N311 Care Plan 3

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Lakeview College of Nursing

N311: Foundations of Professional Practice

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Demographics (5 points)

Date of Admission 10/02/2024	**Client Initials** T. B.	**Age** 87	**Gender** Female
Race/Ethnicity Caucasian	**Occupation** Unemployed/Retired	**Marital Status** Widowed	**Allergies** ACE Inhibitors (cough) Amlodipine (cough) Bactrim (nausea) Oxybutynin (nausea)
Code Status DNR – Comfort Focused Treatment	**Height** 5'2" (157.5 cm)	**Weight** 112 lbs (50.9 kg)	

Medical History (5 Points)

Past Medical History: Coronary Artery Disease (CAD), Congestive Heart Failure (CHF)

Past Surgical History: No past surgical history noted in EHR, patient is poor historian and unable to give proper past surgical history.

Family History: No family history noted in EHR, patient is poor historian and unable to give proper family history.

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Widowed elderly female patient, lives with son in a single-family home in St. Joseph, Illinois. She is Methodist. No tobacco use, no alcohol use, no drug use.

Admission Assessment

Chief Complaint (2 points): Shortness of breath (SOB)

History of Present Illness – OLD CARTS (10 points): Patient presented to the emergency department complaining of shortness of breath (SOB). Patient is accompanied by a son who is helping answer some of the admission questions. She has a past medical history of coronary artery disease (CAD) and congestive heart failure (CHF). Patient's SOB is moderate at rest and severe with increased ambulation. Patient stated SOB is mildly alleviated with rest. Patient has

altered mental status (AMS) upon ER visit and is hypertensive with BP >180/90. Labs and blood cultures were drawn in the ED. BNP and Troponin levels increased, and blood cultures grew gram negative Escherichia coli (E. coli) bacteria.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Septicemia (Sepsis)

Secondary Diagnosis (if applicable): Non-ST Elevation Myocardial Infarction

Pathophysiology

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

Escherichia coli (E. coli) grew on the blood cultures obtained in the emergency department. E. coli is a gram-negative bacteria that is typically found in the human gut, where it is a normal part of the gastrointestinal flora. While E.coli in its normal environment does not produce any negative effects on the body, when it enters the bloodstream it causes a systemic response called septicemia (sepsis). Sepsis causes widespread vasodilation, increased capillary permeability, and organ dysfunction (McCance & Huether, 2019). These negative effects can present on a vital signs assessment as high fever, increased heart rate, and low blood pressure.

The body's response to an infection causes the immune cells to release pro-inflammatory cytokines. In a normal response, cytokine release and the subsequent inflammation it causes is beneficial to the immune system by decreasing the amount of infecting pathogens. When there is a systemic blood infection caused by pathogens such as E. coli, the release of these cytokines can become overwhelming for the entire bodily system.

According to McCance and Huether (2019), tumor necrosis factor alpha, interleukin-1, and interleukin-6 are the typical cytokines released during an immune response. During sepsis the release of these cytokines progresses, and interleukin-10 is released which further impairs the

immune response and disrupts bodily function and homeostasis. There are some treatments in regards to cytokine release, which differ from the antibiotics used to treat the specific pathogen.

According to Athale et al. (2022), a drug named tocilizumab can be given, which is an anti-interleukin-6 receptor antibody. Although this drug can help with the decrease in the inflammatory response that the interleukin-6 cytokine causes, use is still being studied under a controlled clinical trial due to the complexity of the benefit versus harm element.

Pathophysiology References (2) (APA):

Athale, J., Busch, L. M., & O'Grady, N. P. (2022). Cytokine Release Syndrome and Sepsis: Analogous Clinical Syndromes with Distinct Causes and Challenges in Management. *Infectious disease clinics of North America*, *36*(4), 735–748. https://doi.org/10.1016/j.idc.2022.07.001

McCance, K. L., & Huether, S. E. (2019). *Pathophysiology: The biologic basis for disease in adults and children* (8th ed.). Elsevier.

Laboratory Data (20 points)

If laboratory data is unavailable, values will be assigned by the clinical instructor

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

Lab	Normal Range	Admission Value (10/2/24)	Today's Value (10/8/24)	Reason for Abnormal Value
RBC	3.8-5.3	3.61	3.28	Red blood cell count may be lower due to nutritional deficiency (BC Cancer, n.d.).
Hgb	12.0-15.8	11.2	10.2	Hemoglobin may be lower due to nutritional deficiency and sepsis (BC Cancer, n.d.).
Hct	36.0-47.0	33.6	30.3	Hematocrit may be low due to nutritional deficiency (
Platelets	140-440	134	105	Platelet counts may be low due to bacterial infection (BC Cancer, n.d.).
WBC	4.00-12.00	15.70	10.10	Increased white blood cell count due to systemic infection (BC Cancer, n.d.).
Neutrophils	47.0-73.0	74.0	Not Done	Increased neutrophils due to systemic infection (BC Cancer, n.d.).
Lymphocytes	18.0-42.0	5.0	Not Done	N/A

Monocytes	4-12	6.0	Not Done	N/A
Eosinophils	Not Done	Not Done	Not Done	N/A
Bands	Not Done	Not Done	Not Done	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 Value	Today's Value	Reason For Abnormal
Na-	136-145	143	139	N/A
K+	3.5-5.1	2.7	4.0	N/A
Cl-	98-107	106	105	N/A
CO2	22-30	24	20	Carbon dioxide may be low due to electrolyte imbalances (BC Cancer, n.d.).
Glucose	70-99	91	143	Glucose may be elevated due to IV steroids (BC Cancer, n.d.).
BUN	10-20	34	66	Blood urea nitrogen may be elevated due to dehydration and poor kidney function (BC Cancer, n.d.).
Creatinine	0.6-1.00	1.03	1.93	Creatinine may be increased due to systemic infection and kidney involvement (BC Cancer, n.d.).
Albumin	3.5-5.0	2.8	3.7	N/A
Calcium	8.7-10.5	8.4	8.9	N/A
Mag	1.6-2.6	1.5	Not Done	N/A
Phosphate	2.5-4.5	Not Done	Not Done	N/A
Bilirubin	0.1-1.2	4.2	1.4	Bilirubin may be increased due to sepsis and liver involvement (BC Cancer, n.d.).
Alk Phos	44-147	Not Done	Not Done	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	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Yellow & Clear	Not Done	Not Done	N/A
pH	5-9	Not Done	Not Done	N/A
Specific Gravity	1.00-1.06	Not Done	Not Done	N/A
Glucose	<20	Not Done	Not Done	N/A
Protein	<20	Not Done	Not Done	N/A
Ketones	<3	Not Done	Not Done	N/A
WBC	15-40	Not Done	Not Done	N/A
RBC	<0.02	Not Done	Not Done	N/A
Leukoesterase	Negative	Not Done	Not Done	N/A

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	No growth	Not Done	Not Done	N/A
Blood Culture	No growth	Escherichia coli growth (E. coli)	Not Done	Positive blood cultures due to gram-negative Escherichia coli growth on culture (BC Cancer, n.d.).
Sputum Culture	No growth	Not Done	Not Done	N/A
Stool Culture	No growth	Not Done	Not Done	N/A

Lab Correlations Reference (1) (APA):

BC Cancer Foundation. (n.d.) *Lab test confirmation table.*

http://www.bccancer.bc.ca/pharmacy-site/Documents/Clinical_Pharmacy_Guide/cpg3e-lab-test-table.pdf

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

Chest x-ray (CXR) upon arrival to ED, Computed tomography of the abdomen and pelvis with contrast (CT A&P with contrast) during ED visit, Chest x-ray (x3) during admission.

Diagnostic imaging is performed to help with the identification of sepsis early on in the treatment plan. According to Di Serafino et al. (2021), early sepsis identification is the cornerstone of management and diagnostic imaging can play a pivotal role in this clinical context. The choice of imaging modality depends on several factors, associated with the clinical condition and the presence or absence of localizing signs and symptoms. In this patient's case a CXR may aid in treating her shortness of breath. Also, a CT A&P with contrast can give a deeper visualization of her internal organ structure when septic shock is believed to be the diagnosis, and organ involvement and their declining functioning may be suspected.

Diagnostic Imaging Reference (1) (APA):

Di Serafino, M., Viscardi, D., Iacobellis, F., Giugliano, L., Barbuto, L., Oliva, G., Ronza, R., Borzelli, A., Raucci, A., Pezzullo, F., De Cristofaro, M. G., & Romano, L. (2021). Computed tomography imaging of septic shock. Beyond the cause: the "CT hypoperfusion complex". A pictorial essay. *Insights into imaging*, *12*(1), 70. https://doi.org/10.1186/s13244-021-01006-5

Assessment

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

General, Psychosocial/Cultural, and ONE focused assessment specific to the client is required. The student and instructor may complete these assessments together.

GENERAL:

Alertness: Alert & awake

Orientation: Alert & Oriented to person and place (AxO x2), disoriented to time

Distress: Calm and cooperative

Overall appearance: Weak and calm

INTEGUMENTARY:

Skin color: Pale

Character: Dry, thin, blanchable redness

Temperature: Warm

Turgor: Slow return to original state

Rashes: Within defined limits

Bruises: Ecchymotic on upper & lower extremities bilaterally, generalized excoriation

Wounds: Medial coccyx, right gluteal, left gluteal, left heel, right heel, lateral anus

Braden Score: 15

Drains present: **Y☐** **N✔**

Type: N/A

HEENT:

Head/Neck: Within defined limits

Ears: Within defined limits

Eyes: PERRLA intact

Nose: Within defined limits

Teeth: Teeth missing, tooth decay

CARDIOVASCULAR:

Heart sounds: Within defined limits, S1 & S2 present, murmur

S1, S2, S3, S4, murmur etc.

Cardiac rhythm (if applicable): Normal sinus rhythm

Peripheral Pulses: Radial 2+ bilaterally, Dorsalis pedis 1+ bilaterally, Posterior tibial 1+ bilaterally

Capillary refill: Less than 3 seconds

Neck Vein Distention: **Y ☐ N ✔** **Edema Y ✔ N ☐**

Location of Edema: Left leg 2+, Right leg 1+, Left knee 2+, R knee 1+, Left ankle 2+, Right ankle 1+, Left foot 2+, Right food 1+

RESPIRATORY:

Accessory muscle use: **Y☐** **N ✔**

Breath Sounds: Location, character Unlabored, pattern regular, depth regular. Left & Right upper lobe crackles, Right middle lobe diminished, Left & Right lower lobe diminished

GASTROINTESTINAL:

Diet at home: Regular/General

Current Diet: Regular/General, 1:1 assistance with feeding

Height: 5'2" (157.5 cm)

Weight: 112 lbs (50.9 kg)

Auscultation Bowel sounds: Audible in all quadrants

Last BM: 10/09/2024

Palpation: Pain, Mass etc.: Soft

Inspection:

Distention: Rounded abdomen

Incisions: N/A

Scars: N/A

Drains: N/A

Wounds: N/A

Ostomy: **Y ☐** **N ✔**

Nasogastric: **Y ☐** **N ✔**

Size:

Feeding tubes/PEG tube **Y ☐** **N ✔**

Type: N/A

GENITOURINARY:

Color: Yellow

Character: Clear/Anuric

Quantity of urine: Anuria, 100 mL

Pain with urination: **Y ☐** **N ✔**

Dialysis: Y ☐ N ✔

Inspection of genitals: Excoriation around perineal area

Catheter: Y ☐ N ✔

Type: N/A

Size: N/A

MUSCULOSKELETAL:

Neurovascular status: Within defined limits

ROM: Active ROM encouraged, assessment for ROM not documented in EHR

Supportive devices: Gait belt, walker

Strength: Generalized weakness, moderately impaired

ADL Assistance: Y ✔ N ☐

Fall Risk: Y ✔ N☐

Fall Score: Not calculated or documented in EHR

Activity/Mobility Status: Bed rest, up with 2 person assist

Independent (up ad lib) ☐

Needs assistance with equipment ✔

Needs support to stand and walk ✔

NEUROLOGICAL:

MAEW: Y ☐ N ✔

PERLA: Y ✔ N☐

Strength Equal: Y ✔ N ☐ if no - Legs ☐ Arms ☐ Both ✔

Orientation: Alert & Oriented to person and place (AxO x2), disoriented to time

Mental Status: Confused

Speech: Garbled

Sensory: Intact

LOC: Alert but confused

PSYCHOSOCIAL/CULTURAL:

Coping method(s): Family, palliative care consulted, active listening encouraged

Developmental level: Confused but appropriate for age

Religion & what it means to pt.: Methodist, unable to inquire given LOC **Personal/Family Data (Think about home environment, family structure, and available family support):** Supportive family, patient visibly upset and wants to go home .

Vital Signs, 1 set (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0759	87	150/63	18	98.4 (axillary)	96% on 2L Nasal cannula

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0801	Word 0-10	No pain	0	No pain	No pain, position adjusted for comfort

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
477 mL	100 mL

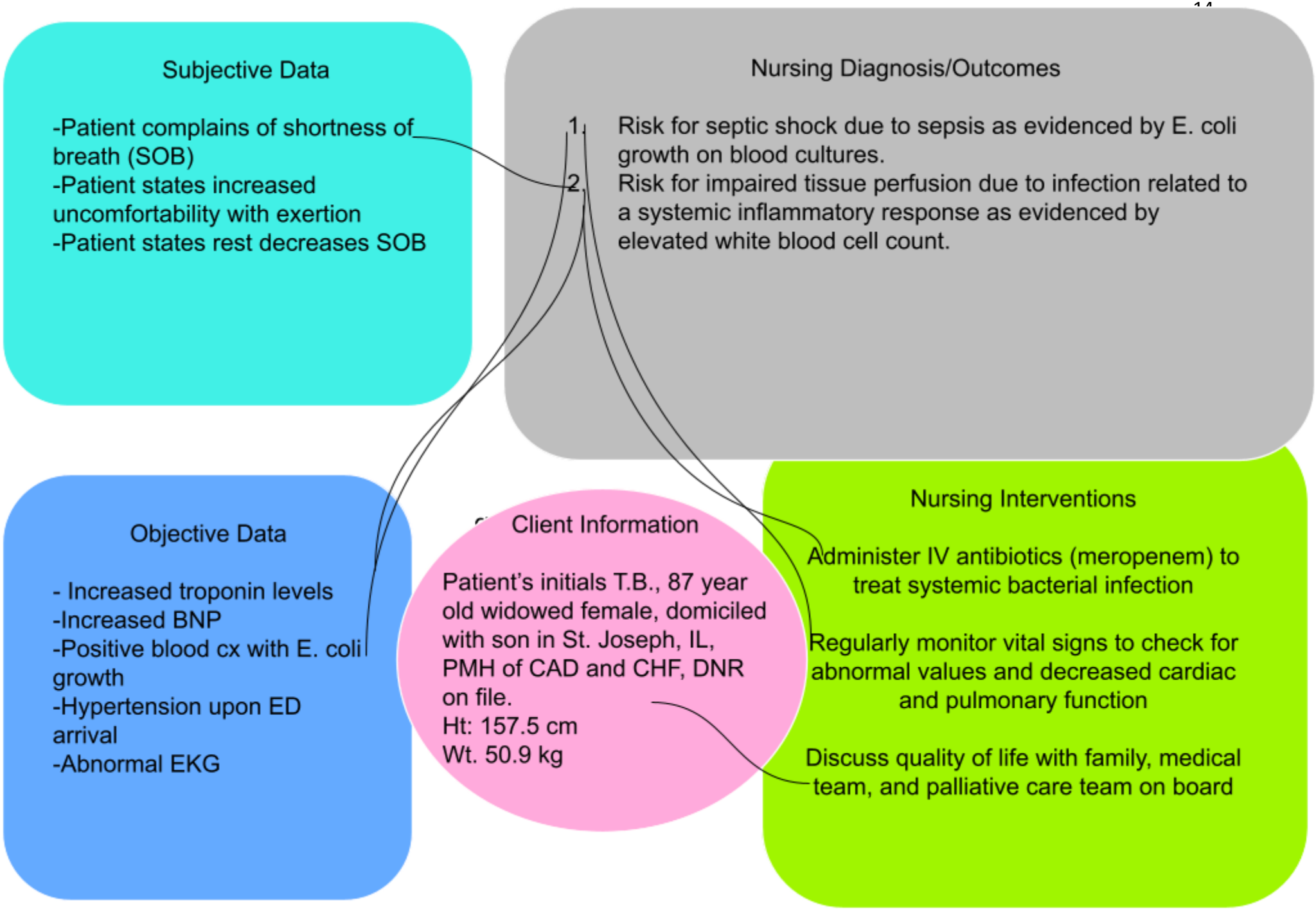
Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis

Nursing Diagnosis ● Include full nursing	Rationale ● Explain why the nursing	Interventions (2 per dx)	Outcome Goal (1 per dx)	Evaluation ● How did the client/family

diagnosis with "related to" and "as evidenced by" components ● Listed in order by priority – highest priority to lowest priority pertinent to this client	diagnosis was chosen			respond to the nurse's actions? ● Client response, status of goals and outcomes, modifications to plan.
1. Risk for septic shock due to sepsis as evidenced by E. coli growth on blood cultures.	Chosen because septic shock can be common with a septicemia diagnosis, and can be fatal if untreated.	**1.** Administer prescribed IV antibiotics **2.** Monitor vital signs frequently	**1.** Stabilize the patient so that the systemic inflammatory response can reduce and return to a homeostatic level.	The patient showed no signs of going into septic shock given the timely administration of IV antibiotics.
2. Risk for impaired tissue perfusion due to infection related to a systemic inflammatory response as evidenced by elevated white blood cell count.	Chosen due to multi-organ involvement, especially her mental status in septicemia and patient's medical past medical history.	**1.** Monitor laboratory values to look for increase in WBC and/or trends in lab values. **2.** Assess and document patients' level of consciousness and/or any changes in mental status.	**1.** Proper tissue perfusion and increased level of consciousness.	The patient showed some signs of increased LOC, but was troubled with quality of life decision making. Inflammatory response is seemingly decreasing given treatment, and her mental status has improved.

Other References (APA):

Concept Map (20 Points):


Subjective Data
-Patient complains of shortness of breath (SOB)
-Patient states increased uncomfortability with exertion
-Patient states rest decreases SOB
Nursing Diagnosis/Outcomes
1. Risk for septic shock due to sepsis as evidenced by E. coli growth on blood cultures.
2. Risk for impaired tissue perfusion due to infection related to a systemic inflammatory response as evidenced by elevated white blood cell count.
Objective Data
- Increased troponin levels
-Increased BNP
-Positive blood cx with E. coli growth
-Hypertension upon ED arrival
-Abnormal EKG
Client Information
Patient's initials T.B., 87 year old widowed female, domiciled with son in St. Joseph, IL, PMH of CAD and CHF, DNR on file.
Ht: 157.5 cm
Wt. 50.9 kg
Nursing Interventions
Administer IV antibiotics (meropenem) to treat systemic bacterial infection
Regularly monitor vital signs to check for abnormal values and decreased cardiac and pulmonary function
Discuss quality of life with family, medical team, and palliative care team on board