N311 Care Plan #3

Lakeview College of Nursing

Anthony Morgan

Demographics (5 points)

Date of Admission 11/13/20	Patient Initials B.H.	Age 90+	Gender Female
Race/Ethnicity White	Occupation Retired school cook & church grounds keeper	Marital Status Widowed	Allergies Atorvastatin & Pravastatin
Code Status DNR with selective TX	Height 64.0in	Weight 127.6lbs	

Medical History (5 Points)

Past Medical History:

- **Two pregnancies (girls)**
- **Fractured right arm twice**
- **COVID-19**
- **Zoster without complications**
- **Recurrent major depressive disorder**
- **Primary hypertension**
- **Weakness**
- **Unsteadiness on feet**
- **Reduced mobility**
- **Hyperlipidemia**
- **Hypothyroidism**
- **General muscle weakness**
- **Meibomian gland dysfunction of unspecified eye and eyelid**
- **Unspecified glaucoma**
- **Impaired fasting glucose**
- **Unspecified cataract**
- **Osteoporosis with pathological fracture**
- **Dry eye syndrome of unspecified lacrimal**

Past Surgical History:

- **Hysterectomy in the year of 1958, the patient cannot remember the month.**
- **Gall bladder surgery, the patient cannot remember when it occurred.**
- **Cataract removal**

- **Appendectomy**

Family History:

- **Sister died of a stroke due to a blood clot**
- **Father died at 62 years old**
- **Mother died at 69 years old**

Social History (tobacco/alcohol/drugs):

- **Never drank alcohol, never smoked cigarettes, and never done drugs**

Admission Assessment

Chief Complaint (2 points):

- **Back pain**
- **Chest pain**

History of present Illness (10 points):

The patient experienced pain on their entire back and chest in September of 2020. The chest pain was caused by the coronavirus disease of 2019 (COVID-19) and the back pain was caused by Shingles. The pain lasted for approximately 8 months. The pain in both locations were sharp and burning. The back also itched after the onset burning and sharpness. Diaphoresis and overly moist skin exacerbated the symptoms. Lotion on the back decreased the severity of symptoms. The patient was given two shots of the COVID-19 vaccine to treat COVID and prevent further infections. The client was given analgesics to alleviate some of the pain from shingles.

Primary Diagnosis

Primary Diagnosis on Admission (3 points):Zoster without complications

Secondary Diagnosis (if applicable):

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

Herpes-zoster is a virus known as shingles. Shingles attacks nerve cells of the nervous system, particularly the neurons of the spine. From the spine, it can potentially spread to the abdomen and chest because the virus infects neurons along a nerve pathway (Morgan, 2020). Shingles is a virus that remains within nerve cells for years then reemerges around 60 years of age due to a decrease in cell-mediated immunity (Morgan, 2020; NCIB, 2015). This is because the virus becomes a prophage after the initial varicella-zoster (VZV) infection, also called chickenpox. A prophage is a virus that remains within its host's cell's deoxyribonucleic acid (DNA) until the proper stresses allow it to replicate. When the virus uses its host's cells to replicate, it becomes lytic. Lytic viruses continue to replicate until they force the cell to burst or force the cell to allow it to bud from its membrane. Some viruses contain DNA and others contain ribonucleic acid (RNA). DNA is long strands of base pairs that give cells instructions on how to operate. DNA remains within the nucleus of cells. The four base pairs that make up DNA are alanine, thymine, cytosine, and guanine. RNA is a translated version of DNA that leaves the nucleus to instruct other cell organelles to create protein and distribute them inside and outside of the cell. The four base pairs that make up RNA are adenine, uracil, guanine, and cytosine. When the virus is reactivated, it uses the cell's mechanisms to transcribe its own strand of RNA then uses that strand to create more VZV particles. Shingles is a single-stranded DNA virus approximately 125,000 base pairs long that produces red patches on the back that eventually become "infectious blisters that contain VZV" (Morgan, 2020, p. 65). There is no such thing as a shingles virus. Shingles is the second stage or condition of the VZV. The blisters come with other symptoms: tingling pain, burning, and itchiness. This virus can be spread through contact and it's airborne making it highly contagious.

Normally the immune system would kill an antigen that didn't contain the proper surface receptors. VZV is difficult to detect for the immune system because it is an enveloped virus (Morgan, 2020). Enveloped viruses have the receptors of the cells the bud from, this prevents the immune system from detecting them. Enveloped viruses appear as the host's cells to the immune system; therefore, almost never attacking them.

The two diagnostic tests for VZV are the "anti-VZV IgG antibody" and withdrawal of cerebrospinal fluid (CSF). The antibody test is a blood draw. Withdrawal of CSF is called a spinal tap. "Spinal taps are done inferior to the end of the spinal cord at L1 taking CSF from the subarachnoid space. There's less of a chance damaging the spinal cord here" (Morgan, 2020, p. 6). "L1" is the first lumbar vertebrae of the spinal cord and the subarachnoid space that surrounds the spinal cord becomes wider past the first lumbar vertebrae. VZV DNA only appears in CSF 30% of the time and only appears 4.2 months after the onset of infection (NCBI, 2015). Spinal taps are invasive, risky, and nearly unreliable for VZV making the antibody test the best and safest method. The viral DNA appears in the bloodstream 93% of the time (NCBI, 2015).

The main treatment for VZV and shingles is the chickenpox vaccine. The vaccine is an inactivated VZV (Morgan, 2020); vaccines with inactivated virus are heat killed. This allows the immune system to make antibodies more easily. Other treatments for the virus only lessen the severity of symptoms. Over-the-counter pain medication is used to relieve mild symptoms and an anti-viral drug called acyclovir is used when symptoms are severe (Morgan, 2020).

Pathophysiology References (2) (APA):

Morgan, A. (2020). *Human Anatomy & Physiology II, Brain & Spinal Cord Lecture*. [Unpublished manuscript]. Portage Learning.

Morgan, A. (2020). *Microbiology Module 6*. [Unpublished manuscript]. Portage Learning.

NCIB. (2015). Varicella Zoster Virus in the Nervous System.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4754002/

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	Today's Value	Reason for Abnormal Value
RBC	**3.92 – 5.13**	**4.88**	**N/A**	
Hgb	**11.6 – 15.0**	**14.5**	**N/A**	
Hct	**35.5 – 44.9**	**44.4**	**N/A**	
Platelets	**157 - 371**	**152**	**N/A**	**The patient is taking multiple medications that have the possibility of causing thrombocytopenia, citalopram hydrobromide, aspirin, and lovastatin (Jones & Bartlett, 2020).**
WBC	**3.4 – 9.6**	**4.5**	**N/A**	
Neutrophils	**1.56 – 6.45**	**2.6**	**N/A**	
Lymphocytes	**0.95 – 3.07**	**1.4**	**N/A**	
Monocytes	**0.26 – 0.81**	**0.4**	**N/A**	
Eosinophils	**0.03 – 0.48**	**0.1**	**N/A**	
Bands	**0 – 5%**	**0.0**	**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-	135 - 145	140	N/A	
K+	3.7 – 5.2	4.1	N/A	
Cl-	96 - 106	103	N/A	
CO2	23 - 29	N/A	N/A	
Glucose	70 - 110	87	N/A	
BUN	6 - 20	28	N/A	BUN is elevated because the patient has a low glomerular filtration rate (GFR). Low GFRs give all substances the opportunity to reenter circulation which is why BUN stays elevated. The client is also taking an antidepressant that can cause acute renal failure. The kidneys control GFR (Jones & Bartlett, 2020).
Creatinine	0.6 – 1.3	0.7	N/A	
Albumin	3.4 – 5.4	3.4	N/A	
Calcium	8.5 – 10.2	8.9	N/A	
Mag	1.7 – 2.2	N/A	N/A	
Phosphate	2.5 – 4.5	N/A	N/A	
Bilirubin	0.1 – 1.2	0.7	N/A	
Alk Phos	20 – 130U/ L	71	N/A	
eGFR	90 - 120	82	N/A	The client is taking an antidepressant that can cause acute renal failure and the

				kidneys control GFR. Primary hypertension can damage arteries that supply kidneys causing damage making them less effective at filtration.

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	**Clear - Yellow**	**N/A**	**N/A**	
pH	**5.00 – 9.00**	**N/A**	**N/A**	
Specific Gravity	**1.003 – 1.030**	**N/A**	**N/A**	
Glucose	**Negative**	**N/A**	**N/A**	
Protein	**Negative**	**N/A**	**N/A**	
Ketones	**Negative**	**N/A**	**N/A**	
WBC	**0 - 5**	**N/A**	**N/A**	
RBC	**0 - 4**	**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	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	**No Growth**	**N/A**	**N/A**	
Blood Culture	**No Growth**	**N/A**	**N/A**	

Sputum Culture	**No Growth**	**N/A**	**N/A**	
Stool Culture	**No Growth**	**N/A**	**N/A**	

Lab Correlations Reference (APA):

eClinpath. (2020). RBC Count. https://eclinpath.com/hematology/tests/rbc-count/#:~:text=RBC%20counts%20are%20expressed%20as,SI%20units%20is%201%3A1.count/#:~:text=RBC%20counts%20are%20expressed%20as,SI%20units%20is%201%3A1.

Healthline. (2019). Serum Phosphorus Test. https://www.healthline.com/health/serum-phosphorus

Jones & Bartlett Learning. (2020). Nurse's Drug Handbook. Composition and Project Management: S4Carlisle Publishing Services.

Mayo Clinic. (2021). Complete Blood Count (CBC). https://www.mayoclinic.org/tests-procedures/complete-blood-count/about/pac-20384919

Mayo Clinic. (2021). Complete Blood Count (CBC) With Differential, Blood. https://www.mayocliniclabs.com/test-catalog/Clinical+and+Interpretive/9109

Medline Plus. (2021). Glomerular Filtration Rate. https://medlineplus.gov/ency/article/007305.htm#:~:text=According%20to%20the%20National%20Kidney,vary%20slightly%20among%20different%20laboratories.

Medline Plus. (2021). Magnesium Blood Test. https://medlineplus.gov/ency/article/003487.htm#:~:text=The%20normal%20range%20for%20blood,measurements%20or%20test%20different%20samples.

National Cancer Institute. (n.d.). Normal Blood Values. https://training.seer.cancer.gov/abstracting/procedures/clinical/hematologic/blood.html

Science Direct. (2021). Spironolactone. https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/spironolactone#:~:text=Spironolactone%20and%20eplerenone%20competitively%20antagonize,excretion%20and%20decrease%20potassium%20loss.

UCLA Health. (2021). High Calcium. https://www.uclahealth.org/endocrine-center/high-calcium

UCSF Health. (2021). Comprehensive Metabolic Panel. https://www.ucsfhealth.org/medical-tests/003468

UNC Medical Center. (2021). Urinalysis (General & Microscopic). https://www.uncmedicalcenter.org/mclendon-clinical-laboratories/available-tests/urinalysis-general-microscopic/

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

Chest x-ray on 11/24/20

- No visible acute processes

EKG – 11/10/20

- Normal Sinus rhythm
- Right bundle branch block
- Inferior infarct, age undetermined

Current Medications (10 points, 2 points per completed med)
5 <u>different</u> medications must be completed

Medications (5 required)

Brand/ Generic	**Generic: Citalopram hydrobromide Brand: Celexa**	**Generic: Aspirin Brand: Ecotrin**	**Generic: Lovastatin Brand: Mevinolin**	**Generic: Amlodipine besylate Brand: Norvasc**	**Generic: Travoprost (BAK free) solution 0.004% Brand: Travatan**
Dose	**20mg**	**81mg**	**20mg**	**5mg**	**One drop**
Frequency	**Once/day**	**Once/day**	**Every evening**	**Once/day**	**Every night before bed**
Route	**Oral**	**Oral**	**Oral**	**Oral**	**Eyes**
Classification	**Antidepressants**	**Analgesics**	**Antihyperlipidemics**	**Calcium channel blockers**	**Ophthalmic Agent**
Mechanism of Action	**Reduces depression and improves mood by stopping the reuptake of serotonin. This keeps more serotonin at the synapses improving emotion (Jones & Bartlett, 2020).**	**"Inhibits cyclooxygenase which overall decreases inflammation. Cyclooxygenase is involved in creating prostaglandins and prostaglandins are inflammatory mediators that dilate arteries (Jones & Bartlett, 2020)" (Morgan, 2021, p. 11).**	**This medication inhibits the enzyme responsible for making cholesterol in the liver. This decreases overall cholesterol in the blood reducing hyperlipidemia (Jones & Bartlett, 2020).**	**This medication binds to a cell receptor on cardiac tissue that inhibits intake of calcium. The decrease of calcium within intracellular fluid causes smooth muscle and cardiac muscle to become less stimulated. This decreases overall**	**Travoprost binds to a receptor that allows uveoscleral outflow. This prevents the outflow from occurring thus maintaining intraocular pressure (rxlist, 2019).**

				cardiac output (Jones & Bartlett, 2020).	
Reason Client Taking	**Anxiety**	**Prophylaxis**	**Hyperlipidemia**	**Primary Hypertension**	**Glaucoma**
Contraindications (2)	**Hypersensitivity to citalopram and pimozide therapy.**	**Asthma and bleeding disorders.**	**Acute hepatic disease and ketoconazole.**	**Renal Impairment with a glomerular filtration rate less than 60 and hypersensitivity to amlodipine.**	**Hypercholesterolemia, hypertension, and Hypersensitivity to travoprost (rxlist, 2019).**
Side Effects/Adverse Reactions (2)	**Acute-angle glaucoma, acute renal failure, and thrombocytopenia**	**Thrombocytopenia, hearing loss with tinnitus, and hepatotoxicity**	**Cataracts, abnormal thyroid function, depression, thrombocytopenia, and hyperbilirubinemia**	**Pancreatitis and lethargy**	**Conjunctival hyperemia, photophobia, and blepharitis (rxlist, 2019).**

Medications Reference (APA):

Jones & Bartlett Learning. (2020). Nurse's Drug Handbook. Composition and Project Management: S4Carlisle Publishing Services.

Morgan, A. (2021). *Care Plan II Chrisman Nursing Home.* [Unpublished manuscript]. Lakeview College of Nursing.

Rxlist. (2019). Travatan. https://www.rxlist.com/travatan-drug.htm#description

Assessment

Physical Exam (18 points)

GENERAL: **Alertness: Excellent** **Orientation: Oriented x1** **Distress: None** **Overall appearance: Good**	
INTEGUMENTARY: **Skin color: Normal for their complexion** **Character: Normal** **Temperature: 96.9˚F** **Turgor: Excellent, immediate recoil** **Rashes: On the back** **Bruises: None** **Wounds: None** **Braden Score: 19** **Drains present: Y☐ N ☒** **Type:**	Rashes: Present due to shingles. Braden Score: Low risk for pressure sores
HEENT: **Head/Neck: Excellent** **Ears: Excellent** **Eyes: Poor - satisfactory** **Nose: Satisfactory** **Teeth: Poor**	**Head/Neck**: No swollen lymph nodes and normal frontal and bilateral sinuses. Normal trachea and thyroid are present. **Ears**: Are symmetrical and both tympanic membranes are normal (grey). **Eyes**: Both upper eye lids are somewhat depressed over both eyes. Sclera and conjunctiva are symmetrical and normal. PERRLA: The patient has 3mm round-symmetrical pupils. Both eyes constricted when light was applied to them. Accommodation occurs when the light is applied to the right eye but does not occur when it's shined in the left eye. The left eye only somewhat follows the pen during the ocular movement test. The right eye completely follows, constricts, and dilates when the pen is moved in an H formation, moved closer, and further away from their face. ROSEMBAUM: 20/250 **Nose**: Normal septum, enlarged turbinates (can't see rear wall/no black tunnel) **Teeth**: All bottom teeth are present, and all top teeth are gone. The patient isn't allowed to get teeth at dentist because of COVID.
CARDIOVASCULAR: **Heart sounds: Normal** **S1, S2, S3, S4, murmur etc.**	**S1 and S2 heart sounds heard without murmurs. Aortic, pulmonary, tricuspid, and mitral valves all sound normal. The radial and**

Cardiac rhythm (if applicable): **Peripheral Pulses: 2+** **Capillary refill: Excellent** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	**brachial peripheral arteries are both 2+. Capillary refill occurred in one second.**
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	**All four anterior locations for lungs, all six posterior locations, and both lateral locations have normal lungs sounds.**
GASTROINTESTINAL: **Current Diet/Diet at home: Soft and small pieces with low salt** **Height: 64.0in** **Weight: 127.6lbs** **Auscultation Bowel sounds: 6 gurgles per minute** **Last BM: "Yesterday morning" (3/3/21)** **Palpation: Pain, Mass etc.: None** **Inspection: Normal** **Distention: None** **Incisions: None** **Scars: None** **Drains: None** **Wounds: None** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	.
GENITOURINARY: N/A **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☐** **Dialysis: Y ☐ N ☐** **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	
MUSCULOSKELETAL: **Neurovascular status: Good** **ROM: Excellent** **Supportive devices: Walker**	**Strength: The patient can firmly grip my hands with both of their hands. They can provide considerable resistance against force bearing down on their legs.**

Strength: Strong and equal **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 30** **Activity/Mobility Status: Moderate Risk** **Independent (up ad lib): Yes** **Needs assistance with equipment: No** **Needs support to stand and walk: No**	
NEUROLOGICAL: **MAEW: Y ☐ N☒** **PERLA: Y ☐ N☒** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation: Excellent** **Mental Status: Excellent** **Speech: Excellent** **Sensory: Excellent** **LOC: None**	**MAEW: Legs are a lot more difficult to move compared to the arms.** **PERRLA: The patient has 3mm round-symmetrical pupils. Both eyes constricted when light was applied to them. Accommodation occurs when the light is applied to the right eye but does not occur when it's shined in the left eye. The left eye only somewhat follows the pen during the ocular movement test. The right eye completely follows, constricts, and dilates when the pen is moved in an H formation, moved closer, and further away from their face.**
PSYCHOSOCIAL/CULTURAL: **Coping method(s): Faith in God** **Developmental level: Excellent** **Religion & what it means to pt.: Christianity** **Personal/Family Data (Think about home environment, family structure, and available family support): Nursing home**	**Christianity is the backbone of reality and morality for this patient.**

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
6:57	**82**	**113/65**	**18**	**96.9˚F**	**97%**

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions

6:57	**0 - 10**	**N/A**	**0**	**N/A**	**N/A**

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
Water: 60 - 120mL **Orange juice: 240mL** **Milk: 240mL**	**Micturition +1**

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

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. Disturbed visual sensory perception related to glaucoma and cataracts as evidence by 20/250 Rosembaum	**This diagnosis was chosen because elevated BUN is indicative of renal dysfunction. The kidneys have small arterioles and capillaries that can become**	**Travoprost eye drops were used to decrease intraocular pressure thus preventing glaucoma.** **Cataract surgery**	**The left eye is irredeemable but the preventative measures of cataract surgery and travoprost prevent vision loss of the right eye.**

test.	**damaged from certain cardiovascular diseases such as hypertension.**	**removed the blurriness from the right eye providing clearer vision.**	
2. Risk for ineffective renal perfusion related to primary hypertension as evidence by a low glomerular filtration rate and elevated BUN levels.	**The patient has high BUN levels and that is a cause of a dysfunction with the kidneys. High blood pressure can damage sensitive organs such as kidneys. Functional kidneys have glomerular filtration rates of 90 – 120 (Medline, 2021). The client has a glomerular filtration rate of 82. BUN is a waste product (Labtestsonline, 2019) and "a flow that's too slow will result in almost everything being reabsorbed including waste" (Morgan, 2020, p. 6).**	**1. Amlodipine besylate decreases cardiac output to prevent hypertension from overworking the heart.** **2.The patient was prescribed a none or low salt diet. Higher concentrations of NaCl increases high blood pressure.**	**The client's blood pressure is not hypertensive (113/65) despite having high blood pressure.**

Other References (APA):

Labtestsonline. (2019). Blood Urea Nitrogen (BUN). https://labtestsonline.org/tests/blood-urea-nitrogen-bun

MedlinePlus. (2021). Glomerular Filtration Rate. https://medlineplus.gov/ency/article/007305.htm#:~:text=According%20to%20the%20National%20Kidney,vary%20slightly%20among%20different%20laboratories.

Morgan, A. (2020). *HA & Phys. Study Guide Exam7*. [Unpublished manuscript]. Portage Learning.

Concept Map (20 Points):

Subjective Data

-Chest and back pain for eight months
-Sharp and burning chest and back pains
- Itchy scars on back
- Being moist or sweaty exacerbates back pains
-Pain is a 0 on a scale of 0 – 10 with 10 being the worse

Nursing Diagnosis/Outcomes

Diagnosis 1: Disturbed visual sensory perception related to glaucoma and cataracts as evidence by 20/250 Rosembaum test.
Outcome: The right eye was saved before being damaged by glaucoma and cataracts. B.H. can barely see out of her left eye.
Diagnosis 2: Risk for ineffective renal perfusion related to primary hypertension as evidence by a low glomerular filtration rate and elevated BUN levels.
Outcome: Blood pressure is within normal limits (113/65).

Objective Data

Pulse: 82
Blood Pressure: 113/65
Respiratory Rate: 18
Temperature: 96.9˚F
Oxygen Saturation: 97%
Allergies: Atorvastatin and pravastatin
Past Surgeries: Cholecystectomy and hysterectomy
Major Depressive Disorder
Osteoporosis
Hypothyroidism
Hyperlipidemia
COVID-19
Herpes Zoster
Primary hypertension

Patient Information

Initials: B.H.
Age: 90+
Gender: Female
Marriage: Widow
Weight: 127.6lbs
Height: 64in
Code Status: DNR with selective TX

Nursing Interventions

Low sodium diet
Soft and small morsels of food, the patient is missing teeth
Amlodipine besylate for reduced blood pressure and cardiac output
Antidepressant Medication
Lovastatin drug to decrease cholesterol
Travoprost eye drops to halt glaucoma