Student Name: Kevin Juarez
Medical Diagnosis/Disease: Crohn's Disease

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

Anatomy and Physiology
Normal Structures

The GI system's primary role is to provide nutrients to the body through three main processes: ingestion (taking in food), digestion (breaking it down), and absorption (transferring nutrients into circulation). Waste products of digestion are removed through elimination.
The autonomic nervous system controls the GI tract. The parasympathetic system stimulates activities like peristalsis, while the sympathetic system inhibits them.
The GI tract also has its own nervous system called the enteric nervous system (ENS), which oversees movement and secretions throughout the tract.
Movements in the GI tract include mixing (segmentation) and moving (peristalsis).
GI secretions, including enzymes, hormones, mucus, water, and electrolytes, aid in digestion and protect the tract.

The mouth includes the lips and oral cavity. Saliva lubricates and softens food to help with swallowing.
The pharynx, a muscular tube lined with a mucous membrane, connects to the esophagus. It is divided into three sections: nasopharynx, oropharynx, and laryngeal pharynx.
The esophagus, a hollow muscular tube, transfers food to the stomach through peristalsis. The lower esophageal sphincter (LES) prevents stomach acid from flowing back into the esophagus.
The stomach stores food, mixes it with gastric secretions, and releases it into the small intestine for digestion. Gastric juice is acidic due to hydrochloric acid (HCl). Intrinsic factor, secreted by the stomach, aids in cobalamin (vitamin B12) absorption in the small intestine.

The small intestine, the primary site for digestion and absorption, is essential for processing and absorbing nutrients.
The large intestine, divided into the cecum and appendix, colon (ascending, transverse, descending, sigmoid), rectum, and anus, mainly reabsorbs water and electrolytes.
Liver, Biliary Tract, and Pancreas:
The liver performs essential roles, including metabolism, secretion, vascular regulation, and nutrient storage.
Bile, produced by the liver and stored in the gallbladder, contains bilirubin, cholesterol, bile salts, and other components to help digest fats.
The pancreas contributes to digestion through its exocrine function by secreting digestive enzymes, while its endocrine function involves hormone production, including insulin, glucagon, and somatostatin

Pathophysiology of Disease

In Crohn's disease, inflammation affects all layers of the bowel wall, compromising the protective mucosal barrier. This leads to weakened immunity in the GI tract, increased permeability, and exposure to harmful pathogens, resulting in persistent inflammation.

Skip Lesions and Diseased Segments: The hallmark "skip lesions" create alternating areas of normal and inflamed bowel. This irregular pattern disrupts the flow of digested food and impairs nutrient absorption, especially in the terminal ileum, where vitamin B12 and bile salts are absorbed.

Small Intestine Involvement: When Crohn's affects the small intestine, malabsorption is a significant issue. Nutritional deficiencies arise as the inflammation damages the villi and microvilli, which are essential for absorbing nutrients. This can lead to weight loss, fatigue, and deficiencies in iron, calcium, and fat-soluble vitamins (A, D, E, K).

Impaired Peristalsis and Motility: Chronic inflammation can cause strictures (narrowing of the bowel) and fistulas (abnormal connections between segments or other organs). Strictures obstruct normal food movement, while fistulas may bypass normal digestion pathways, further complicating nutrient absorption and elimination.

Involvement of the Colon: When the disease impacts the large intestine, water and electrolyte absorption are compromised, resulting in diarrhea. This often contributes to dehydration and imbalances in potassium, sodium, and magnesium.

Systemic Effects: Crohn's inflammation extends beyond the bowel, leading to systemic symptoms such as fever, fatigue, and joint pain. Chronic inflammation diverts the body's energy, further impairing digestion and nutrient absorption.

Role of Immune Dysregulation: An overactive, inappropriate immune response exacerbates tissue damage in the GI tract, maintaining a cycle of inflammation and preventing healing. This prolonged immune activity contributes to fibrosis (scar tissue formation), further narrowing the bowel and reducing functionality.

NCLEX IV *(7)*: Reduction of Risk

Anticipated Diagnostics
Labs

CBC: Detects signs of infection, anemia, and overall health status, including inflammation markers.
Serum Electrolytes: Assesses electrolyte imbalances due to diarrhea and malabsorption.
CRP/ESR: Measures levels of inflammation in the body, often elevated during active Crohn's disease.
Stool Tests: Identifies blood, infection, and signs of inflammation (elevated calprotectin).
Endoscopy/Colonoscopy: Visualizes the GI tract to locate inflammation, ulcers, and skip lesions characteristic of Crohn's disease.
Biopsy: Confirms Crohn's diagnosis and evaluates the extent of tissue involvement.
MRI Enterography or CT Enterography: Provides detailed images of the small bowel, highlighting inflammation, strictures, or fistulas.
Small Bowel Follow-Through: Detects narrowed areas and blockages in the small intestine.
Capsule Endoscopy: Uses a tiny camera to examine the entire GI tract, focusing on areas missed by traditional scopes.
Barium X-Ray: Helps visualize bowel structure and detect abnormalities like strictures or fistulas.

Additional Diagnostics

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

NCLEX IV *(7)*: Reduction of Risk

Contributing Risk Factors	Signs and Symptoms	Possible Therapeutic Procedures	Prevention of Complications
Family history of Crohn's disease or inflammatory bowel disease Smoking Age (commonly diagnosed between 15 and 35 years old) Ethnicity Use of NSAIDs Diet low in fiber or high in refined sugar Environmental factors (urban living or developed countries)	Persistent diarrhea Abdominal pain and cramping Blood in stool Fatigue and low energy Weight loss and reduced appetite Mouth sores Fever Pain or drainage near the anus (due to fistulas) Sensation of incomplete bowel evacuation Constipation, which may lead to bowel obstruction	Non-surgical Medications, Dietary Modifications: Tailored diets to reduce symptoms and improve nutrient absorption. Bowel Rest: Temporary cessation of oral intake, with nutrition provided via IV or feeding tube. Lifestyle Changes: Smoking cessation and stress management to reduce flare-ups. Surgical: Resection, strictureplasty, fistula repair, abscess drainage, colectomy	Bowel obstruction due Fistulas forming abnormal connections between organs or tissues. Perforation and bleeding Abscesses, which are painful collections of pus. Malnutrition Anal fissures leading to pain and bleeding during bowel movements. Colon cancer risk increases with long-term inflammation. Osteoporosis due to malabsorption of calcium and vitamin D. Kidney stones from altered absorption of oxalate. Skin disorders, such as erythema nodosum or pyoderma gangrenosum.

NCLEX IV *(6)*: Pharmacological and Psychosocial/Holistic

Parenteral Therapies

Anticipated Medication Management
Anti-inflammatory Drugs: Aminosalicylates (mesalamine) to reduce inflammation in mild cases. Corticosteroids: Used for short-term management during flare-ups to control inflammation. Immunosuppressants: Azathioprine or methotrexate to suppress the immune system and prevent flare-ups. Biologics: Tumor necrosis factor (TNF) inhibitors (infliximab, adalimumab) or integrin inhibitors (e.g., vedolizumab) for moderate to severe cases. Antibiotics: Metronidazole or ciprofloxacin to treat infections or complications like abscesses. Pain Management: Analgesics for symptom relief, avoiding NSAIDs due to potential exacerbation of symptoms. Nutritional Support: Vitamin and mineral supplements to address deficiencies caused by malabsorption.

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

Non-Pharmacologic Care Measures
Dietary Adjustments: Implementing a low-residue or anti-inflammatory diet to reduce symptoms and improve digestion. Hydration: Ensuring adequate fluid intake to counteract dehydration caused by diarrhea. Stress Management: Techniques like mindfulness, yoga, or counseling to minimize stress-related flare-ups. Physical Activity: Gentle exercise to support overall health and reduce fatigue. Smoking Cessation: Avoiding smoking to prevent exacerbation of symptoms. Probiotic Use: Supporting gut health with probiotics to balance intestinal flora.

NCLEX III *(4)*: Care Needs

What stressors might a patient with this diagnosis be experiencing?
Physical Stressors: Chronic pain, acute pain, fatigue, diarrhea, and malnutrition. Emotional Stressors: Anxiety about flare-ups, fear of public accidents, and feelings of isolation. Social Stressors: Difficulty attending social events or maintaining relationships due to symptoms. Financial Stressors: Costs of medications, treatments, and dietary adjustments. Work/School Stressors: Managing symptoms while meeting responsibilities and deadlines. Lifestyle Stressors: Adapting to dietary restrictions and frequent medical appointments.

Client/Family Education

List 3 potential teaching topics/areas
Importance of medication adherence and recognizing side effects. Dietary modifications to manage symptoms and improve nutrition. Recognizing early signs of complications and when to seek medical help.

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

Multidisciplinary Team Involvement (Which other disciplines do you expect to share in the care of this patient)
Gastroenterologist, Colorectal Surgeon, Dietitian/Nutritionist, Radiologist, Pathologist, Pharmacist, Mental Health Professional Primary Care Physician

Potential Patient Problems (Nursing Diagnoses)

To Be Completed Before the Simulation

Anticipated Patient Problem: Risk for fluid/electrolyte imbalance (deficient)

Clinical Reasoning: Chronic diarrhea, inflammation, and malabsorption leading to potential dehydration and electrolyte abnormalities.

Goal 1: will maintain stable fluid and electrolyte levels, evidenced by balanced intake/output and normalized electrolyte values by the end of my shift.

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?
Monitor intake and output every 2 hours.	Implement strict intake/output monitoring every 2 hours to track fluid balance.
Assess mucous membranes for dryness every 4 hours.	Provide oral rehydration solutions every 2-4 hours.
Evaluate skin turgor and capillary refill at the beginning of each shift every 4 hours.	Encourage fluid intake, focusing on electrolyte-rich fluids, every 2 hours as tolerated.
Assess serum electrolyte levels (sodium, potassium) at the beginning of each shift.	Administer oral mineral and electrolyte supplements (potassium, magnesium) as ordered to correct deficiencies.
Evaluate blood pressure and heart rate every 4 hours to identify signs of hypovolemia.	Administer IV fluids as ordered to restore hydration and electrolytes prn
Monitor urine characteristics (color, clarity) once per shift to assess hydration status.	Monitor and record daily weight to detect fluid retention or losses at beginning and end of my shift

Goal 2: will remain free from symptoms of dehydration, such as dizziness or dry mucous membranes during my time of care.

To Be Completed Before the Simulation

Anticipated Patient Problem: **Acute Pain**

Clinical Reasoning: Inflammation in the GI tract causing abdominal cramping and discomfort.

Goal 1: will report a pain score of less than 3 on a 0-10 scale by the end of my shift.

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 pain level using 0-10 scale every 2 hours and as needed.	Administer prescribed analgesics (IV morphine) as needed.
Monitor for nonverbal signs of pain (guarding, facial expressions) every 2 hours.	Educate the patient on relaxation techniques, such as deep breathing, to manage pain.
Assess abdomen for tenderness and distention at the beginning of each shift and every 4 hours.	Offer a heating pad to the abdomen to relieve cramping as tolerated.
Monitor vital signs (heart rate, blood pressure) for changes associated with pain every 4 hours.	Educate the patient on relaxation techniques, such as deep breathing, to manage pain.
Review the patient's pain triggers and response to previous interventions every shift.	Provide small, frequent meals to reduce abdominal discomfort.
Evaluate the effectiveness of pain relief interventions every 2-4 hours.	Notify the provider if pain persists or intensifies despite interventions.

Goal 2: will demonstrate nonverbal signs of comfort (relaxed posture, no grimacing, no guarding) during my care.

To Be Completed During the Simulation:

Actual Patient Problem: Risk for hypovolemic shock

Clinical Reasoning: Gastritis, recent ileostomy, active blood loss and decreased circulating volume, history of Crohn's disease, decreased tissue perfusion, loss of extracellular fluid, deficient fluid volume, BP 100/60, HR 110, RR22, PRBC 2units, pale, flushed, fever.

Goal: Will remain free from signs of organ dysfunction, such as altered mental status or decreased urine output, throughout my care. Met: ☐ Unmet:☐

Goal: Will maintain stable vital signs, including blood pressure at or above 90/60 mmHg and heart rate at or below 100 bpm, by the end of my shift. Met: ☐ Unmet:☐

Actual Patient Problem: **Acute Pain**

Clinical Reasoning: Seen in ED for abdominal pain, 6-8 abdominal pain, body aches, headaches, acetaminophen/morphine use, chills.

Goal: Will report a pain score of less than 3 on a 0-10 scale by the end of my shift. Met: ☐ Unmet:☐

Goal: will demonstrate nonverbal signs of comfort (relaxed posture, no grimacing, no guarding) during by the end of my care Met: ☐ Unmet:☐

Additional Patient Problems: Ineffective coping

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
Risk for hypovolemic shock	1500	IVF/PO Intake total: 400 Output: 500 Weight: 59kg	1630	Maintained IVF 1L NS IV at 150ml/hr.	1645	IVF/PO intake total: 200 Output: 400 Weight: 59kg
Risk for hypovolemic shock	1530	Previous VS BP 100/60 HR 110 RR 22	1540	Obtained VS during assessment.	1630	BP 94/56 HR 110 RR 26 Worsening condition
Acute Pain, Ineffective coping	1545	"Very sore and crampy" 6/10 on 0-10 numerical scale Began in AM and is	1550	Assured that when feeling better stress management methods should be reviewed.	1600	Verbalized understanding of education plan.

		located at top of stomach and increases with stress		Bowel sounds hyperactive in all 4 quadrants		
Risk for hypovolemic shock	1630	BP 94/56 HR 110 RR 26 SpO2 92& RA Feels “more lightheaded and dizzier” Feels like they will faint and throw up Skin color pale	1545	Oxygen therapy started at 2L NC Lowered the HOB less than 30 degrees/flat. Provided cold cloth, pan, and oxygen therapy.	1700	BP 98/62 HR 100 RR 20 SpO2 94% 2L NC
Risk for hypovolemic shock	1730	Accessed whether client has experienced reactions with any previous blood transfusions	1800	Began administration and infusion of 2 units of PRBC. Administered slowly and turned off NS solution by closing clamp. Double verified with charge RN.	1845	Had a headache and body ache all over. Requested ibuprofen. Blood infused: 300ml
Risk for hypovolemic shock	1845	BP 103/60 HR 96 RR 22 T 36.9C Face is flushed, headache and is restless	1850	Stopped the transfusion and explained that during blood transfusions, sensitivity and reactions can occur such as fever, chills, headaches and that the provider will be notified.	1910	Verbalized understanding of reactions that can occur. IV NS to continue to keep veins open at 30ml/hr.
Acute pain	1855	Requested ibuprofen	1900	Informed that ibuprofen order has not been made, and that the provider will be notified.	1910	Gained order for acetaminophen 650mg PO stat and PRN four hours for aches and elevated temperatures.
Acute pain, risk for hypovolemic shock	1920	Consulted with Dr. March (Gastroenterologist) for an endoscopy recommendation to visualize GI tract.	1930	Provided education reason for endoscopy procedure/treatment, and medications to be used – IV sedation and atropine.	1935 1600	Verbalized understanding.
Acute pain	1600	8/10 abdominal pain after AM endoscopy and intake of food. BP 98/58 HR 106 RR 24	1600	Administered 4mg/.5ml of IV morphine bolus infused at a rate of 1mg/min.	1630	Reports better feeling and 2-3 pain. No longer feels sore or crampy.

		SpO2 95% 2L NC				
Ineffective coping	1630	Lives a stressful lifestyle and work life. Feels they don't have time for management stress and reduce to wine drinking. Has no support systems	1640	Educated on different coping strategies to be implemented to reduce stress and readmission	1645	Will avoid ibuprofen and plans to implement walks, socialization, increase protein in lunches. Left home with handouts.

ATI Virtual Clinical Questions and Reflection:

1) Identify two members of the healthcare team collaborating in the care of this patient:
    a. **RN Kari and RN Esther.**
        i. They worked together to pass information pertaining to the client when doing transfers of units. This helped keep continuity of care for the client.
    b. **Dr. March (Gastroenterologist)**
        i. She recommended an endoscopy to the client after doing an assessment, explained the procedure and its rationale for being recommended. She performed the procedure and stopped the bleeding the next morning.
2) What were three steps the nursing team demonstrated that promoted patient safety?
    a. RN Esther had another nurse act as a witness and as another person to verify that the correct client was receiving the right dose and amount of PRBC. The transfusion was stopped when the abnormal reaction took place.
    b. RN Esther closely monitored the client every 15 minutes with VS and questions after beginning the infusion of PRBC.
    c. RN Esther provided education to ensure that the client avoids medications such as NSAIDS which further progress the damage that occurs in Crohn's disease. An order was made for pain medication (acetaminophen) that is better tailored to treat her pain and fever more safely.
3) Do you feel the nurse and medical team utilized therapeutic communication techniques when interacting with individuals, families, and health team members of all cultural backgrounds?
    a. If **yes**, describe: I believe that overall, the medical team utilized therapeutic communication techniques when interacting with the client. Every team member properly introduces themselves, what they would be doing, and made sure that the client was comfortable during their time of care. All the clients questions were answered, and this is seen best near the end when RN Esther provided education in several forms such as through handouts and verbal. Different recommendations were made to ensure that the client could leave and begin implementing different stress reduction strategies and Crohn's disease care to prevent readmission. She was never discriminated against based on her age, gender, race, or cultural/economic background. The team also did good by addressing her pain and discomfort concerns before even trying to do

things such as providing education because its important for the client to at least be comfortable and stable before that can begin.

b. If **no**, describe: I believe that pain is a top priority that should be addressed quickly. I understand that the client needed PRBC before anything else, but the team did not address her concerns for pain and requested pain medications as quickly as they should have. It was only after the provider was notified of the transfusion complication that acetaminophen was ordered, but this could have probably been done beforehand so that the client wouldn't have to endure pain for such a long time.

Reflection

1) Go back to your Preconference Template:

   a. Indicate (circle, star, highlight, etc.) the components of your preconference template that you saw applied to the care of this patient.

      i. Endoscopy, lifestyle changes, NSAID avoidance, stress management, bleeding and risk for hypovolemic shock, pain medications.

2) What was the priority nursing problem? Provide rationale.

   a. The primary nursing concern for this client was the risk for hypovolemic shock. This was exacerbated by the ongoing gastrointestinal bleeding, a negative fluid balance, and the interruption of a blood transfusion due to an adverse reaction, all of which significantly heightened the potential for shock.

3) Review your Patient Problem Form: Did you see many of your anticipated nursing assessments and interventions used?

   a. Were there interventions you included that *were not* used in the scenario that could help this patient?

      i. If **yes**, describe: I saw several of my anticipated nursing assessments and interventions that were used. Most of them aligned with consistent monitoring of VS such as BP, HR, and RR, and pain to prevent and sudden complications or episodes of hypovolemic shock. Accessing these vitals and monitoring fluid intake helps to track the progression and risk for hypovolemic shock. A lot of care was similar to risk for fluid/electrolyte imbalance (deficient).

      ii. If **no**, describe: Not many of the electrolyte imbalance/fluid imbalances interventions were used in this scenario. I believe that if more labs were drawn like a CMP and CBC to view electrolytes and other minerals such as potassium, there may have been some imbalances that could be corrected with supplements either through PO or IVF. More pain interventions could have been implemented because that were nonpharmacological could have been implemented because they took too long to get acetaminophen ordered.

4) After completing the scenario, what is your patient at risk for developing?

   a. Risk for further GI bleeding and hypovolemic shock

   b. Why? This is due to ongoing blood loss, resulting in decreased circulating volume and worsening hemodynamic stability. Without appropriate interventions like blood transfusions and fluid replacement, the patient remains at risk for complications such as organ dysfunction or

further deterioration in vital signs. If she continues to live her current lifestyle that is very stressful, continues to use NSAIDS, and doesn't consume a proper diet she can begin bleeding again.

5) What was your biggest "take-away" from participating in the care of this patient? How did this impact your nursing practice?

    a. The biggest takeaway from participating in the care of this patient is understanding how critical it is to catch the early signs of deterioration, especially with something as serious as a GI bleed and hypovolemic shock. It taught me that fast and effective actions, like monitoring vitals closely, starting oxygen, and working as a team to address complications, can really make all the difference. It has reinforced how prompt and quick actions like administering PRBCs, notifying providers of any sudden complications can lead to correction/stabilization of a client. This ATI clinical experience will definitely shape how I approach patient care moving forward. It reminded me how important clear communication, patient education, and teamwork are in delivering safe and effective care. It's also made me more confident in prioritizing interventions and ensuring my patients are stabilized before moving on to other tasks. I feel more prepared to handle critical situations now