N321 CARE PLAN

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Lakeview College of Nursing

N321: Adult Health I

Professor Henry

8/30/24

Demographics

Date of Admission	**Client Initials**	**Age**	**Biological Gender**
8/22/24	S.P	79	Female
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White/Caucasian	Retired	Married	Sertraline Albuterol Diphenhydramine
Code Status	**Height**	**Weight**	
Full	5’2	123lb	

Medical History

Past Medical History: Acute on chronic CHF, Arteriosclerotic heart disease. COPD, Diverticulitis, SIADH, CVD, Chronic hyponatremia, parietal lobe infarction, high cholesterol, graves' disease, thyroidectomy, hyperthyroidism, osteoarthritis, pulmonary disease, hypertension, CVA left side.

Past Surgical History: CABG, Appendectomy, Open heart surgery, Hysterectomy, Cholecystectomy, Total abdomen and Carotid endarterectomy.

Family History: According to patient, mom and dad both had COPD and HF.

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Patient stated she has been smoking since the age of 20 and she currently smokes a pack of cigarettes a day. Patient states she doesn’t currently drink alcohol and has never used smokeless tobacco.

Education: Patient did not graduate high school and never obtained her GED.

Living Situation: The patient lives with her husband and son she states she has a good living environment.

Assistive devices: The patient does have a walker at home that she uses.

Admission History

Chief Complaint: SOB/ mild chest pain

History of Present Illness (HPI)– OLD CARTS

The patient presented to the ED with complaints of SOB. The patient stated that the day prior to admission she started to experience SOB along with chest pain due to coughing. The patient stated she only experienced SOB with activity. The patient does have an oxygen tank at home which she used when she had difficulty breathing, she also stated she used her nebulizer which helped get her breathing back on track. The patient stated that on a scale 1-10 she is at an 8 when she is experiencing shortness of breath.

Admission Diagnosis

Primary Diagnosis: CHF exacerbation

Secondary Diagnosis (if applicable):

Pathophysiology

Heart failure occurs when the heart cannot pump blood sufficiently to meet the body's needs. Chronic HF leads to structural changes in the heart such as hypertrophy, or changes in dilation, when this occurs it increases the workload of the heart which leads to additional heart problems. According to Hinkle and Cheever (2019), "As HF develops, the body activates neurohormonal compensatory mechanisms. These mechanisms represent the body’s attempt to cope with HF and are responsible for the signs and symptoms that develop (Norris, 2019). Understanding these mechanisms is important because the treatment for HF is aimed at correcting them and relieving symptoms".

According to Hinkle and Cheever (2019), "The most common type of HF is systolic HF, also called Heart Failure with reduced Ejection Fraction (HFrEF; see later discussion in Assessment and Diagnostic Findings)". According to Hinkle and Cheever (2019), "Systolic heart failure results in decreased blood ejected from the ventricle. The reduced blood flow is sensed by baroreceptors in the aortic and carotid bodies, and the sympathetic nervous system is then stimulated to release epinephrine and norepinephrine (Fig. 25-1)". According to Hinkle and Cheever (2019), "The purpose of this initial response is to increase heart rate and contractility and support the failing myocardium, but the continued response has multiple negative effects. Sympathetic stimulation causes vasoconstriction in the skin, gastrointestinal tract, and kidneys. A decrease in renal perfusion due to low CO and vasoconstriction then causes the release of renin by the kidneys". According to Hinkle and Cheever (2019), "Renin converts the plasma protein angiotensinogen to angiotensin I, which then circulates to the lungs. Angiotensin-converting enzyme (ACE) in the lumen of pulmonary blood vessels converts angiotensin I to angiotensin II, a potent vasoconstrictor, increasing blood pressure and afterload. Angiotensin II also stimulates the release of aldosterone from the adrenal cortex, resulting in sodium and fluid retention by the renal tubules and an increase in blood volume". According to Hinkle and Cheever (2019), "These mechanisms lead to the fluid volume overload commonly seen in HF. Angiotensin, aldosterone, and other neurohormones (e.g., endothelin) lead to an increase in preload and afterload, which increases stress on the ventricular wall, causing an increase in cardiac workload". According to Hinkle and Cheever (2019), "A counterregulatory mechanism is attempted through the release of natriuretic peptides. Atrial natriuretic peptide (ANP) and B-type natriuretic peptide (BNP; brain type) are released from the overdistended cardiac chambers, these substances promote vasodilation and diuresis". Signs and symptoms of heart failure can vary depending on the

patient and other conditions they acquire. The most common symptoms experienced by my patient were dyspnea, edema, fatigue, and persistent cough. The X-ray showed signs of pulmonary congestion, which indicates that the lungs are not working properly due to fluid which causes the heart to pump inefficiently. An EKG or Echocardiogram is also beneficial in diagnosing heart problems, the patient did not have any of these test results recorded.

Pathophysiology References (2) (APA):

Haghighi, A. (2023, June 21). *ECG vs. EKG: Definition, procedure, and results*. Www.medicalnewstoday.com. https://www.medicalnewstoday.com/articles/ecg-vs-ekg

Hinkle, J. L., & Cheever, K. H. (2019). *Lippincott Coursepoint for Brunner & Suddarth's Textbook of Medical-Surgical Nursing*. Wolters Kluwer.

Mayo Clinic. (2023, April 20). *Heart failure*. Mayo Clinic. https://www.mayoclinic.org/diseases-conditions/heart-failure/symptoms-causes/syc-20373142

Laboratory/Diagnostic Data

Lab Name	Admission Value	Today's Value	Normal Range	Reasons for Abnormal
Sodium	134mmol/L	126mmol/L	136-145mmol/L	The patients' sodium level is abnormal due to receiving furosemide the patient also has chronic hyponatremia.
BUN	32mg/dL	28mg/dL	10-20mg/dL	The patients' BUN is elevated due to

				dehydration.
Creatinine, blood	1.46mg/dL	1.33mg/dL	0.60-1.00mg/dL	The patients' creatinine blood is low due to the patient having SIADH, SIADH causes the body to retain water.
Glucose	104mg/dL	88mg/dL	70-99mg/dL	The patients' glucose level is abnormal due to the patient taking diuretics and lack of nutritional intake.
Calcium	9.3mg/dL	8.0mg/dL	8.7-10.5mg/dL	The patients' calcium level is high due to electrolyte imbalance.
Co2, Venous	19mmol/L	20mmol/L	22-30mmol/L	The patient has a PMH of pulmonary disease which is causing abnormal Co2 venous.
GFR estimated	36	41	>=60	The patients' GFR estimated is abnormal due to poor kidney function.
BUN/Creatinine ratio	22	21	12-20	The patients' BUN/Creatinine ratio is

				abnormal due to dehydration and decreased kidney function.
RBC	3.89mcL	3.73mcL	3.80-5.30mcL	The patients' RBC is abnormal due to the patient receiving furosemide which changes the concentration of the blood.
Hemoglobin	11.5g/dL	11.2g/dL	12.0-15.8g/dL	The patients' hemoglobin is low due to the patients' nutritional status. The patient stated she hasn't been eating much due to decreased appetite.
Hematocrit	35.0%	32.9%	36.0-47.0%	The patients' hematocrit is low due to decreased hemoglobin and RBCs.
Monocytes	11.3%	12.1%	4.0-12.0%	The patients' monocytes are abnormal due to some type of undiagnosed lung infection. The patient is

				coughing up phlegm persistently.

Diagnostic Test & Purpose	Clients Signs and Symptoms	Results
XR Ribs unilateral with PA chest right	As I observed the patient, I noticed it was difficult for her to lie on her left side where she fell. The patient showed signs of discomfort and stated it feels like a big bruise. There was no bruising or redness on her left side where she had fell.	Everything appears to be normal on X-ray.
XR chest single view	The patient exhibited signs of persistent cough along with slight wheezing, SOB, and fatigue.	Borderline to mild pulmonary congestion meaning the patients' lungs is accumulating fluid. The chest X-ray results also read Border line heart size meaning that the heart is not at its normal. Which is an

		early sign of heart complication.

Diagnostic Test Reference (1) (APA):

Mayo Clinic. (2023, April 20). *Heart failure*. Mayo Clinic. https://www.mayoclinic.org/diseases-conditions/heart-failure/symptoms-causes/syc-20373142

Active Orders

Active Orders	Rationale
Inpatient cardiac rehab for education, HF management	The patient did not seem to understand how important it is to maintain a heart healthy diet and stay active as much as possible. The patient would benefit from receiving additional information regarding HF management.
Aerosol nebulizer one time PRN	This medication is given to the patient in the form of mist, which allows medication to enter the patients' lungs making it easier to breathe and reduce coughing spells.

Pulse oximetry	This is used in order to monitor the patients' O2 saturations. If the patients' O2 sats drop too low nurses are able to provide supplemental oxygen.
Strict intake and output	Strict I&Os are important for patients in HF. Monitoring this helps assess fluid balance, weight, and lets the healthcare team know if the medication regiment is effective.
Up as tolerated	Promoting mobility is important in order to maintain muscle strength and reduce fatigue.
Vital signs	Monitoring the patients' vitals allows the healthcare team to see if the patient is hemodynamically stable.
Covid-19, Flu, and pneumonia	The tests were done to rule out any other underlying issues.
Admission weight	Admission weight helps establish a baseline for the patient. The patient is also taking furosemide, so monitoring weight is important.
Diet general	The patient is currently on a general diet to see what foods are tolerable.
Discontinue IV if present	IV is to be discontinued if there aren’t any more fluids running. An IV with no fluid

	running can affect its patency and also increases the risk for infection.
Insert/maintain peripheral IV	Maintaining the IV allows the healthcare team to give medications when needed in a timely manner.
Up with assistance	The patient has been experiencing weakness, so while at the hospital the patient is to get up 1 assist.
Discontinue foley catheter if present	Foley catheter is to be discontinued due to the patient being able to urinate regularly. Catheters can make it easier for a patient to get an infection, so if not needed it is best that it is removed.

Medications

Home Medications (Must List ALL)

Brand/	Acetamino	Albuterol	Atorvastatin/	Benzonatate/	Bisacody	Clopidog

Generic	phen/ Tylenol 325mg Q4 Oral	/ Proventil 3mL 3x daily Nebulization	Lipitor 40mg 1x daily Oral REPEAT MED	Tessalon 100mg 3x daily Oral	l/ Dulcolax 5mg 1x daily Oral	rel/ Plavix 75mg 1x daily Oral REPEAT MED
Classification	Analgesics (MedlinePlus, 2019)	Adrenergic bronchodilators (Medline Plus, 2021)	HMG-CoA reductase inhibitors (statins) (MedlinePlus, 2021)	Antitussives (MedlinePlus, 2021)	Stimulant laxatives (WebMD, 2020)	Antiplatelet drugs (WebMD, 2020)
Reason Client Taking	The client is taking this for mild pain she experiencing on her left side.	The client is taking this to treat shortness of breath.	The client has a history of high cholesterol.	To reduce the severity of the patients' cough.	This medication is a laxative which can help with constipation, the patient stated she hasn't pooped in 5 days.	This medication is an antiplatelet which means it prevents blood clots from forming. Blood clots cause more damage to the heart in patients with CHF.
Key nursing assessment(s) prior to administration	View the clients' liver function, and allergy list prior to administration.	Respiratory assessment Check O2 sats	Monitor lipid levels Ensure the correct dosage is being given	View the clients' allergy list Ensure the client is capable of swallowing this medication whole	Abdominal assessment Assess the clients' hydration and electroly	Assess the client for any potential bleeding risks View platelet count

					te status	
Brand/ Generic	Folic acid/Folvite 1mg 1x daily Oral REPEAT MED	Furosemide/Lasix 40mg 1x daily Oral REPEAT MED	Hydrocodone/ Acetaminophen 5-325mg 1x daily Oral	Levothyroxine /Synthroid 125mcg 1x daily Oral REPEAT MED	Losartan /Cozaar 25mg 1x daily Oral REPEAT MED	Metoprolol succinate /Toprol-xl 25mg 1x daily Oral REPEAT MED
Classification	B vitamin (MedlinePlus, 2021)	Loop diuretics (Medline Plus, 2021)	Opiate narcotic analgesics (MedlinePlus, 2021)	Hormones (MedlinePlus, 2021)	Angiotensin II receptor blocker (ARB) (Medline Plus, 2021)	Beta blockers (Medline Plus, 2021)
Reason Client Taking	The clients RBC count is low	Medication is used to treat the patients' edema	The client is taking this medication for pain	The client has hypothyroidism	This medication is being taken to reduce the risk for heart attack	The client is taking this medication to improve blood flow
Key nursing assessment(s) prior to administration	Assess the patients need for folate acid to determine if there is a deficiency. Provide patient education as to why they are taking this medication	Assess the patient for signs of dehydration. Assess the clients' renal function.	Assess clients LOC, and bowel sounds	Assess clients thyroid function tests Assess heart rate.	Assess the clients BP and view patients' medications for potential interactions	Assess respirations and heart rate

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Brand/ Generic	Nicotine/ NicoDerm 1 patch Transderm al route PRN	O2 concentra tor 2L Overnight	Nitroglycerin/ Nitrostat 0.4mg Sublingual PRN	Spironolacton e/Aldactone 25mg Once daily Oral REPEAT MED		
Classific ation	Stimulant drug (MedlineP lus, 2021)	N/A	Vasodilators (MedlinePlus, 2021)	aldosterone receptor antagonists (MedlinePlus, 2021)		
Reason Client Taking	The patient is taking this to help with cigarette cravings.	The patient uses this for comfort when sleeping	The patient is taking this medication to supply blood to the heart.	The patient is taking this medication to treat fluid retention		
Key nursing assessm ent(s) prior to adminis tration	Assess the patients' skin and provide patient education prior to administra tion	Assess o2 sats and breathing pattern	Assess patients' LOC, and assess for allergies	Assess potassium levels, and kidney/liver functioning		

Hospital Medications (Must List ALL)

Brand/ Generic	Atorvastatin/ Lipitor 40mg Nightly Oral	Clopidogr el/Plavix 75mg 1x daily Oral	Empagliflozi n/Jardiance 10mg 1x daily Oral	Enoxaparin/ Lovenox 30mg 1x daily Subq	Folic acid/F olvite 1mg 1x daily Oral	Furosemi de/Lasix 40mg 1x daily Oral

Classification			Sodium-glucose co-transporter 2 (SGLT2) inhibitors (MedlinePlus, 2021).	Low molecular weight heparins (MedlinePlus, 2021).		
Reason Client Taking			The patient is taking this medication because she has heart failure	The patient is taking this medication to prevent blood clots due to lack of mobility		
Key nursing assessment(s) prior to administration			Assess blood glucose, and renal function tests	Assess for bleeding risks, and assess platelet levels		
Brand/ Generic	Levothyroxine/Synthroid 125mcg Every morning before breakfast Oral	Losartan/ Cozarr 25mg 1x daily Oral	Metoprolol Succinate/Toprol-xl 25mg 1x daily Oral	Spironolactone /Aldactone 25mg 1x daily Oral		
Classification						
Reason Client Taking						
Key nursing assessment(s) prior to administration						

Brand/ Generic						
Classification						
Reason Client Taking						
Key nursing assessment(s) prior to administration						

Prioritize Three Hospital Medications

Medications	Why this medication was chosen	List 2 side effects. These must correlate to your client
1. Furosemide	This medication was chosen due to the fact that many patients who experience HF, have fluid buildup in the body. This diuretic helps to	**1.** Decreased sodium levels **2.** Fluid loss

	reduce fluid and edema.	
2. Losartan	Ace inhibitors lower blood pressure and reduces the workload on the heart.	**1.** Hypotension **2.** Headache
3. Metoprolol	This medication is a betablocker, which is an important med in heart failure, this med helps slow the heart rate and reduce blood pressure, which allows the heart to work less by decreasing contractility which reduces oxygen consumption.	**1.** Bradycardia **2.** Fatigue

Medications Reference (1) (APA)

MedlinePlus. (2021). *MedlinePlus Drug Information*. Medlineplus.gov. https://medlineplus.gov/druginfo/meds/a601210.html

WebMD. (2020). *Drugs & Medications*. Www.webmd.com. https://www.webmd.com/drugs/2/drug-1837/lovenox-subcutaneous/details

Physical Exam

HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	The patient alert and oriented x4 The patient does appear to be in distress, tired and fatigued. The patient is not on any isolation The patient made complaints about the left side

Infection Control precautions: **Client Complaints or Concerns:**	of her ribs due to a fall she had a week prior to admission.
VITAL SIGNS: **Temp:** **Resp rate:** **Pulse:** **B/P:** **Oxygen:** **Delivery Method:**	8:00am 11:00am 99.2F. 97.9F 18 RR 20 RR 62 pulse 64 pulse 154/65 99/62 93% O2 room air 96% O2 room air
PAIN ASSESSMENT: **Time:** **Scale:** **Location:** **Severity:** **Characteristics:** **Interventions:**	8:00 11:00am 1-10 1-10 Left side ribs N/A 8 N/A Patient stated it feels bruised, patient stated the nurse gave her Tylenol.
IV ASSESSMENT: **Size of IV:** **Location of IV:** **Date on IV:** **Patency of IV:** **Signs of erythema, drainage, etc.:** **IV dressing assessment:** **Fluid Type/Rate or Saline Lock:**	18 Gauge Antecubital right arm 8/22/24 Patent No signs of erythema or drainage IV dressing is clean, dry and intact Saline locked
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	Skin is white and warm with some slight bruising from IV. Patients' skin turgor was normal. No rashes or wounds noted. Patients Braden score is 18. No drains are present
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Head is midline with neck, no NVD noted. Ears are shaped normal with no drainage or abnormalities noted. Sclera is white eyes and free from drainage. Periorbital edema noted Septum in normal and midline Patient has dentures .
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.**	S1 and S2 heard, gallop noted, peripheral pulses are 2+, cap refill<3secs, no NVD noted, periorbital edema observed.

Cardiac rhythm (if applicable): **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☒ N ☐** **Location of Edema:** Eyes	
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Lung sounds were heard in all four quadrants anteriorly and six quadrants posteriorly, Lung sounds were not clear. Slight wheezing noted.
GASTROINTESTINAL: **Diet at home:** **Current Diet:** **Is Client Tolerating Diet?** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	Patient stated she eats whatever she likes at home, while at the hospital the patient is on a general diet. The patient is tolerating the diet ok, patient ate 25% of her breakfast. Patient weighs 123lb and 5'2 Patients' bowel sounds are active, upon palpation the patient did not mention any pain. No masses noted. No distention, incisions, scars, drains, or wounds noted.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	Patients' urine is light yellow, urine does not have any odor and does not appear to be cloudy. The patient voided 900ml, no pain upon urination noted, genitals appear normal. Patient does have an external catheter present.

Intake (in mLs) **Output (in mLs)**	Patient intake not recorded Patient output 900mLs
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** Walker **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score:** **Activity/Mobility Status:** **Activity Tolerance:** **Independent (up ad lib)** **Needs assistance with equipment** **Needs support to stand and walk**	The patients' neurovascular status is normal, nail beds and body temperature are WNL. Passive ROM was completed Strength is 5/5 on the patients' right side of her body, on the left side where she had the stroke strength is about a 3 due to weakness. The patient is a fall risk, fall score is 79. The patient is up as tolerated and is a 1 assist The patient does need support to stand with gait belt, but can walk on her own once she's up.
NEUROLOGICAL: **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	The patient is alert and oriented x4 with no apparent cognitive issues. Mental status, speech and sensory normal. The patient is able to advocate for herself and does well with communicating and answering questions appropriately. LOC normal
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	The patient stated that she smokes cigarettes to cope with life. Patient did not complete high school but is able to speak fluently. The patient practices Protestantism The patient stated that her husband and son take good care of her.

Discharge Planning

Discharge location: The patient will return home with her husband and son

Home health needs: The patient stated that she receives help at home 3x a week, no further home health needs noted.

Equipment needs: The patient stated she has a walker at home that she uses sometimes.

Follow up plan: The patient is to follow up with her provider in the next 2-4 weeks. The provider requests that the client goes home on a cardiac diet.

Education needs: Smoking cessation, Activity tolerance, Diet, use of incentive spirometer, daily weight monitoring, recognition of s/s related to HF, and appropriate use of medication.

Nursing Process
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	**Rationale** • Explain why the nursing diagnosis was chosen	**Outcome Goal (1 per dx)**	**Interventions (2 per goal)**	**Evaluation of interventions**
1. Fluid volume overload related to heart failure as evidence by periorbital edema.	This nursing diagnosis was chosen because the patient has periorbital edema which means what that the patient is retaining fluid. Retaining fluid can cause more complication in a HF patient.	The patients edema/ swelling will decrease.	**1.**Monitor patients' intake and output **2.**Monitor heart function	The patients' output will be normal, and the patients' heart function will improve. This should be evaluated daily while the patient is at the hospital by weighing the client and completing cardiac functioning panels.

2. Decreased cardiac output related to abnormal heart functioning as evidence by BP being 99/62.	This nursing diagnosis was chosen for the patient because the patients' blood pressure has been low in the morning and afternoon which indicates the heart is not pumping blood effectively.	The patients BP will return to normal limits.	**1.** Check vitals routinely. **2.** Provide oxygen therapy when needed.	The patients' vitals will improve. This should be evaluated before and after heart medications are given.
3. Activity intolerance related to decreased oxygenation and energy as evidenced by patient stating she needs assistance with standing and is SOB with activity.	This nursing diagnosis was chosen because it is crucial that the patient includes some activity in their daily routine. Physical activity can help with improving circulation and alleviate symptoms of fatigue and swelling.	The patients' will be able to move freely without assistance and will not make complaints of being SOB.	**1.** Assess the patients' tolerance to certain activities, this allows both the nurse and patient to see what activity the patient is capable of completing. **2.** Promote rest periods and allow the patient to recover this will help reduce and prevent fatigue.	The patient will be able to complete ADLs without complaints of fatigue and SOB. The patients activity levels should be recorded after an activity is performed, such as ambulating to the bathroom.

Other References (APA):

MedlinePlus. (2021). *MedlinePlus Drug Information*. Medlineplus.gov.

https://medlineplus.gov/druginfo/meds/a601210.html

WebMD. (2020). *Drugs & Medications*. Www.webmd.com.

https://www.webmd.com/drugs/2/drug-1837/lovenox-subcutaneous/details