eosinophils (%)	0-8	0.7	N/A	*Value is not abnormal
Bands (%)	N/A	N/A	N/A	*Value is not abnormal

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

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na+ (mmol/L)	136-145	123	N/A	*Value is not abnormal
K+ (mmol/L)	3.5-5.1	6.1	N/A	According to Capriotti and Frizzell (2020), increased serum potassium levels may be increased with a client initially presenting with DKA – this increase is false, as potassium moves into the extracellular space during acidosis.

Cl- (mmol/L)	98-107	85	N/A	According to Van Leeuwen and Bladh (2021), chloride levels are decreased in DKA as a result of ketone bodies with increased chloride, resulting in a lower serum level.
CO2 (mmol/L)	22-30	24	N/A	*Value is not abnormal
Glucose (mg/dL)	70-99	1141	N/A	A main cause of DKA is uncontrolled DM – an elevated blood glucose level is a key indicator of uncontrolled DM (Van Leeuwen & Bladh, 2021).
BUN (mg/dL)	9-21	20	N/A	*Value is not abnormal
Creatinine (mg/dL)	0.7-1.3	1.51	N/A	According to Advani (2020), patient's experiencing hyperglycemic crises (including DKA) are at increased the risk of acute kidney injury. Creatinine is a marker of kidney function and is increased during acute kidney injury (Van Leeuwen & Bladh, 2021).
Albumin (g/dL)	3.5-5.0	4.6	N/A	*Value is not abnormal
Calcium (mg/dL)	8.7-10.5	9.9	N/A	*Value is not abnormal
Mag (mg/dL)	1.6-2.6	2.3	N/A	*Value is not abnormal
Phosphate (mg/dL)	2.5-4.5	4.5	N/A	*Value is not abnormal
Bilirubin (mg/dL)	0.2-1.2	1.0	N/A	*Value is not abnormal
Alk Phos (units/L)	< 750	138	N/A	*Value is not abnormal
AST (units/L)	5-34	13	N/A	*Value is not abnormal
ALT (units/L)	0-55	26	N/A	*Value is not abnormal
Serum acetone	Negative	Small amount	N/A	According to Van Leeuwen and Bladh (2021), acetone is an intermediate product of ketone metabolism, and indicates an increase in serum ketones, which is

				consistent with a DKA diagnosis.
Amylase	40-140	N/A	N/A	*Value is not abnormal
Lipase	11-82	N/A	N/A	*Value is not abnormal
Lactic Acid	0.5-2.0	N/A	N/A	*Value is not abnormal
Troponin (ng/mL)	> 0.03	N/A	N/A	*Value is not abnormal
CK-MB (%)	0-4	N/A	N/A	*Value is not abnormal
Total CK (units/L)	50-204	N/A	N/A	*Value is not abnormal

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
INR	0.86-1.14	N/A	N/A	*Value is not abnormal
PT	11.9-15.0	N/A	N/A	*Value is not abnormal
PTT	22.6-35.3	N/A	N/A	*Value is not abnormal
D-Dimer	0-500	N/A	N/A	*Value is not abnormal
BNP (pg/mL)	0-100	N/A	N/A	*Value is not abnormal
HDL (mg/dL)	> = 60	N/A	N/A	*Value is not abnormal
LDL (mg/dL)	0-100	N/A	N/A	*Value is not abnormal
Cholesterol (mg/dL)	< 150	N/A	N/A	*Value is not abnormal
Triglycerides (mg/dL)	< 150	N/A	N/A	*Value is not abnormal
Hgb A1c	< 5.7%	N/A	N/A	*Value is not abnormal
TSH (mU/L)	0.4-4.0	N/A	N/A	*Value is not abnormal

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Yellow & clear	Yellow & clear	N/A	*Value is not abnormal
pH	5.0-9.0	6.0	N/A	*Value is not abnormal
Specific Gravity	1.003-1.030	1.005	N/A	*Value is not abnormal
Glucose	Negative	3+	N/A	According to Van Leeuwen and Bladh (2021), glucose present in the urine is an indicator of DM, which is consistent with the patient's hyperglycemia.
Protein	Negative	Negative	N/A	*Value is not abnormal
Ketones	Negative	3+	N/A	According to Capriotti and Frizzell (2020), the presence of ketones in the urine is a key diagnostic criterion for DKA.
WBC	Negative	Negative	N/A	*Value is not abnormal
RBC	Negative	Negative	N/A	*Value is not abnormal
Leukoesterase	Negative	Negative	N/A	*Value is not abnormal

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
pH	7.35-7.45	N/A	N/A	*Value is not abnormal
PaO2 (mmHg)	80-100	N/A	N/A	*Value is not abnormal
PaCO2 (mmHg)	35-45	N/A	N/A	*Value is not abnormal
HCO3 (mmol/L)	22-26	N/A	N/A	*Value is not abnormal
SaO2 (%)	95-100	N/A	N/A	*Value is not abnormal

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	Negative	Negative	N/A	*Value is not abnormal
Blood Culture	Negative	N/A	N/A	*Value is not abnormal
Sputum Culture	Negative	N/A	N/A	*Value is not abnormal
Stool Culture	Negative	N/A	N/A	*Value is not abnormal

Lab Correlations Reference (1) (APA):

Advani, A. (2020, October 14). Acute kidney injury: A bona fide complication of diabetes. *Diabetes, 69*(11), 2229-2237. https://doi.org/10.2337/db20-0604

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

OSF Sacred Heart Medical Center (2023). Normal lab values. OSF Sacred Heart Medical Center.

Van Leeuwen, A.M., & Bladh, M.L. (2021). *Davis's comprehensive handbook of laboratory & diagnostic tests with nursing implication* (9th ed.). F. A. Davis Company

Diagnostic Imaging

All Other Diagnostic Tests (5 points) & Diagnostic Test Correlation (5 points):

- Chest x-ray:
    - Impression: no notable findings
        - Lungs normal
        - Aorta normal
        - Mediastinum normal

- While in the ED, a chest x-ray was completed on this patient. According to Van Leeuwen and Bladh (2021), chest x-rays are used to help evaluate structures in the chest cavity, including the heart, lungs, and associated skeletal structures. Van Leewen and Bladh (2021) also state that the chest x-ray is one of the most often performed imaging studies. While this patient's diagnosis was not directly related to the heart or lungs, the chest x-ray likely helped rule out issues in these organ systems that could have been contributing to the symptoms he was experiencing.

Diagnostic Test Reference (1) (APA):

Van Leeuwen, A.M., & Bladh, M.L. (2021). *Davis's comprehensive handbook of laboratory & diagnostic tests with nursing implication* (9th ed.). F. A. Davis Company

Current Medications (10 points, 1 point per completed med)
10 <u>different</u> medications must be completed

Home Medications (5 required)

Brand/Generic	****Patient does not have any home medications****				
Dose	N/A	N/A	N/A	N/A	N/A
Frequency	N/A	N/A	N/A	N/A	N/A
Route	N/A	N/A	N/A	N/A	N/A
Classification	N/A	N/A	N/A	N/A	N/A
Mechanism of Action	N/A	N/A	N/A	N/A	N/A
Reason Client Taking	N/A	N/A	N/A	N/A	N/A
Contraindications (2)	N/A	N/A	N/A	N/A	N/A
Side Effects/Adverse Reactions (2)	N/A	N/A	N/A	N/A	N/A
Nursing Considerations (2)	N/A	N/A	N/A	N/A	N/A
Key Nursing	N/A	N/A	N/A	N/A	N/A

Assessment(s)/Lab(s) Prior to Administration					
Client Teaching Needs (2)	N/A	N/A	N/A	N/A	N/A

Hospital Medications (5 required)

Brand/ Generic	Humalog/ Insulin lispro	Mycostatin/ Nystatin	Zofran/ Ondansetron	GlucaGen/ Glucagon	MiraLax/ Polyethylene glycol
Dose	Sliding scale	5 ml	4 mg	1 mg	17 g
Frequency	ACHS	Q6H	Q6H PRN	PRN	BID PRN
Route	Sub-cut	Oral "swish and spit"	PO	IM	PO
Classification (Thera. & Pharma.)	T: Anti-diabetic P: Pancreatic	T: Anti-fungal P: None	T: Anti-emetic P: 5-HT-3 antagonist	T: Hormones P: Pancreatic	T: Laxative P: Osmotic
Mechanism of Action	Medication "lowers blood glucose by: stimulating glucose uptake in skeletal muscle and fat and inhibiting hepatic glucose production (Vallerand & Sanoski, 2023, p. 712)."	Medication "binds to fungal cell membrane, allowing leakage of cellular contents (Vallerand & Sanoski, 2023, p. 951)."	Medication "blocks the effects of serotonin at 5-HT-3 receptor sites located in vagal nerve terminals and the chemoreceptor trigger zone in the CNS (Vallerand & Sanoski, 2023, p. 970)."	Medication "stimulates hepatic production of glucose from glycogen stores, or glycol-genolysis (Vallerand & Sanoski, 2023, p. 638)."	Medication "acts as an osmotic agent, drawing water into the lumen of the GI tract (Vallerand & Sanoski, 2023, p. 1059)."
Reason Client Taking	Blood glucose management	Oral fungal infection treatment	Nausea management	Reversal of acute hypo-glycemia	Treatment for periods of constipation
Contraindications (2)	1. Renal impairment 2. Hypo-glycemia (Vallerand & Sanoski, 2023).	1. Use of products with alcohol. 2. Hyper-sensitivity (Vallerand & Sanoski, 2023).	1. Hepatic impairment 2. Phenyl-ketonuria (Vallerand & Sanoski, 2023).	1. Insulinoma 2. Prolonged fasting or starvation (Vallerand & Sanoski, 2023).	1. Gastric retention 2. Abdominal pain of unknown source (Vallerand & Sanoski,

					2023).
Side Effects/Adverse Reactions (2)	1. Hypo-kalemia 2. Hypo-glycemia (Vallerand & Sanoski, 2023).	1. Diarrhea 2. Nausea (Vallerand & Sanoski, 2023).	1. Constipation 2. Headache (Vallerand & Sanoski, 2023).	1. Vomiting 2. Epistaxis (Vallerand & Sanoski, 2023).	1. Abdominal cramping 2. Flatulence (Vallerand & Sanoski, 2023).
Nursing Considerations (2)	1. Medication should be drawn using only insulin syringes in units and no syringes with milliliters. 2. Monitor for signs and symptoms of hypo-glycemia during medication therapy and understand how to treat acute hypo-glycemia. (Vallerand & Sanoski, 2023).	1. Nurse should ensure that patient holds medication in mouth and swishes for several seconds before spitting out medication. 2. The patient's mouth should be assessed before each dose and frequently during therapy to monitor effectiveness (Vallerand & Sanoski, 2023).	1. Use of medication comes with risk of extra-pyramidal symptoms - monitor patient for these symptoms during therapy. 2. Medication may cause increases to liver enzymes including ALT and AST without damage to the liver. (Vallerand & Sanoski, 2023).	1. While point-of-care glucose levels are used before administration, these values should be confirmed with a laboratory blood test 2. Monitor and protect patient from risks associated with severe hypo-glycemia, including aspiration, falls, and seizures (Vallerand & Sanoski, 2023).	1. Medication should be dissolved in 8 oz of client's beverage of choice and can be hot or cold. 2. Assess stool color, consistency, and amount frequently during medication therapy (Vallerand & Sanoski, 2023).
Key Nursing Assessment(s)/Lab(s) Prior to Administration	1. Due to the sliding scale of dosage, blood glucose should be monitored, and dosage determined before administration.	1. The patient's mouth should be assessed before each dose of medication. 2. Prior to administration, the medication	1. Assess patient's level of nausea and associated symptoms prior to and following administration. 2. Medication	1. Serum glucose levels should be monitored before medication administration and in the hours following medication	1. Assess patient's bowel sounds, abdominal distention, and bowel function before administration.

	2. Prior to administration, the nurse should clarify any ambiguous orders and clarify any drawn doses with another registered nurse. (Vallerand & Sanoski, 2023).	should be shaken well and measured using a correctly calibrated measuring cup to confirm correct dosage. (Vallerand & Sanoski, 2023).	should ideally be used prophylactically before nausea occurs. (Vallerand & Sanoski, 2023).	administration. 2. Assess patient's signs and symptoms of hypo-glycemia prior to medication administration and following administration (Vallerand & Sanoski, 2023).	2. Medication is easily confused with propylene glycol – ensure correct medication before use. (Vallerand & Sanoski, 2023).
Client Teaching Needs (2)	1. Client needs educated on proper self-administration of insulin. 2. Client needs educated on proper nutrition and exercise for diabetes maintenance. (Vallerand & Sanoski, 2023).	1. Educate client that medication therapy should be continued for a minimum of 48 hours after symptoms have subsided. 2. Educate client to alert their provider of any irritation or swelling to the oral mucus membranes (Vallerand & Sanoski, 2023).	1. Educate client of the signs and symptoms of extra-pyramidal effects (involuntary facial movement, eye movement, etc.). 2. Educate client to take medication as directed and that prolonged large doses may harm the liver (Vallerand & Sanoski, 2023).	1. Educate client on the signs and symptoms of hypo-glycemia, and teach patient to ingest carbo-hydrates or oral glucose at the first sign. 2. Educate patient that medication can be taken orally if the patient is conscious and able to swallow (Vallerand & Sanoski, 2023).	1. Educate client that the medication may take 2-4 days to help in production of a bowel movement. 2. Educate patient to alert provider of any sudden changes in bowel habits for longer than two weeks (Vallerand & Sanoski, 2023).

Medications Reference (1) (APA):

Vallerand, A.H., & Sanoski, C.A. (2023). *Davis's Drug Guide for Nurses* (18th ed.). F.A. Davis

Company

Assessment

Physical Exam (18 points) – HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	**Alertness:** Patient is alert. **Orientation:** Patient is oriented x4 - to person, time, place, and situation. **Distress:** Patient is in no acute distress, but states he is very fatigued. **Overall appearance:** Patient is clean and well-groomed and appears calm overall.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	**Skin color:** Skin color white, pink, and appropriate for ethnicity. **Character:** Overall skin intact. Patient has acne present on facial cheeks, forehead, and back of neck. Patient states he was diagnosed with cystic acne at age 16. **Temperature:** Skin warm. **Turgor:** Skin turgor returns to place in < 3 seconds. No tenting present. **Rashes:** None **Bruises:** None **Wounds:** None **Braden Score**: 23 – patient at no risk for skin breakdown **Drains present: Y☐ N ☒** **Type:** None
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	**Head/Neck:** Head and neck symmetrical. Trachea midline without deviation. No lymphadenopathy noted or palpated in head or neck. Lymph nodes assessed: tonsillar, submandibular, submental, preauricular, posterior auricular, anterior cervical, posterior cervical, occipital, and supraclavicular. Carotid pulses 2+ bilaterally. Cystic acne present on back of neck. **Ears:** Bilateral auricles symmetrical with no pain, lumps, lesions or drainage. Ear canals clear bilaterally. **Eyes:** PERRLA present and EOMs intact bilaterally. Sclera white bilaterally, Conjunctiva and eyelids pink and moist bilaterally with no lesions or drainage inspected. No noted drainage from eyes. **Nose:** Septum midline. Bilateral turbinates pink and moist with no visible bleeding or drainage.

	Teeth: Oral thrush present over visible length of tongue, with white/yellow colored presentation. Patient states the growth does not hurt or effect his swallowing, but "feels weird inside my mouth." Overall dentition moderate – patient is missing two teeth on top, lateral sides of mouth. Uvula midline. Tonsils 1+ and pink and moist bilaterally. Overall oral mucosa intact, pink, and moist with no noted drainage or lesions.
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:**	**Heart sounds:** S1 and S2 heart sounds present with no noted or auscultated murmurs, gallops, or rubs. **Cardiac rhythm (if applicable):** Regular **Peripheral Pulses:** Bilateral radial and posterior tibial pulses 2+ and regular. **Capillary refill:** > 3 seconds bilaterally in fingers and toes. **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:** None
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	**Accessory muscle use: Y☐ N ☒** **Breath Sounds:** Breath sounds clear posteriorly and anteriorly bilaterally, including right middle lobe. No adventitious breath sounds auscultated. Respirations non-labored and symmetrical. Expected respiratory rate and rhythm.
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☐** **Type:**	Diet at home: Regular **Current Diet:** Regular. Patient states he has been experiencing polyphagia and polydipsia for approx. 3 months. **Height:** 188 cm **Weight:** 79.8 Kg **Auscultation Bowel sounds:** Bowel sounds auscultated in all four quadrants and normoactive at 5-34 per minute. **Last BM:** 6/1/2023 **Palpation: Pain, Mass etc.:** Abdomen soft and non-tender to palpation in all four quadrants. No masses palpated in all four quadrants. **Inspection:** **Distention:** None **Incisions:** None **Scars:** None **Drains:** None **Wounds:** None

	Ostomy: Y ☐ N ☒ **Nasogastric:** Y ☐ N ☒ **Size:** None **Feeding tubes/PEG tube** Y ☐ N ☒
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination:** Y ☐ N ☒ **Dialysis:** Y ☐ N ☒ **Inspection of genitals:** **Catheter:** Y ☐ N ☒ **Type:** **Size:**	**Color:** Yellow **Character:** Clear **Quantity of urine:** Patient voided twice while in the ED. Additionally, patient states he has been experiencing polyuria for approx. 3 months and has been "going all the time." **Pain with urination:** Y ☐ N ☒ **Dialysis:** Y ☐ N ☒ **Inspection of genitals:** Genitals not inspected. **Catheter:** Y ☐ N ☒ **Type:** None **Size:** None
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance:** Y☐ N ☒ **Fall Risk:** Y ☐ N☒ **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib)** ☒ **Needs assistance with equipment** ☐ **Needs support to stand and walk**☐	**Neurovascular status:** Intact. **ROM:** Full and active in all extremities. **Supportive devices:** None. **Strength:** 5/5 in upper and lower extremities bilaterally. **ADL Assistance:** Y☐ N ☒ **Fall Risk:** Y ☐ N☒ **Fall Score:** 20 (low risk) **Activity/Mobility Status:** **Independent (up ad lib)** ☒ **Needs assistance with equipment** ☐ **Needs support to stand and walk**☐
NEUROLOGICAL: **MAEW:** Y ☒ N☐ **PERLA:** Y ☒ N☐ **Strength Equal:** Y ☒ N ☐ **if no -** **Legs** ☐ **Arms** ☐ **Both** ☐ **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	**MAEW:** Y ☒ N☐ **PERLA:** Y ☒ N☐ **Strength Equal:** Y ☒ N ☐ **if no - Legs** ☐ **Arms** ☐ **Both** ☐ **Orientation:** Patient is alert and oriented x4. **Mental Status:** Appropriate for age and development. **Speech:** Clear. **Sensory:** Intact. **LOC:** Patient is alert and oriented x4.
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and**	**Coping method(s):** Patient states his girlfriend and his dog are those closest to him. **Developmental level:** Appropriate for age. **Religion & what it means to pt.:** Patient states they are Christian and go to church "most Sundays."

available family support):	**Personal/Family Data (Think about home environment, family structure, and available family support):** Patient lives with his girlfriend and has regular contact with his family and his girlfriend's family. Patient also has one dog.

Vital Signs, 2 sets (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1130	88 bpm	117/77 Laying	12 rpm	36.6 C	97% Room air
1230	80 bpm	127/90 Laying	12 rpm	36.7 C	95% Room air

Vital Sign Trends: Stable

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1130	0-10	N/A	0	N/A	N/A
1230	0-10	N/A	0	N/A	N/A

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: 20 g **Location of IV:** Right forearm **Date on IV:** 6/2/23 **Patency of IV:** Patent and flushes easily **Signs of erythema, drainage, etc.:** None	1000 ml 0.9% normal saline fluid bolus draining with gravity. Patient received two fluid boluses.

IV dressing assessment: Clean and dry	

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
1000 ml 0.9% normal saline (2x) 480 ml water Total intake: 2480 ml	Patient voided 2x

Nursing Care

Summary of Care (2 points)

Overview of care: Patient was alert and an active participant in his care. In general, the patient received treatment to counteract his diagnosis of DKA. His treatment included fluid administration, insulin administration, and blood glucose management education.

Procedures/testing done: The client did not leave the ED for any testing or procedures, but received a complete blood work-up, urinalysis testing, and a chest x-ray.

Complaints/Issues: Patient complained of being thirsty throughout the shift and was given ice water when requested. Patient also requested to be transferred to Carle for admittance but decided to stay at current OSF facility.

Vital signs (stable/unstable): Vital signs stable and within normal limits throughout care.

Tolerating diet, activity, etc.: Patient tolerated any activity well. Unable to assess patients' toleration of diet, as he did not receive any food while in the ED.

Physician notifications: Physician notified of elevated blood glucose levels and ketones in client's urine.

Future plans for client: Patient being admitted to the facility for observation. Anticipate client will be able to discharge upon correction of blood glucose levels.

Discharge Planning (2 points)

Discharge location: Client will discharge to his home with his girlfriend.

Home health needs (if applicable): Patient may need follow-up from home health after discharge to ensure the patient is capable of monitoring and managing his blood glucose levels.

Equipment needs (if applicable): Glucometer and associated glucose testing supplies.

Follow up plan: Patient will follow-up with his primary care provider to set-up glucose monitoring appointments.

Education needs: Patient has multiple education needs regarding his new diagnosis of type 1 DM. Patient did not fully understand the details of his diagnosis, the disease process, or necessary disease management.

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

Nursing Diagnosis	Rationale	Interventions (2 per dx)	Outcome Goal (1 per dx)	Evaluation
Risk for electrolyte	This nursing diagnosis was	1. Assess patient's fluid	1. Patient's serum	After explaining the importance of

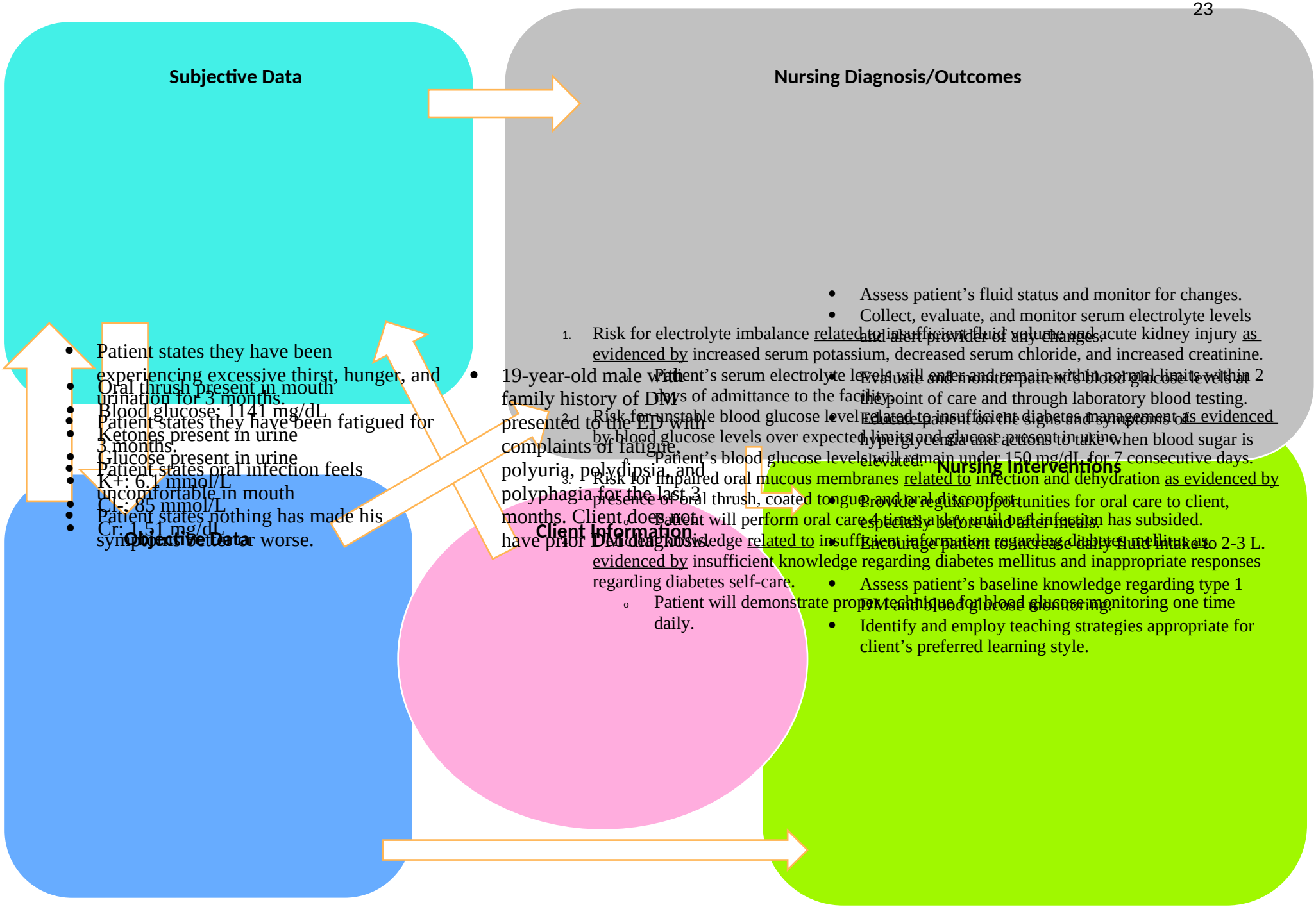
imbalance related to insufficient fluid volume and acute kidney injury as evidenced by increased serum potassium, decreased serum chloride, and increased creatinine.	chosen due to the apparent risks the client's current electrolyte levels (including imbalanced potassium and chloride) pose to his overall health.	status and monitor for changes. 2. Collect, evaluate, and monitor serum electrolyte levels and alert provider of any changes.	electrolyte levels will enter and remain within normal limits within 2 days of admittance to the facility.	electrolyte balance to the patient, he was open to continuous monitoring of his electrolyte levels and began to take an active approach to correcting these levels.
Risk for unstable blood glucose level related to insufficient diabetes management as evidenced by blood glucose levels over expected limits and glucose present in urine.	This nursing diagnosis was chosen due to the client's initial presentation with severely elevated blood glucose. Without proper education, the patient could experience severe hyperglycemia again.	1. Evaluate and monitor patient's blood glucose levels at the point of care and through laboratory blood testing. 2. Educate patient on the signs and symptoms of hyperglycemia and actions to take when blood sugar is elevated.	1. Patient's blood glucose levels will remain under 150 mg/dL for 7 consecutive days.	The patient was understanding that blood glucose monitoring was being prioritized in his care. The patient was very open to blood glucose monitoring and understood his levels needed to be monitored multiple times throughout the day.
Risk for impaired oral mucous membranes related to infection and dehydration as evidenced by presence of oral thrush, coated tongue, and oral discomfort.	This nursing diagnosis was chosen due to the client's current oral infection. If the client's thrush is not treated promptly and properly, it could greatly impair his mouth.	1. Provide regular opportunities for oral care to client, especially before and after meals. 2. Encourage patient to increase daily fluid intake to 2-3 L.	1. Patient will perform oral care 4 times a day until oral infection has subsided.	While the patient stated that his oral infection did not bother him, he was grateful that the infection was identified after his presentation to the ED. The patient was open to increasing his daily oral care regimen.
Deficient knowledge	This nursing diagnosis was	1. Assess patient's baseline	1. Patient will demonstrate	The patient was grateful that the

related to insufficient information regarding diabetes mellitus as evidenced by insufficient knowledge regarding diabetes mellitus and inappropriate responses regarding diabetes self-care.	chosen due to the client's educational needs regarding type 1 DM and blood glucose management.	knowledge regarding type 1 DM and blood glucose monitoring. 2. Identify and employ teaching strategies appropriate for client's preferred learning style.	proper technique for blood glucose monitoring one time daily.	nursing staff took the time to educate him on type 1 DM and proper blood glucose monitoring. The patient was open to the teaching and appeared ready to learn.

Other References (APA):

Phelps, L.L. (2020). *Sparks and Taylor's nursing diagnosis reference manual* (11th ed.) Wolters Kluwer.

Concept Map (20 Points):


Subjective Data
Patient states they have been experiencing excessive thirst, hunger, and urination for 3 months.
Patient states they have been fatigued for 3 months.
Patient states oral infection feels uncomfortable in mouth
Patient states nothing has made his symptoms better or worse.
Objective Data
Oral thrush present in mouth
Blood glucose: 1141 mg/dL
Ketones present in urine
Glucose present in urine
K+: 6.1 mmol/L
Cl-: 85 mmol/L
Cr: 1.51 mg/dL
Client Information
19-year-old male with family history of DM presented to the ED with complaints of fatigue, polyuria, polydipsia, and polyphagia for the last 3 months. Client does not have prior DM diagnosis.
Nursing Diagnosis/Outcomes
1. Risk for electrolyte imbalance related to insufficient fluid volume and acute kidney injury as evidenced by increased serum potassium, decreased serum chloride, and increased creatinine.
o Patient's serum electrolyte levels will enter and remain within normal limits within 2 days of admittance to the facility.
2. Risk for unstable blood glucose level related to insufficient diabetes management as evidenced by blood glucose levels over expected limits and glucose present in urine.
o Patient's blood glucose levels will remain under 150 mg/dL for 7 consecutive days.
3. Risk for impaired oral mucous membranes related to infection and dehydration as evidenced by presence of oral thrush, coated tongue, and oral discomfort.
o Patient will perform oral care 4 times a day until oral infection has subsided.
4. Deficient knowledge related to insufficient information regarding diabetes mellitus as evidenced by insufficient knowledge regarding diabetes mellitus and inappropriate responses regarding diabetes self-care.
o Patient will demonstrate proper technique for blood glucose monitoring one time daily.
Nursing Interventions
Assess patient's fluid status and monitor for changes.
Collect, evaluate, and monitor serum electrolyte levels and alert provider of any changes.
Evaluate and monitor patient's blood glucose levels at the point of care and through laboratory blood testing.
Educate patient on the signs and symptoms of hyperglycemia and actions to take when blood sugar is elevated.
Provide regular opportunities for oral care to client, especially before and after meals.
Encourage patient to increase daily fluid intake to 2-3 L.
Assess patient's baseline knowledge regarding type 1 DM and blood glucose monitoring.
Identify and employ teaching strategies appropriate for client's preferred learning style.