N433 Care Plan 1

Lakeview College of Nursing

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Demographics (3 points)

Date of Admission	Client Initials	Age (in years & months)	Gender
01/19/2022	AM	17 years 8 months	Male
Code Status	**Weight (in kg)**	**BMI**	**Allergies/Sensitivities (include reactions)**
Full	72.6	24.3	No known allergies

Medical History (5 Points)

Past Medical History: Patient has no past medical history

Illnesses: Patient has no history of illness

Hospitalizations: Patient has no history of hospitalizations

Past Surgical History: Patient has no surgical history

Immunizations: Patient stated: "I did not receive any vaccines except for the COVID vaccine last year, it was not my choice."

Birth History: Patient's mother was not available to attain this information

Complications (if any): n/a

Assistive Devices: This patient does not use any assistive devices

Living Situation: Patient stated: "I live with my dad, stepmom, and my brother. I have three rats and one dog."

Admission Assessment

Chief Complaint (2 points): Motor Vehicle Accident (MVA), yellow trauma, thoracic spine fracture (T11), back and head pain

Other Co-Existing Conditions (if any): n/a

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

On 01/19/20211, the emergency team placed three IVs and a foley catheter. They also performed an x-ray of his lumbar and cervical spine which identified a T11 fracture. The Patient had surgery at 2000 on 01/19/2022, during which, pedicle screws were placed from T8-L2, and a laminectomy was performed at T10-T12. He was brought to the unit at 0800 on 01/20/2022. He currently has two JP drains draining his thoracic vertebrae midline incision.

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

On Wednesday afternoon (01/19/2022), a 17-year-old male was in the passenger seat of his friend's vehicle while they were smoking marijuana and driving to another friend's house. The driver was speeding and hit a parked car which caused his vehicle to roll several times. The patient was not wearing his seatbelt. Following the accident, his friends fled the scene, but the patient could not because he could not feel his legs. He was brought to the emergency department and declared a yellow trauma. The patient complained of sharp, constant pain in the right side of his head and back, which worsened with movement. The patient did not have any other complaints. An x-ray of his spine revealed that he had fracture T11, which would be addressed by surgically placing screws and fusing his vertebrae. An MRI of identified a cephalic bleed which is currently not being treated.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Thoracic spine fracture

Secondary Diagnosis (if applicable):.

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

The human spine consists of twenty-four vertebrae, seven cervical, twelve thoracic, and five lumbar (Hinkle & Cheever, 2018). These vertebrae are composed of several parts, including the arch, pedicles, laminae, and vertebral body (Capriotti, 2020). These parts protect the spinal cord, which controls the motor and sensory function from injury (Hinkle & Cheever, 2018). The cervical spine allows for flexion, extension, and rotation. The thoracic spine prevents flexion, extension, and rotation, while the lumbar spine allows it (Fernández-de Thomas & De Jesus, 2021). The area where these two regions meet (T10-L2) is called the thoracolumbar junction (Fernández-de Thomas & De Jesus, 2021). This region is highly susceptible to injury because the adjoining vertebrae move in different directions (Fernández-de Thomas & De Jesus, 2021). The most common injury to this area is a fracture, which typically results from a motor vehicle accident or a fall (Fernández-de Thomas & De Jesus, 2021). Each year, 2.4 patients per million experience a thoracolumbar fracture (Fernández-de Thomas & De Jesus, 2021). Symptoms of a thoracolumbar fracture include pain that worsens with movement, muscle spasms, and changes in spinal shape (Capriotti, 2020). If the fracture is pressing on the spinal cord, leg paralysis, incontinence, and weakness can occur (Capriotti, 2020). Physicians diagnose a thoracolumbar fracture by x-ray, CT scan, and MRI (Capriotti, 2020). The x-ray identifies spine deformities, the CT scan rules out cervical fractures, and the MRI identifies spinal cord injury (Capriotti, 2020). The treatment of a thoracolumbar fracture depends on the type and location (Fernández-de Thomas & De Jesus, 2021). Stable fractures, which result from excessive flexion, extension, and weight-bearing, are treated with a brace, bed rest, and analgesics (Hinkle & Cheever, 2018). Unstable fractures resulting from dislocation are typically treated with surgery to place screws, decompress the spinal cord, and fuse the spine (Hinkle & Cheever, 2018). The prognosis following treatment depends on the amount of spinal cord damage (Fernández-de Thomas & De Jesus, 2021). Some patients will completely regain neurological function, while others experience permanent deficits (Fernández-de Thomas & De Jesus, 2021).

This patient was in a motor vehicle accident on 01/19/2022, which caused him to lose sensation in his legs. He complained of pain in his head and back at the hospital, which worsened with movement. An x-ray of his spine revealed a T11 fracture and mild kyphosis. A CT of his spine ruled out a cervical fracture. An MRI identified a cephalic bleed. He had surgery on 01/19/2022 to place pedicle screws from T8-L2 and perform a laminectomy (fusion) from T10 to T12. During my shift, he was experiencing severe back pain, which was being managed as needed with hydromorphone hydrochloride. Neurological status is being assessed every two hours. This patient did not display any neurological deficits and is expected to make a complete recovery. However, while hospitalized, he is at risk for several postoperative complications. This patient has a large vertical thoracic midline incision, increasing his risk of infection. Symptoms of infection include redness, swelling, warmth, and purulent discharge at the surgical site, as well as elevated WBCs, fever, tachycardia, and tachypnea (Hinkle & Cheever, 2018). This complication can be prevented by performing wound care as ordered. This patient's range of motion and mobility is severely limited, putting him at risk for deep-vein thrombosis (DVT). Symptoms of DVT include pain in one leg, swelling, warmth, redness, and sometimes a positive Homan's sign (Capriotti, 2020). DVT can be prevented by using sequential compression devices and frequently repositioning the patient.

Pathophysiology References (2) (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed.). F.A. Davis.

Fernández-de Thomas, R. J., & De Jesus, O. (2022). *Thoracolumbar spine fracture*. StatPearls. https://www.ncbi.nlm.nih.gov/books/NBK562204/

Hinkle, J. L., & Cheever, K. H. (2018). *Brunner & Suddarth's textbook of medical-surgical nursing* (14th ed.). Wolters Kluwer

Active Orders (2 points)

Order(s)	Comments/Results/Completion
Activity: As tolerated	The patient changed positions multiple times during my shift. Physical therapy came to see him, but he was in too much pain to participate.
Diet/Nutrition: Regular	The patient was not hungry, but I did encourage him to order breakfast and consume something. He ordered eggs and bacon. He ate 2/3 pieces of his bacon and did not touch his eggs.
Frequent Assessments: Vitals q4h, neuro q2h, cardiac monitoring	Vitals were stable and he was A&Ox4 at 0815 and 1125.
Labs/Diagnostic Tests: CBC and CMP	The nurse drew labs around 1000, the results showed elevated WBCs, and glucose. His calcium, RBCs, Hct, Hgb, and sodium were low.
Treatments: Incentive spirometer q2h, SCDs, pain medication as needed	The patient was encouraged to use his incentive spirometer every two hours but did not use it while I was there. The patient had

	SCDs on through my entire shift and he received pain medication two times.
Other: n/a	
New Order(s) for Clinical Day	
Order(s)	**Comments/Results/Completion**
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	4.63-5.29 10^6 /µL	4.02	3.86	Decreased RBCs result from blood loss (Pagana et al., 2021). My patient is recovering from thoracic spine surgery and has two JP drains in place which are putting out sanguineous drainage. He also has an internal cephalic bleed.
Hgb	11-14.5 g/dL	12.1	11.5	
Hct	33.9%-43.5%	34.8	33.4	Decreased hct occurs with blood loss

				(Pagana et al., 2021). My patient is recovering from thoracic spine surgery and has two JP drains in place which are putting out sanguineous drainage. He also has an internal cephalic bleed.
Platelets	175-332 10^3 /µL	165	169	Gabapentin can cause thrombocytopenia (Jones & Bartlett Learning, 2020). Blood loss can also cause low platelets (Pagana et al., 2021).
WBC	3.84-9.84 10^3 /µL	10.02	12.6	Stress on the body and inflammation cause elevated WBC levels (Capriotti, 2020).
Neutrophils	1.54-7.04 x10^9/L	8.32	10.53	Elevated neutrophils can occur with inflammation and stress (Capriotti, 2020). The healing process causes inflammation and stress on the body. This patient is recovering from a thoracic spine surgery.
Lymphocytes	20-40%	7.7	8.8	Gabapentin can cause leukopenia (Jones & Bartlett Learning, 2020). When a medication suppresses only the lymphocytes and not the other WBCs it is called B lymphocytopenia (Capriotti, 2020).
Monocytes	2%-10%	8.6	6.7	
Eosinophils	0%-4%	0.1	0.3	
Basophils	0%-1%	0.1	0.2	
Bands	0%-10%	83	83.5	Elevated bands combined with elevated WBCs indicates acute inflammation in the body (Capriotti, 2020).

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 mmol/L	139	134	Damage to the skin decreases its ability to maintain water and electrolyte balance (Capriotti, 2020).

				My patient has a large midline incision which is allowing water and electrolytes to exit the body. He is also not receiving adequate nutrition which could cause low sodium in the blood (Pagana et al., 2021).
K+	3.5-5.1 mmol/L	4	4.1	
Cl-	98-107 mmol/L	109	101	Elevated chloride can result from I.V fluid administration (Pagana et al., 2021). This patient was receiving I.V fluids until 01/20/2022 (evening).
Glucose	74-100 mg/dL	100	104	Stress on the body can cause elevated cortisol levels, resulting in elevated blood glucose (Hinkle & Cheever, 2018). Gabapentin can also cause hyperglycemia (Jones & Bartlett Learning, 2020).
BUN	8-21 mg/dL	12	10	
Creatinine	0.55-1.3 mg/dL	0.76	0.66	
Albumin	3.5-5 g/dL	4.4	n/a	
Total Protein	6-8 g/dL	7.0	n/a	
Calcium	8.9-10.6 mg/dL	8.0	8.4	Decreased calcium levels can result from not consuming an adequate diet (Capriotti, 2020). This patient has not received adequate nutrition since he has been hospitalized.
Bilirubin	0.2-1.2 mg/dL	0.6	n/a	
Alk Phos	40-150 U/L	60	n/a	
AST	5-34 U/L	39	n/a	Certain medications can damage the liver cells causing elevated liver enzymes (Pagana et al., 2021). Gabapentin and hydromorphone hydrochloride can both affect the liver (Jones & Bartlett Learning, 2020). Muscle cell damage can also increase this value (Capriotti, 2020).

				My patient had major spinal surgery which could have injured these cells.
ALT	0-55 U/L	18	n/a	
Amylase	30-115 U/L	n/a	n/a	
Lipase	7-59 U/L	n/a	n/a	
Magnesium	1.6-3.6mg/dL	1.9	n/a	
Carbon dioxide	20-30 mEq/L	26	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	3-15 mm/hr	n/a	n/a	
CRP	0-0.29 mg/dL	n/a	n/a	
Hgb A1c	<7.5%	n/a	n/a	
TSH	0.660-4.140 mIU/L	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	Yellow, clear	n/a	n/a	
pH	4.5-8	n/a	n/a	
Specific Gravity	1.005-1.03	n/a	n/a	
Glucose	Negative	n/a	n/a	

Protein	Negative	n/a	n/a	
Ketones	Negative	n/a	n/a	
WBC	<5 hpf	n/a	n/a	
RBC	<5 hpf	n/a	n/a	
Leukoesterase	Negative	n/a	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	

***** CBC and CMP normal lab values obtained from Epic chart. Other labs obtained from *Mosby's diagnostic and laboratory test reference (2021)*.**

Lab Correlations Reference (1) (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed.). F.A. Davis.

Hinkle, J. L., & Cheever, K. H. (2018). *Brunner & Suddarth's textbook of medical-surgical nursing* (14th ed.). Wolters Kluwer

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

Pagana, K.D., Pagana, T. J., Pagana, T.N. (2021). *Mosby's diagnostic and laboratory test reference* (15th ed). Elsevier

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

01/19/2022- CT of cervical vertebrae ruled out cervical spine fracture

01/19/2022- X ray of lumbar vertebrae identified a T11 fracture and mild kyphosis.

01/19/2022- MRI identified a cephalic bleed.

Diagnostic Test Correlation (5 points):

CT scans and x-rays of the spine are used to identify the cause of back pain, which was one of my patient's complaints following his accident. These tests provide images of the vertebrae and spinal canal, which help diagnose and rule out deformities such as fractures, herniated disks, osteoporosis, and spinal stenosis. An MRI of the brain is ordered following head trauma and for patients experiencing neurological symptoms such as peripheral numbness, which my patient experienced. The MRI provides images of the lobes and vessels of the brain to confirm or rule out complications such as hemorrhage, aneurysms, tumors, vessel malformations, and damage to the brain and spinal cord (Capriotti, 2020).

Diagnostic Test Reference (1) (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed.). F.A. Davis.

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

Brand/Generic	Kefzol/ cefazolin sodium	Neurontin/ gabapentin/	Dilaudid/ Hydromorphone hydrochloride	Robaxin methocarbamol	Miralax/ Polyethylene glycol 3350
Dose	2g/10 mL @ 60 mL/hr	300 mg	0.5 mg for pain 4-6 / 1 mg for pain 7-10	500 mg	17 g
Frequency	Pre-op/once	Q8H	PRN Q2H	Q6H	Twice daily
Route	I.V PB	PO	I.V Push	PO	PO
Classification	1st- generation cephalosporin/ antibiotic	1-amino-methyl cyclohexaneacetic acid/ anticonvulsant	Opioid /Opioid analgesic	Carbamate derivative/ skeletal muscle relaxant	Osmotic laxative/stimulant laxative/ gastrointestinal agent
Mechanism of Action	Interferes with cell wall synthesis by interfering with the cross-linking of the peptidoglycan stands which makes the bacteria rupture and die	Drug is similar in structure to GABA the main neurotransmitter in the brain, exact mechanism of drug is unknown, but GABA may reduce pain response	Binds with opioid receptors in the CNS to reduce pain perception of/ and emotional response to pain	Interferes with perception of pain, depresses CNS which causes sedation and reduces muscle spasms	Pulls water into the colon which stimulates the colon to contract and makes it easier to pass stool
Reason Client Taking	To prevent infection following thoracic spine surgery	To manage nerve pain following thoracic spine surgery	To prevent severe pain post-op	To relieve skeletal muscle pain	To relieve constipation caused by immobility and opioid analgesics to prevent paralytic ileus
Concentration Available	2g/10 mL	300 mg	0.5 mg/1 mg based on pain level	500 mg	17 g
Safe Dose Range Calculation	Adult pre-op dosage is 1-2g 30-60 min before surgery, given over 30 min Children- 50-100 mg/kg/day (72.6) = 3630-7260 mg/day/3 doses= 1,210-	300-600 mg three times daily	0.2-1 mg every 2-3 hours	1,500mg q8h 1,000 mg q6h	0.4-0.8 g/kg/day divided in 2 doses safe dose= 29.04/2 doses - 58.08/2 doses = 14.52-29.04 g/dose

	2,420 mg/dose				
Maximum 24-hour Dose	6,000 mg daily is the maximum daily dose, the ordered dose is safe for this patient	900-1,800 mg/ day is safe range Max: 3,600 mg daily, the ordered dose is safe for this patient	0.2 mg x 12 doses= 2.4 mg/day 0.2x 8 doses= 1.6 mg/day 1x12 doses= 12 mg/day 1 x 8 doses= 8 mg/day This order is safe for this patient	safe dose= 4,000-4,500 - mg/day max: 8,000 mg daily for severe discomfort, the ordered dose is safe for this patient	58.08 g/day, this ordered dose is safe for this patient
Contraindications (2)	Hypersensitivity to cefazolin, other cephalosporins or their components, hypersensitivity to penicillin	Hypersensitivity to gabapentin or its components Extended-release safety not established in patients <18	Hypersensitivity to hydromorphone, other narcotics, or their components Confirmed or suspected paralytic ileus	Hypersensitivity to methocarbamol or its components use caution when giving with other CNS depressants	Bowel obstruction Nausea, vomiting, and abdominal pain Hypersensitivity to drug or its components
Side Effects/Adverse Reactions (2)	Hemolytic anemia, nephrotoxicity	Elevated liver enzymes, leukopenia thrombocytopenia	CNS depression respiratory depression	Fever brown urine	Frequent diarrhea Mild cramps, bloating, and gas
Nursing Considerations (2)	Monitor patient for bleeding due to thrombocytopenia Monitor patient for diarrhea because this drug can cause pseudomembranous colitis	Monitor renal and liver function test results Monitor patient for hypersensitivity such as fever or swollen lymph nodes	Give IV injection over 2 minutes monitor for respirator depression, hypotension, and constipation	Keep antihistamines, corticosteroids, and epinephrine nearby in case of anaphylaxis Do not give subcutaneously	Do not give if patient displays signs of bowel obstruction Mix in 120-240 mL of water, juice, coffee, soda, tea, or juice
Client Teaching needs (2)	Report perineal itching and loose, foul-smelling stools which indicate a superinfection, monitor and report bleeding	This drug may cause dizziness, and nose bleeds perform adequate oral hygiene to prevent	Report difficulty breathing, severe nausea, or vomiting Change positions	Take with food to prevent nausea This drug may turn urine brown, black, or	Drink solution immediately after it is mixed This drug should produce a bowel movement within 1-3 days

	from gums or blood in urine/stool	gingivitis	slowly to prevent orthostatic hypotension	green	

Medication Reference (1) (APA):

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

Assessment

Physical Exam (18 points) Highlight Abnormal Pertinent Assessment Findings

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	A&O x 4 No acute distress noted. This patient is well-groomed
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☒ N ☐** **Type:** **IV Assessment (If applicable to child):** **Size of IV:** **Location of IV:** **Date on IV:** **Patency of IV:** **Signs of erythema, drainage, etc.:** **IV dressing assessment:** **IV Fluid Rate or Saline Lock:**	Pink Dry Warm Skin turgor assessed with immediate recoil No rashes noted. Small round bruises on right nail beds Large vertical thoracic spine midline incision 14, patient can change positions in bed but is bedfast and has poor dietary intake 2 JP drains with sanguineous output from midline incision Right AC- 18 g Right hand- 14 g 01/19/2022 for both Patent, flushed well when administering hydromorphone hydrochloride No signs of erythema Clean, dry, and intact Saline lock
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Head and neck symmetrical. The trachea is midline without deviation. No lymphadenopathy inspected or palpated. Thyroid is nonpalpable. Bilateral auricles are pink without drainage or lesions noted. Bilateral PERRLA. Intact EOMs

Thyroid:	bilaterally. Sclera is white. Conjunctiva is pink. The nose is free of discharge and lesions. Dentition is good. Throat is pink, moist, and without lesions. Tonsils 1+.
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:** n/a	Clear S1 and S2 heart sounds. No audible murmur, gallops, or rubs noted. Pulses 2+ throughout bilaterally. Capillary refill normal, less than 3 seconds. No edema inspected or palpated in upper or lower extremities
RESPIRATORY: **Accessory muscle use: Y**☐ **N** ☒ **Breath Sounds: Location, character**	Breath sounds even, regular and nonlabored bilaterally. No crackles, wheezes, or rhonchi noted.
GASTROINTESTINAL: **Diet at home:** **Current diet:** **Height (in cm):** **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:**	 Regular Regular 172.72 cm Normoactive in all four quadrants Patient reported last BM was two days ago Abdomen soft, and nontender to light palpation. No masses or organomegaly noted. No distention noted. No incisions noted. No scars noted. No abdominal drains noted. No abdominal wounds noted.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y** ☐ **N** ☒ **Dialysis: Y** ☐ **N** ☒ **Inspection of genitals:** **Catheter: Y** ☒ **N** ☐	 Brown (side effect of his medication) Clear 275 mL at 1125 Genitalia clean without rashes or lesions.

Type: **Size:**	Indwelling foley catheter 16 Fr.
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** ☐	 WDL except tingling in both feet Full ROM in upper extremities, patient could lift his lower extremities and flex and extend his feet but not his knees due to pain. No supportive devices. Patient can perform oral care, change to side-lying position, and feed himself but cannot move up/down/or shift in bed 0 Bedfast, as tolerated
NEUROLOGICAL: **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	 Patient has limited mobility in his lower extremities bilaterally Equal and firm grips in upper extremities bilaterally. Equal and firm pedal pushes/pulls in lower extremities bilaterally Oriented to person, place, time, and situation. Cognitive with clear speech. Normal sensory response in upper and lower extremities bilaterally. Alert
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):**	 Patient stated: “I skateboard, play basketball, go on walks, and hang out with friends to cope with stress.” Patient has his own vehicle and drives himself. He cares for himself at home. Patient reported that he has a close and very supportive family.

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0815	76	109/61	20	98.8- Oral	96% RA
1125	87	113/63	18	99.3- Oral	100% RA

Vital Sign Trends: This patient's vitals were stable throughout my shift. However, his temperature was elevated at 1135 which can result from inflammation in the body (Hinkle & Cheever, 2018).

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

Pulse Rate	50-100 BMP
Blood Pressure	<120/80 **
Respiratory Rate	15-20 BPM
Temperature	97.9-99.1 F **
Oxygen Saturation	95-100%

** Vitals for patient's age not specified in ATI or textbook, so I used the adult ranges since he is almost 18.

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

Hinkle, J. L., & Cheever, K. H. (2018). *Brunner & Suddarth's textbook of medical-surgical nursing* (14th ed.). Wolters Kluwer

Holman, H.C., Williams, D., Sommer, S., Johnson, J., Wheless, L., Wilford, K., & McMichael, M. G. (2019). *RN nursing care of children review module* (11th ed.). Assessment Technologies Institute, LLC.

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

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1. 0735 2. 1115	1. Numerical 2. Numerical	1. Central back 2. Centr	1. 7/10 2. 10/10	1. Stabbing, constant,	1. Administer 1 mg I.V hydromorphone, reposition

		al back		2. Stabbing, constant	patient, and support knees with pillows 2. Administer 1 mg I.V hydromorphone
Evaluation of pain status *after* intervention	1. 0835-Numerical	Central back	6/10	Stabbing, constant	Patient reported that the medication helped a little. Shortly after, he fell asleep.
Precipitating factors: This patient experienced severe pain up and down his spine throughout my shift. His pain could not be adequately managed because there was not any hydromorphone hydrochloride on the unit. Pharmacy sent it up around 1130. **Physiological/behavioral signs:** His pulse and blood pressure were elevated compared to his 0815 vitals. The patient was fidgeting, deep breathing, squeezing the rails of the bed, and grimacing.					

Intake and Output (1 points)

Intake (in mL)	Output (in mL)
120 mL apple juice 60 mL Sierra Mist with breakfast	160 mL sanguineous drainage-JP drains 275 mL brown urine

Developmental Assessment (6 points)

Be sure to highlight the achievements of any milestone if noted in your child. Be sure to highlight any use of diversional activity if utilized during clinical. There should be a minimum of 3 descriptors under each heading

Age Appropriate Growth & Development Milestones

1. Adolescent males stop growing between 13.5- and 17.5 years of age (Ricci et al., 2021). By this age, males should be 132-176.8 cm tall and weigh 77.4-211 pounds (Ricci et al., 2021). This patient is 17 years and 8 months old. He weighs 159.72 pounds and is 172.72 cm tall which is ideal for his age.

2. Adolescents' lungs increase in length and diameter, resulting in a respiratory rate between 15 and 20 ((Ricci et al., 2021). This patient respiratory rate falls within this range indicating he has achieved this milestone.
3. Adolescents have all their permanent teeth except their wisdom teeth which erupt between 17 and 20 (Ricci et al., 2021). This patient had all his permanent teeth but did not have his wisdom teeth yet.

Age Appropriate Diversional Activities

1. Watching movies—The nurse and I helped him find a movie to watch.
2. Listening to music
3. Reading a book or magazine

Psychosocial Development:

Which of Erikson's stages does this child fit? This adolescent is the psychosocial stage of identity versus role confusion (Holman et al., 2019).

What behaviors would you expect? Adolescents are searching for their identity which requires them to participate in various experiences and try different roles (Holman et al., 2019). Their behaviors are influenced by their friends (Holman et al., 2019). They distance themselves from their family and rely on their friends (Ricci et al., 2021).

What did you observe? This patient was participating in risky behavior, which resulted in his injury. He admitted that not wearing a seat belt and smoking while driving was not wise. He appeared very upset while telling me how his friends left him injured and alone. This patient did not call to talk to his family during my shift.

Cognitive Development:

Which stage does this child fit, using Piaget as a reference? This adolescent is in the cognitive stage of formal operations (Holman et al., 2019).

What behaviors would you expect? During this stage, adolescents can pay attention for long periods of time (Holman et al., 2019). They can use logic to decide and understand errors in their judgement (Holman et al., 2019). They should also be participating in less risky behavior (Ricci et al., 2021).

What did you observe? This patient was attentive while I was collecting information for my care plan and performing my physical assessment. He understood the consequences of his actions and why he was in his current position. He participates in risky behaviors such as smoking marijuana and not wearing his seat, belt but denies drinking alcohol or using other drugs.

Vocalization/Vocabulary:

Development expected for child's age and any concerns? This patient communicated clearly and as expected for his age. He did not display any language delays.

Any concerns regarding growth and development? This patient's risky behavior and poor choice in friends almost cost him his life. He needs educated about substance use and ways to avoid harm. However, based on my observations, I do not have any concerns for his growth and development. This patient will remain in these psychosocial and cognitive stages for a few more years.

Developmental Assessment Reference (1) (APA):

Holman, H.C., Williams, D., Sommer, S., Johnson, J., Wheless, L., Wilford, K., & McMichael, M. G. (2019). *RN nursing care of children review module* (11th ed.). Assessment Technologies Institute, LLC.

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.
1. Acute pain related to thoracic spine surgery as evidenced by patient's fidgeting, grimacing, elevated heart rate, and verbalization of his back pain being a 7/10 and 10/10.	Acute pain impairs comfort, rest, and healing.	1.Assess patient's pain using OLDCART and numerical pain scale **2**.Administer analgesics as prescribed and provide non-pharmacological pain relief methods.	The patient's pain intensity will decrease as evidenced by her numerical pain rating within 1 hour. The patient will be comfortable evidenced by relaxed body language and ability to rest within 1 hour.	Goal met- Patient's pain level and characteristics were assessed while assessing his vitals. His numerical pain rating went down from a 7/10 to a 6/10 and he fell asleep shortly after being repositioned and given his hydromorphone at 0735. Pain level at 1115 was 10/10 and constant, he was given 1 mg hydromorphone and immediately his body language became relaxed.
2. Impaired nutrition: Less than body requirements related to inadequate dietary intake, loss of appetite and pain as evidenced by	Pain can affect a patient's appetite. Inadequate dietary intake can delay wound healing and suppress the immune system, increasing the risk of infection (Swearingen & Wright, 2019).	1.Administer analgesics before meals to control his pain and encourage dietary intake 2.. Monitor weight and electrolytes daily	While hospitalized, this patient's weight will be ideal for his age and height. Before discharge, his electrolyte levels will be in the normal range and his	Goal partially met- Hydromorphone was administered at 0735 which decreased his pain level from a 7/10 to a 6/10. I encouraged him to order breakfast and consume the protein because he needs it for healing. The patient ate 2/3 slices of bacon and said he would continue to

patient's vocalization of not being hungry, only consuming 25% of his breakfast, low electrolyte levels, and constipation			elimination pattern will return to normal.	pick at it until lunch. After receiving his second dose of hydromorphone, he was asked about ordering lunch, and he stated he would order it in a few minutes. Electrolyte levels and weight were reviewed at 1145 He has a healthy BMI, and his calcium and sodium levels were low. These interventions should be repeated to improve PO intake which will help address his electrolyte imbalance.
3. Constipation related to immobility, inadequate dietary intake, and opioid analgesics as evidenced by patient's report of his last bowel movement being two days ago.	If he does not produce a bowel movement, he is at risk for developing paralytic ileus, a serious postoperative complication.	1. Administer laxatives and stool softeners as prescribed. 2.Reposition the patient every two hours to promote peristalsis and encourage him to increase fluid/dietary intake	The patient will have a normal elimination pattern within two days	Goal not met- This patient was cooperative and took his senna and polyethylene glycol this morning. He was repositioned after receiving his 0735 dose of hydromorphone and again during my physical assessment. I encouraged the patient to increase his fluid and dietary intake and he did eat 2/3 pieces of bacon and drank half of his sprite at breakfast. These interventions should be repeated to promote elimination.
4. Risk for infection related to inadequate defenses, immobility, and indwelling foley catheter as evidenced by midline incision and patient not using incentive spirometer during my shift	This patient has a large midline incision and an indwelling catheter which provide bacteria access to the body and bloodstream. He is also immobile which increases his risk of developing pneumonia following surgery.	1. Assess vital signs every 4 hours for increases in temperature, heart rate, and respiratory rate which can indicate the patient has developed an infection 2. Encourage patient to use incentive spirometer and provide wound/peri care as ordered	While hospitalized, the patient will remain free from infection as evidenced by clear breath sounds, absence of fever, and absence of swelling, redness, and warmth at incision site	Goal partially met- Vitals were assessed every four hours and charted. His temperature did increase slightly but his other vitals were within the normal range. His lungs were clear bilaterally during my physical assessment. I encouraged the patient to use his incentive spirometer every two hours to prevent pneumonia and he said he would. However, I did not see him use it during my shift. This patient should be reminded every two

				hours to use his incentive spirometer. His incisions were covered with a dressing so I could not assess for redness or swelling, but it was not warm to the touch. Wound/foley care were not provided during my shift but need to be completed as ordered.

Other References (APA):

Swearingen, P. L., & Wright, J. D. (2019). *All-in-one nursing care planning resource: Medical-surgical, pediatric, maternity, and psychiatric-mental health* (5th ed.). Elsevier.

Concept Map (20 Points):

Nursing Diagnosis/Outcomes

1.Acute pain related to thoracic spine surgery as evidenced by patient's fidgeting, grimacing, elevated heart rate, and verbalization of his back pain being a 10/10.

Outcome: The patient's pain intensity will decrease as evidenced by her numerical pain rating within 1 hour. The patient will be comfortable evidenced by relaxed body language and ability to rest within 1 hour.

2.Impaired nutrition: Less than body requirements related to inadequate dietary intake, loss of appetite and pain as evidenced by patient's vocalization of not being hungry, only consuming 25% of his breakfast, low electrolyte levels, and constipation

Outcome: While hospitalized, this patient's weight will be ideal for his age and height. Before discharge, his electrolyte levels will be in the normal range and his elimination pattern will return to normal.

3.Constipation related to immobility, inadequate dietary intake, and opioid analgesics as evidenced by patient's report of his last bowel movement being two days ago.

Outcome: The patient will have a normal elimination pattern within two days.

4.Risk for infection related to inadequate defenses, immobility, and indwelling foley catheter as evidenced by midline incision and patient not using incentive spirometer during my shift

Outcome: While hospitalized, the patient will remain free from infection as evidenced by clear breath sounds, absence of fever, and absence of swelling, redness, and warmth at incision site.

Subjective Data

Patient's initial complaints: loss of sensation in legs, generalized back and head pain
Patient reported tingling in feet post-op
Pain levels of 7/10, 6/10, and 10/10
Pain was up and down back, constant, and stabbing
Patient reported loss of appetite
Last bowel movement two days ago

Objective Data

X-ray showed fractured T11
MRI showed internal cephalic bleed
Pedicle screws from T8-L2, laminectomy T10-T12
Patient was grimacing, grabbing the bed rails, deep breathing, and his heart rate and BP were elevated due to pain
Ate 25% of his breakfast and consumed 180 ML of fluid
Calcium values: 8.0, 8.4
Sodium level: 134
Large vertical thoracic midline incision
Indwelling foley catheter
Patient did not use incentive spirometer
Bedfast
Temperature-99.3 F
Medications: polyethylene glycol, senna, hydromorphone

Client Information

On 01/19/2022, a 17-year-old male with no past medical history presented to the emergency department following a MVA and was declared a yellow-trauma. He was admitted for back pain and surgery to correct T11 facture.

Nursing Interventions

Assess patient's pain using OLDCART and numerical pain scale
Administer analgesics as prescribed and provide non-pharmacological pain relief methods.

Administer analgesics before meals to control his pain and encourage dietary intake
Monitor weight and electrolytes daily

Administer laxatives and stool softeners as prescribed.
Reposition the patient every two hours to promote peristalsis and encourage him to increase fluid/dietary intake

Assess vital signs every 4 hours for increases in temperature, heart rate, and respiratory rate which can indicate the patient has developed an infection
Encourage patient to use incentive spirometer and provide wound/peri care as ordered