N433 Care Plan # 1

Lakeview College of Nursing

Trevor Davis

Demographics (3 points)

Date of Admission 10/20/2020	Patient Initials MS	Age (in years & months) 16 years 3 months	Gender Male
Code Status Full	Weight (in kg) 55.1 kg	BMI 22.2	Allergies/Sensitivities (include reactions) Shellfish- results in rash

Medical History (5 Points)

Past Medical History:

Illnesses: MS has a history of anemia, left epididymitis, head trauma, a facial tic, ADHD lymphadenopathy, and a periauricular infection.

Hospitalizations: MS has never been admitted to the for any illnesses listed.

Past Surgical History: MS has no history of surgeries.

Immunizations: MS is up to date for his immunizations, except for his second dose of Gardasil and his second meningococcal vaccination.

Birth History: MS was born underweight to a G5 P4 30-year-old mother. He was delivered via a repeat cesarean section.

Complications (if any): No complications occurred during labor or birth.

Assistive Devices: MS does not use any assistive devices.

Living Situation: MS lives at home with his mother and father in Champaign Illinois.

Admission Assessment

Chief Complaint (2 points): "My chest hurts"

Other Co-Existing Conditions (if any): N/A

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

MS has had recurring, random chest pain throughout his stay. He has labs drawn for troponin every 8 hours. He will have an MRI later today if his latest troponin lab does not show a downward trend.

History of present Illness (10 points):.

MS presented to the emergency department with his mother with complaints of "chest pain" that was localized to the right side of his chest. The pain is heavy, severe ache lasting 2-3 minutes at a time and returns every few minutes. He is a healthy 16-year-old male with no history of cardiac issues or drug use. He had been playing video games with his friends when the pain started. He was at the trampoline park the day before and was "roughhousing with his friends". He took a punch to the chest and experienced nausea and vomiting later that night. The pain is worsened when he lies on his right side. He has not been able to keep food or drink down so oral pain medication has been ineffective. Non- pharmacological measures have not been successful. MS rated the pain at 8/10 on the numeric scale.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Unspecified chest pain

Secondary Diagnosis (if applicable): Possible cardiac contusion

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

Chest pain is referred to as angina pectoris in the clinical setting. Angina is characterized by episodes of pain or pressure on the anterior chest. In most cases, the cause of angina is related to an increased myocardial demand for oxygen. Many issues are related to atherosclerotic disease. When there is a blockage in the coronary arteries, blood flow cannot be increased to the

heart areas that need it, resulting in ischemia. Ischemia is then noted by chest pain (Hinkle & Cheever, 2018). Angina could indicate a potential myocardial infarction, leading to system organ failure and death due to ineffective blood flow to the body tissues (Capriotti & Frizzell, 2016). There is no evidence of atherosclerosis or myocardial infarction in MS's case, though his troponin levels are elevated. His angina is related to blunt force trauma and excessive consumption of energy drinks.

Angina pectoris manifests as pain in the chest area that could range from mild indigestion to a sense of choking or a heavy feeling in the upper chest. Pain ranges from mild to unbearable. Pain is often accompanied by anxiety and "a feeling of impending doom" (Hinkle & Cheever, 2018, p. 758). Pain may be localized but may radiate to the neck or jaw. The patient may be weak, feel nauseous, and may experience vomiting. The patient is likely to be hypertensive, tachycardic, and tachypneic (Hinkle & Cheever, 2018).

Lab values that may be elevated include troponin and C reactive protein values. MS was tachycardic upon arrival at the emergency department. His troponin and C reactive protein values are elevated, showing cardiac muscle damage and inflammation (Capriotti & Frizzell, 2016). Other diagnostic tools that could help determine damage level associated with angina include 12-lead electrocardiogram, echocardiogram, computed tomography, and chest x-ray (Hinkle & Cheever, 2018). MS had all the previously listed imaging and labs ran when he was admitted. His c-reactive protein was 0.66 mg/ dL and troponin levels were elevated to 15.3 mg/ dL. All imaging revealed normal findings.

Treatment for angina includes supplemental oxygen to perfuse more oxygen to the rest of the body. Sublingual nitroglycerin can be administered to relieve pain associated with angina. Beta-adrenergic blockers reduce myocardial oxygen consumption by decreasing the heart rate,

blood pressure, and myocardial contractility. Beta-blockers can also act as a way to relieve pain (Hinkle & Cheever, 2018). Nitroglycerin is listed under MS's discontinued medications and was possibly given in the emergency department. Evidence to support this could not be found. He was given metoprolol via IV push and ordered metoprolol tablets to take twice per day as needed.

Myocardial infarction and stroke are potential complications related to angina pectoris. Nursing actions to prevent further complications include administering prescribed medications to manage the symptoms of angina. Administering oxygen when the patient's oxygen saturation is low helps to ensure the body's tissues and organs are receiving the required oxygen requirements (Hinkle & Cheever, 2018).

Pathophysiology References (2) (APA):

Capriotti, T., & Frizzell, J. (2016). *Pathophysiology: introductory concepts and clinical perspectives*. F.A. Davis Company.

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

Active Orders (2 points)

Order(s)	Comments/Results/Completion
Activity: ad lib	MS is ad lib with no restrictions. He is encouraged to walk around the hallway and does occasionally.
Diet/Nutrition: regular diet	MS has no dietary restrictions with the exception of shellfish due to allergy. Since his admittance, he has not had much of an appetite. He ordered bacon and eggs for breakfast and ate 90%. His appetite is returning since his nausea has subsided.
Frequent Assessments: Q8 hour troponin,	MS is scheduled to have troponin labs drawn

Q4 hour vital signs	every 8 hours. Vital signs are assessed every 4 hours.
Labs/Diagnostic Tests: Q8 hour troponin, **possible MRI**	Q8 hour troponin labs are being drawn. If there is no downward trend shown, there is a possibility of an MRI being scheduled for later today to assess for further damage to cardiac muscle.
Treatments:	The only medication given during my rotation was pantoprazole. TV and videos on the patient's phone are serving as a form of distraction. MS denies being in any pain.
Other:	
New Order(s) for Clinical Day	
Order(s)	**Comments/Results/Completion**
Possible MRI	If troponins are not trending downward, an MRI will most likely be ordered.

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	4.03- 5.29	4.54	N/A	
Hgb	11- 14.5	13.1	N/A	

Hct	33.9- 43.5	39.6	N/A	
Platelets	175- 332	192	N/A	
WBC	3.84- 9.84	9.59	N/A	
Neutrophils	1.54- 7.04	4.65	N/A	
Lymphocytes	1.0-4.8	3.4	N/A	
Monocytes	2-8	12.7	N/A	MS's monocyte level is likely elevated due to tissue damage to the heart from chest trauma. Monocytes carry away dead and damaged tissue from affected areas (Mayo Clinic, 2020).
Eosinophils	2-4	3.9	N/A	
Basophils	0-1	0.3	N/A	
Bands	0-10%	N/A	N/A	

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	138	N/A	
K+	3.5- 5.1	4.5	N/A	
Cl-	98- 107	106	N/A	
Glucose	60- 99	90	N/A	
BUN	7- 18	14	N/A	
Creatinine	0.7-1.3	0.84	N/A	
Albumin	3.4- 5	4.1	N/A	

Total Protein	6.4- 8.2	7.8	N/A	
Calcium	8.5- 10.1	9.8	N/A	
Bilirubin	0.2- 1.0	0.4	N/A	
Alk Phos	45- 117	206	N/A	Elevated ALP could be explained by increased osteoblast production as a result of rapid bone growth (Mayo Clinic Laboratories, 2020).
AST	15- 37	11	N/A	Typically, with damage to the heart or liver AST levels are increased for the following few days. Low values indicate a healthy liver (Thompson et al., 2019).
ALT	12- 78	10	N/A	Typically, with damage to the heart or liver ALT levels are increased for the following few days. Low values indicate a healthy liver (Thompson et al., 2019).
Amylase	19-76	N/A	N/A	
Lipase	7-59	N/A	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	13	N/A	
CRP	0-0.29	0.66	N/A	Elevated CRP is indicative of inflammation. Trauma to the chest likely caused inflammation to the heart muscle and vessels (Van Leeuwen & Bladh, 2017).
Hgb A1c	<7.5	N/A	N/A	
TSH	0.45-4.5	N/A	N/A	
Troponin I	0- 0.05	15.3	13.7	Troponin I is elevated on to two hours after heart muscle damage. It begins to decrease after 60-80 hours

				(Van Leeuwen & Bladh, 2017).

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 and 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	

Lab Correlations Reference (APA):

Mayo Clinic. (2020). *Pediatric white blood cell disorders*. https://www.mayoclinic.org/diseases-conditions/pediatric-white-blood-cell-disorders/symptoms-causes/syc-20352674#:~:text=Monocytes%20help%20get%20rid%20of,Eosinophilia.

Mayo Clinic Laboratories. (2020). *Alkaline phosphatase, serum.* https://pediatric.testcatalog.org/show/ALP

Normal lab ranges were found using the EPIC charting system.

Thompson, G., Husney, A., Gabica, M., Romito, K., & Simon, J. (2019). Aspartate aminotransferase. *C.S. Mott Children's Hospital.* https://www.mottchildren.org/health-library/hw20331

Van Leeuwen, A. M., & Bladh, M. L. (2017). *Davis's comprehensive handbook of laboratory and diagnostic tests with nursing implications* (7 ed.). F.A. Davis Company.

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

Chest X-ray

- A chest x-ray is done to evaluate cardiac, respiratory, and skeletal structures within the lung cavity to assess the potential for diseases like pneumonia and heart failure (Van Leeuwen & Bladh, 2017, p. 387). This test was done diagnostically in response to MS's chest pain.

Electrocardiogram (EKG)

- An EKG is used to evaluate electrical impulses of the heart to diagnose arrythmias, blocks, damage, or infection (Van Leeuwen & Bladh, 2017, p. 727). This test as done to rule out dysthymias or heart block in response to MS's chest pain.

Echocardiogram (echo)

- An echo is used diagnostically to rule out cardiac disorders by examining the structure and function of the heart and heart valves (Van Leeuwen & Bladh, 2017, p.717). This test was performed in response to MS's chest pain.

Computed Tomography, Angiography (CTA)

- A CTA is done to visualize the vascular structure of the heart to determine if there is an aneurism, embolism, or stenosis. This test was performed in response to chest pain and elevated troponin levels (Van Leeuwen & Bladh, 2017, p. 529).

Diagnostic Test Correlation (5 points):

- The chest x-ray was WDL, there was no pulmonary consolidation, pneumothorax, pulmonary embolism, cardiomegaly, or bone abnormalities. Results are per radiologist.
- Per physician's report, the EKG revealed normal sinus rhythm with occasional pre ventricular contractions.
- Per physician's report, the echo was normal for the patient's age.
- Per the physician's note, the CTA revealed normal findings with residual thymus.

Diagnostic Test Reference (APA):

Van Leeuwen, A. M., & Bladh, M. L. (2017). *Davis's comprehensive handbook of laboratory and diagnostic tests with nursing implications* (7 ed.). F.A. Davis Company.

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

Brand/Generic	Tylenol/ acetaminophen (Frandsen &	Lopressor/ metoprolol (Frandsen &	Zofran/ ondansetron (Shields et al.,	Protonix/ pantoprazole (Shields et al.,	Toradol/ ketorolac (Shields et	Klorcon M20/ D5 NaCl KCl 20 mEq (Lexicomp,

	Pennington, 2018).	Pennington, 2018).	2020).	2020)	al., 2020).	2020).
Dose	650 mg	25 mg tablets / 2mg/ 1 ml	4 mg	40 mg	22 mg/ 1.5 ml	100 ml/ hour
Frequency	Q4 hours or PRN	BID	Q 8 hours or PRN	PRN mornings	PRN Q 6 hours	Continuous infusi
Route	PO	PO and IV push	IV push	PO	IV push	IV infusion
Classification	Non- narcotic analgesic	Beta adrenergic antagonist/ antihypertensive	Antiemetic	GI agent, proton pump inhibitor	NSAID analgesic	IV fluid for hydration balance
Mechanism of Action	Acetaminophen's mechanism of action for pain reduction is unknown (Frandsen & Pennington, 2018).	This medication inhibits beta2 receptors in the vascular muscles to decrease the frequency and severity of angina (Frandsen & Pennington, 2018).	This medication acts as a serotonin receptor antagonist. Serotonin is released from the walls of the small intestine to stimulate the gag reflex (Shields et al., 2020).	Gastric acid secretion is decreased by inhibiting the enzyme system responsible for acid production (Shields et al., 2019).	This medication inhibits the synthesis of prostaglandins and is a peripherally acting analgesic (Shields et al., 2020).	N/A
Reason Client Taking	MS takes this medication for mild pain.	MS takes this medication to reduce his heart rate and minimize chest pain with anginal attacks.	MS is taking this medication to reduce vomiting.	MS takes this medication to prevent GI upset.	MS takes this medication for severe pain.	MS has had troub keeping fluids down due to excessive vomiting.
Concentration Available	This medication is available in 325 mg tablets.	50 mg tabs 2mg/ 2ml	4mg/ 2ml	40 mg tablets	15 mg/ml	D5 NaCl KCl 20 mEq
Safe Dose Range Calculation	325mg-540mg/ dose (Lexicomp, 2020).	0.8- 2.8mg/ kg/ day= 44-154mg/ day (Lexicomp, 2020).	1.5- 5mg/ dose (Lexicomp, 2020).	20-40 mg for children weighing over 40 kg (Lexicomp, 2020).	0.5mg/ kg/ dose= 27 mg max per dose (Lexicomp, 2020).	100 mL/ hour 2400 ml/ day Requirements: 1500 ml+ 20(35) =2200 ml/ day
Maximum 24-hour Dose	3250 mg	80mg	8 mg	40mg	150 mg/ day	2400ml/ day
Contraindications (2)	-impaired hepatic or renal	-Impaired liver functioning	- Hypersensitivit	- Hypersensitivit	- renal failure due	N/A

	function -hypersensitivity to medication	-cardiomegaly	y to medication -potential glaucoma	y to proton pump inhibitors -potential hepatic insufficiency	to dehydration -Patients at risk for bleeding	
Side Effects/Adverse Reactions (2)	-Hepatotoxicity -Myocardial damage with excessive use	-Headache -Hypoglycemia	- Headache -Constipation	-Abdominal pain -Insomnia	-Drowsiness -Nausea	-fluid overload -Hyperkalemia
Nursing Considerations (3)	-Know all herbal medications the patient is taking to prevent interactions -Assess for jaundice when monitoring therapeutic effect and preventing hepatic damage. -Monitor liver enzymes prior to administration (Frandsen & Pennington, 2018).	-Monitor vital signs before and after administration of this medication. -Hold medication if pulse is below 60 bpm or if systolic BP is less than 90 mmHg. -Know if the patient takes any herbal medications. Some herbal meds reduce the effectiveness of metoprolol (Frandsen & Pennington, 2018).	-Monitor fluid and electrolyte status -Monitor for tachycardia -Monitor for therapeutic effects with reduced nausea and vomiting (Frandsen & Pennington, 2018).	-Assess for signs of angioedema. -Give this medication with food. -Assess for severe skin reactions (Shields et al., 2020).	-Ensure the patient is well hydrated prior to the administration of this medication. -Monitor electrolytes and liver enzymes periodically. -Monitor pt and INR due to potential prolonged bleeding (Shields et al., 2020).	-Monitor infusion rate -Chart intake and output -Monitor electroly for hyper/hypo kalemia.
Client Teaching needs (2)	-Do not exceed the recommended dosage -Inform health care provider of the development of rash or fever (Frandsen & Pennington, 2018).	-Move slowly from a sit to stand position. -Take this medication at the same time every day (Frandsen & Pennington, 2018).	- Use lowest effective dosage to start with -Do not take this medication with other medications that result in respiratory depression (Frandsen &	-Contact physician if severe rash or other skin abnormalities develop. -Seek medical help if shortness of breath or worsened chest pain are	-Do not drive or participate in other hazardous activities until full effect of this medication is known.	-Alert nurse for si of IV infiltration -Alert nurse When IV pump alarms.

			Pennington, 2018).	experienced (Shields et al., 2020).	-Do no take this medication with other NSAIDS (Shields et al., 2020).	

Medication Reference (APA):

Frandsen, G., & Pennington, S. (2018). *Abrams' clinical drug therapy: rationales for nursing practice*. Wolters Kluwer Health.

Lexicomp. (2020). *Wolters Kluwer*. https://online.lexi.com/lco/action/home

Shields, K. M., Fox, K. L., & Liebrecht, C. (2019). *Pearson nurse's drug guide 2019*. Pearson.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	MS is A&O x4. He was a little drowsy upon first assessment, but he just woke up. He did not seem distressed.
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:**	MS's skin color is normal for his race. Skin is warm and dry with no signs of breakdown. Turgor shows adequate hydration and is normal for his age. He has no rashes. The right side of his chest shows mild bruising that is a few days old. It is difficult to see due to his dark skin color. No wounds or drains are present. Braden Score: 23= no risk of skin breakdown

Drains present: Y☐ N ☒ **Type:**	
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:** **Thyroid:**	MS's head is normocephalic with symmetrical facial features. The neck and trachea are midline with no deviations or abnormalities. His hair is black with even proportioning. PERRLA is noted with normal EOM. MS has no visual impairment. There is no abnormal drainage or erythema noted from the nose. Turbinates are equal bilaterally with no deviated septum. Teeth are intact and white in color. Mucosa of the mouth is pink and moist. No enlarged or displaced thyroid is noted.
CARDIOVASCULAR (2 points): **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:**	S1 and S2 heart sounds are noted. No adventitious sounds are noted. Rhythm is normal sinus rhythm. Radial and posterior tibial pulses are 2+ bilaterally. Pedal pulses could not be felt. Capillary refill is within 2 seconds in all extremities. No evidence of JVD or edema noted in extremities.
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	MS has clear breath sounds in all lobes bilaterally. No accessory muscle use is noted. No adventitious breath sounds are noted.
GASTROINTESTINAL (2 points): **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:**	MS consumes a regular diet at home and is currently eating regular diet in the hospital. He has no dietary restrictions, but he is allergic to shellfish. He is 157.5 cm tall. Active bowel sounds are heard in all four quadrants. His last bowel movement was today around 10:00. No pain was noted upon palpation of the abdomen. No distention, incisions, scars, drains or wounds are noted upon inspection of the abdomen.

GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	MS's urine is clear and yellow in color. No distinct odor is noted. He denies pain with urination. He voided 670 mL during my rotation. No genital abnormalities noted.
MUSCULOSKELETAL (2 points): **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☐**	ROM is active bilaterally in all extremities. No neurovascular deficit is noted. MS does not use an assistive device. He has equal strength in all extremities bilaterally. He does not need assistance ambulating and is not a fall risk. Fall score: 0 = no risk for a fall
NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	MS moves all extremities well and has no neurological abnormalities related to motion or vision. He is A&O x4 and shows age appropriate mental development and speech patterns. No sensory abnormalities noted.
PSYCHOSOCIAL/CULTURAL (2 points): **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):**	MS enjoys spending time with his friends and is an avid video game player. He has been using his phone as a coping mechanism to keep in touch with friends and watch videos to pass the time. His mother spent much of the morning with him and has visited often. He has a good relationship with his parents and 4 older siblings. They are supportive of him but are not all able to visit. He will be discharged home with his mom and dad. No supplemental social needs are anticipated.

Vital Signs, 1 set (2.5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0835	68 bpm	127/84 mmHg	16 respirations/ min	37.0 C	100%

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

Pulse Rate	50-90 bpm
Blood Pressure	111/63- 145/94
Respiratory Rate	16-19 respirations/ min
Temperature	36.6 C- 38C
Oxygen Saturation	95-100%

(Holman et al., 2019)

Normal Vital Sign Range Reference (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.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0748	Numeric	No pain	0/10	No pain	No pharmacologic intervention. Videos on MS's phone serves as a

					distraction from any potential pain.
Evaluation of pain status *after* intervention	Numeric	No pain	0/10	No pain	MS was on his phone.
Precipitating factors: MS was not in pain. No precipitating factors were noted. Physiological/behavioral signs: MS showed no psychological or behavioral signs of pain					

Intake and Output (1 points)

Intake (in mL)	**Output (in mL)**
500 ml IV fluids during rotation 240 ml water -→ 740 ml total	670 ml urine during rotation.

Developmental Assessment (6 points)
Be sure to highlight the achievements of any milestone if noted in y our 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. A 16- year old needs more sleep. The time they fall sleep is usually later.
2. They will show more independence but also engage in less conflict with parents
3. They care more about their looks and what others think of them, especially the opposite sex (Morin, 2020).

APA reference:

Morin, A. (2020). 16- year-old child development milestones. *Verywellfamily.* https://www.verywellfamily.com/16-year-old-developmental-milestones-4171922

Age Appropriate Diversional Activities

1. **Video games**
2. **Listening to music**

3. **Watching TV or movies**

Psychosocial Development:

Which of Erikson's stages does this child fit?

MS is in the middle part of the identity vs. role confusion stage (Ricci et al., 2017).

What behaviors would you expect?

During this stage, one would expect mood changes, self-conscious feelings about body image, a need for acceptance by peer groups, interest in the opposite sex, conflict with parents or authoritative figures (Ricci et al., 2017).

What did you observe?

MS appears confident with his body image; he was texting with his girlfriend. He has a close group of friends, and he seemed to get along with his mother based on the interactions I witnessed. One could see that he wanted some privacy and for her to leave.

Cognitive Development:

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

According to Piaget, MS is in the middle of the formal operations stage (Ricci et al., 2017).

What behaviors would you expect?

One might observe an increased ability for problem solving and critical thinking at this stage. A need for independence is seen along with a sense of invincibility. Risky behaviors are a result of the feeling of invincibility (Ricci et al., 2017).

What did you observe?

I did not witness any critical thinking or problem solving. MS likely has a sense of invincibility though. He was playing rough with his friends and was hospitalized as a result.

Vocalization/Vocabulary:

Development expected for child's age and any concerns?

MS has an age appropriate vocabulary and speaks well for himself. He does use colloquial speech much of the time, this is expected for a 16- year old (Ricci et al., 2017).

Any concerns regarding growth and development?

No developmental delays or abnormalities are noted.

APA references:

Ricci, S. S., Carman, S., & Kyle, T. (2017). *Maternity and pediatric nursing* (3rd 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	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1)Potential for impaired cardiac output and gas exchange related to chest trauma as evidenced by elevated troponin levels from heart muscle damage (Mancini, 2017).	Blunt force chest trauma causes chest pain, resulting in shallow breathing, which could result in atelectasis, resulting in impaired gas exchange. MS's troponin levels	1)Monitor the patient's respiration quality, heart sounds, and oxygen saturation status. 2. Administer analgesics to facilitate painless breathing (Mancini, 2017).	Goal: The goal of the interventions is to maximize the patient's painless deep breathing while increasing oxygen saturation. - Currently, MS denies pain while deep breathing. Early in his admission, non- opioid pain measures were implanted to reduce chest

	are elevated due to a cardiac contusion (Mancini, 2017).		pain and facilitate breathing. His oxygen saturation is 100%. S1 and S2 sounds are noted with no sign of a murmur.
2)Potential for further injury related to increased activity level and impulsivity as evidenced by chest trauma from playing and fighting too hard (Swearingen & Wright, 2019).	MS has a history of ADHD and hyperactivity. MS's mother mentioned that "he and his friends get a little too wild and rough". Sometimes that results in injury. MS will need to take it easy to prevent further or worsened cardiac injury.	1. Educate MS and his parents about the importance of safety during play activities and the seriousness of a chest trauma. 2 Ensure MS takes any prescribed medication to manage symptoms of hyperactivity. (no such medication was on the MAR)	Goal: MS will remain free from further physical trauma while playing safely. - MS understands that he needs to take it easy with his friends. He regrets playing so rough since he was hospitalized for it. He wants to go home.
3) Need for teaching related to healthy diet and sleep patterns as evidenced by excessive energy drink and junk food consumption along with staying up all night (Swearingen & Wright, 2019).	Energy drinks can cause tachycardia resulting in worsened chest pain. A lack of sleep could potentially make problems worst too (Wassef et al., 2017).	1.Educate MS on healthy food and beverage choices while limiting the consumption of energy drinks. 2.Educate MS on the importance of establishing a regular sleep pattern (Swearingen & Wright, 2019).	Goal: MS will start better eating habits and get the rest he needs to effectively develop physically and cognitively. -MS understands the importance of healthy habits but does not show much interest in compliance at this point. He likes staying up late to play video games and eat junk food.
4) Ineffective coping related to depression from an extended hospital stay as evidenced by MS feeling sad and missing his friends (Wayne, 2017).	Being cooped up in a hospital can have negative emotional effects on an adolescent. They need contact with peers and higher activity levels that cannot be achieved in the	1.Provide chances for the patient to express feelings of depression and anxiety while using empathetic communication. **2.** Encourage the patient to make	Goal: The goal after these interventions is for MS to be less sad about being in the hospital and have an improved demeanor. -MS has verbalized that "he wants to go home". He has been watching YouTube videos on his phone and facetimed with some of his friends. This

	hospital, especially with Covid precautions (Doupnik et al., 2017).	choices and participate in planning of care and scheduled activities (Wayne, 2017).	has helped lift his spirits.

Other References (APA):

Doupnik, S. K., Hill, D., Palakshappa, D., Worsley, D., Bae, H., Shaik, A., Qiu, M., Marsac, M., & Feudtner, C. (2017). Parent coping support interventions during acute pediatric hospitalizations: A meta-analysis. *Pediatrics*, *140*(3), e20164171. https://doi.org/10.1542/peds.2016-4171

Mancini, M. (2017). Blunt chest trauma. *Nursing.com.* https://nursing.com/lesson/nursing-careplan-for-blunt-chest-trauma/

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

Wassef, B., Kohansieh, M., & Makaryus, A. N. (2017). Effects of energy drinks on the cardiovascular system. *World Journal of Cardiology*, *9*(11), 796–806. https://doi.org/10.4330/wjc.v9.i11.796

Concept Map (20 Points):

Subjective Data

- “My chest hurts”
- MS was “roughhousing with friends”
- MS drinks a lot of energy drinks
- MS does not sleep much at night
- MS has feelings of sadness and boredom related to extended stay in the hospital.

Nursing Diagnosis/Outcomes

- Potential for impaired cardiac output and gas exchange related to chest trauma as evidenced by elevated troponin levels from heart muscle damage (Mancini, 2017).
  - Outcome: The goal of the interventions is to maximize the patient’s painless deep breathing while increasing oxygen saturation.
- Potential for further injury related to increased activity level and impulsivity as evidenced by chest trauma from playing and fighting too hard (Swearingen & Wright, 2019).
  - Outcome: MS will remain free from further physical trauma while playing safely.
- Need for teaching related to healthy diet and sleep patterns as evidenced by excessive energy drink and junk food consumption along with staying up all night (Swearingen & Wright, 2019).
  - Outcome: MS will start better eating habits and get the rest he needs to effectively develop physically and cognitively
- Ineffective coping related to depression from an extended hospital stay as evidenced by MS feeling sad and missing his friends (Wayne, 2017).
  - Outcome: The goal after these interventions is for MS to be less sad about being in the hospital and have an improved demeanor.

Objective Data

- Vital signs are stable
- Troponin I was 15.3 at time of admission and was 13.7 at last lab draw.
- ALP is elevated in relation to rapid bone growth
- CRP is elevated due to inflammation in response to chest trauma.
- Mild right sided anterior chest bruising noted.

Patient Information

MS is a 16-year-old African American male that presented to the ED for severe chest pain following excessive vomiting related to chest trauma inflicted the day prior to admission. He has no history of cardiac problems and is otherwise healthy. He has no history of illness or surgery pertinent to present illness.

Nursing Interventions

- Monitor the patient’s respiration quality, heart sounds, and oxygen saturation status.
- Administer analgesics to facilitate painless breathing
- Educate MS and his parents about the importance of safety during play activities and the seriousness of a chest trauma.
- Ensure MS takes any prescribed medication to manage symptoms of hyperactivity.
- Educate MS on healthy food and beverage choices while limiting the consumption of energy drinks.
- Educate MS on the importance of establishing a regular sleep pattern.
- Provide chances for the patient to express feelings of depression and anxiety while using empathetic communication.
- Encourage MS to be involve in decision making regarding his plan of care.