N311 Care Plan #3

Lakeview College of Nursing

Bryson Cutts

Demographics (5 points)

Date of Admission 10/13/2020	**Patient Initials** CB	**Age** 64	**Gender** F
Race/Ethnicity **Caucasian**	**Occupation** Employed	**Marital Status** Unmarried	**Allergies** Cephalexin (diarrhea, vomiting) Morphine (violent vomiting) Sulfa drugs (itching) Trulicity (nausea) Lisinopril (vomiting, coughing, itching)
Code Status Full	**Height** 170.2 cm	**Weight** 95.2 kg	

Medical History (5 Points)

Past Medical History:

diabetes mellitus type 2, acute UTI, allergic rhinitis, CAD, myalgia, sciatica, lumbar radiculopathy, wheezy, osteoarthritis, syncope, palpitations, HTN, HLD, hypothyroid, osteoporosis

Past Surgical History:

thyroidectomy, carpel tunnel, hysterectomy, orthopedic surgery (metal plate insertion in neck), cystoscopy macroplastique injection (06/10/2019), cystoscopy (07/26/2019), colonoscopy with biopsy (12/11/2019), laminectomy lumbar navigation implant fusion (pedicle screw) (10/13/2020)

Family History:

Father: heart disease, Alzheimer's disease, renal cancer, skin cancer, prostate cancer

Mother: COPD, macular disease, palpations

Other: Crohn's disease

Social History (tobacco/alcohol/drugs):

Lives alone, has never smoked, drinks a glass of wine weekly, does not use recreational drugs.

Admission Assessment

Chief Complaint (2 points): Low back pain

History of present Illness (10 points):

A female patient who is 64 years old has a past medical history of osteoarthritis, osteoporosis, and sciatica. She has been experiencing back pain in her lumbar region that radiates down her right leg. Her pain is verbalized as a 7/10. The pain began six months ago and is characterized by the patient as “sharp when I move” and “dull when I am resting.” Also, the pain has been persistent with unsuccessful attempts of relief with rest and ibuprofen. The patient claims nothing worsens the pain; it only changes characteristics without an alteration in severity. The patient underwent a laminectomy lumbar navigation implant fusion to eliminate her pain and enhance her quality of life.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Spondylolisthesis

Secondary Diagnosis (if applicable): Lumbar stenosis

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

Lumbar spondylolisthesis involves one proximal vertebra slipping onto another that is lies below. In this patient’s case, degenerative joint/disc disease related to osteoporosis and osteoarthritis caused the vertebral disc to slip. Lumbar spondylolisthesis can cause nerve impingement and compression, which can trigger low back pain and paresthesia in the lower extremities (Spondylolisthesis, 2020). As in the patient’s case, diagnostic imaging including X-rays can determine one vertebra abnormally resting on another. CT scans and MRIs can also be done to provide a more extensive view of the neural and connective tissue structures (Sarah,

2020). The patient underwent a variety of treats before her final step of a lumbar implant navigation fusion. She tried NSAIDs, like ibuprofen, rest, and steroid injections. None of those treatments provided any long-lasting relief, so the lumbar fusion, combined with the operation mentioned in the next section, was done in order to provide stability, comfort, and a return to adequate functioning.

Lumbar stenosis involves the columns within the vertebrae, or the root canals of the nerves, that become abnormally narrowed. Correspondingly, the nerve(s) subjugated to the vertebral column closure can turn into radiculopathy, which is the term typically succeeding a nerve impingement (Capriotti, 2020). The aging process is a primary cause for lumbar stenosis because, as evidenced by the patient's medical history, osteoarthritis is a typical degenerative process of getting older. This degenerative process attacks the cartilaginous discs between each vertebral bone causing a potential narrowing of nerve root canals. On the other hand, osteophytes can cause an eruption of osseous tissue, which could also cause impingement, ignite pain, and initiate musculoneural impairments. Lumbar stenosis is diagnosed through a history and physical exam involving nerve compression. Diagnostic imaging such as X-rays, DEXA scans, and MRIs can determine bone loss and spinal column narrowing. Typical signs and symptoms presented with lumbar stenosis include low back pain that can radiate to the legs and paresthesia; the patient experienced both symptoms. Patients with lumbar stenosis are first treated with NSAIDs for moderate pain, which is combined with decreased activity. If the pain does not subside, opioids may be used. Patients may undergo nerve blocks, epidural injections, and acupuncture to inhibit the neural transmission to the brain. If the pain still is unrelieved, surgery is the final solution (Capriotti, 2020). The patient could not be successfully treated through noninvasive procedures. So, she underwent a laminectomy, which increases the intravertebral space, to

decompress aggravated nerves. The laminectomy was combined with the lumbar fusion within one operation.

Pathophysiology References (2) (APA):

Capriotti, T. (2020). Degenerative disorders of the musculoskeletal system. In *Davis Advantage for Pathophysiology: Introductory Concepts and Clinical Perspectives* (2nd ed., pp. 984-985). F.A. Davis Company.

Sarah Bush Lincoln Health Reference Guide. (2020). Sarah Bush Lincoln: Cerner. https://www.sarahbush.org/

Spondylolisthesis: What is it, causes, symptoms & treatment. (2020). Cleveland Clinic. https://my.clevelandclinic.org/health/diseases/10302-spondylolisthesis

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 (10^6/mcL)	3.80-5.41	N/A	N/A	N/A
Hgb (g/dL)	11.3-15.2	N/A	N/A	N/A
Hct (%)	33.3-45.3	N/A	N/A	N/A
Platelets (K/mcL)	149-393	N/A	N/A	N/A
WBC (K/mcL)	4.0-11.7	N/A	N/A	N/A
Neutrophils (%)	45.3-79.0	N/A	N/A	N/A
Lymphocytes (%)	11.8-45.9	N/A	N/A	N/A
Monocytes (%)	4.4-12.0	N/A	N/A	N/A
Eosinophils (%)	0-6.3	N/A	N/A	N/A
Bands (%)	0-5.1	N/A	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 Value	Today's Value	Reason for Abnormal Value
Na- (mmol/L)	136-145	N/A	N/A	N/A
K+ (mmol/L)	3.5-5.1	N/A	N/A	N/A
Cl- (mmol/L)	98-107	N/A	N/A	N/A
CO2 (mmol/L)	21-31	N/A	N/A	N/A
Glucose (mg/dL)	74-109	246	163	Diabetes involves hyperglycemia (Sarah, 2020).

BUN (mg/dL)	7-25	N/A	N/A	N/A
Creatinine (mg/dL)	0.70-1.30	N/A	N/A	N/A
Albumin (g/dL)	3.4-5.4	N/A	N/A	N/A
Calcium (mg/dL)	8.6-10.3	N/A	N/A	N/A
Magnesium (mg/dL)	1.6-2.5	N/A	N/A	N/A
Phosphate (mg/dL)	2.5-4.5	N/A	N/A	N/A
Bilirubin (mg/dL)	0.3-1.0	N/A	N/A	N/A
Alk Phos (unit/L)	34-104	N/A	N/A	N/A

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Pale yellow-deep amber/ clear	Yellow, clear	N/A	N/A
pH	5-8	6.0	N/A	N/A
Specific Gravity	1.005-1.034	1.039	N/A	The patient appears mildly dehydrated as evidenced by an I&O of 0 and 700 mL (Sarah, 2020)
Glucose	Normal	>500	N/A	The patient is diabetic, so glycosuria is a commonality (Sarah, 2020).
Protein	Negative	Negative	N/A	N/A
Ketones	Negative	Negative	N/A	N/A
WBC	Negative	<1	N/A	N/A
RBC (HPF)	0-5	<1	N/A	N/A
Leukoesterase (HPF)	0-5	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	Negative	N/A	N/A	N/A
Blood Culture	Negative	N/A	N/A	N/A
Sputum Culture	Negative	N/A	N/A	N/A
Stool Culture	Negative	N/A	N/A	N/A

Lab Correlations Reference (APA):

Sarah Bush Lincoln Health Reference Guide. (2020). Sarah Bush Lincoln: Cerner.

https://www.sarahbush.org/

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

XR Spine Lumbosacral 2, 3 views

Findings: joint space narrowed, stenosis

XR Fluoroscopy-ARM <1 Hour

Findings: N/A

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

Medications (5 required)

Brand/Generic	Invokana/ Canagliflozin	Microzide/ Hydrochlorothiazide	Euthyrox/ Levothyroxine	Singulair/ Montelukast	Narcan/ Naloxone
Dose	100 mg	25 mg	100 mcg	10 mg	0.1 mg (0.25 mL)
Frequency	QD	QD	Q AM	QD	PRN
Route	PO	PO	PO	PO	IV
Classification	Sodium-glucose co-transporter 2 inhibitor	Benzothiadiazide diuretic, antihypertensive	Thyroid hormone	Leukotriene receptor antagonist	Opioid antagonist
Mechanism of Action	Causes a reduction in the reabsorption of filtered glucose by inhibiting SGLT2 which is expressed in the proximal renal tubules and is responsible for most filtered glucose reabsorption. By lowering the renal threshold for glucose, this drug increases	Inhibits the reabsorption of sodium and chloride ions in the distal renal tubule, resulting in diuresis. Thiazides are secreted into the renal tubular lumen, which is decreased in renal failure. (This explains why thiazide diuretics are ineffective in patients with severe renal dysfunction.) Other effects of the thiazide diuretics include increased potassium, magnesium, and bicarbonate excretion,	Synthetic T4 hormone is chemically identical to that produced in the human thyroid gland. When a deficiency is present, this drug will maintain normal T4 levels. Circulating serum T3 and T4 levels exert a feedback effect on both TRH and TSH secretion. When serum	The cysteinyl leukotrienes (LTC4, LTD4, LTE4) are potent inflammatory eicosanoids released from various cells including mast cells and eosinophils. These important pro-asthmatic mediators bind to cysteinyl leukotriene	Antagonizes opioid effects by competing for the same receptor sites. It acts to reverse the effects of opioids including respiratory depression, sedation, and hypotension. It lacks pharmacologic activity in the absence of opioids or agonistic effects

	urinary glucose excretion and lowers elevated plasma glucose concentrations in an insulin-independent manner. Urinary glucose excretion leads to an osmotic diuresis which has been associated with caloric loss and weight reduction.	decreased calcium excretion, and decreased uric acid excretion with resultant hyperuricemia.	T3 and T4 levels increase, TRH and TSH secretion decrease. When thyroid hormone levels decrease, TRH and TSH secretion increases. TSH is used for the diagnosis of hypothyroidism and evaluation of levothyroxine (T4) therapy	receptors (CysLT) found in the human airway and cause airway actions, including bronchoconstriction, mucous secretion, vascular permeability, and eosinophil recruitment. In allergic rhinitis, CysLTs are released from the nasal mucosa after allergen exposure during both early- and late-phase reactions and are associated with symptoms of allergic rhinitis. This drug binds with high affinity and	

				selectivity to the CysLT1 receptor (in preference to other pharmacologically important airway receptors such as the prostanoid, cholinergic, or ?-adrenergic receptor) and potently inhibits physiologic actions of LTC4, LTD4, and LTE4 at the CysLT1 receptor without any agonist activity.	
Reason Client Taking	DM Type 2	HTN	Thyroid deficiency	Allergic rhinitis	Reverse opioid depression
Contraindications (2)	Hypoglycemia, pregnancy	Diabetes, hypercalcemia	Pregnancy, diabetes	Depression, eosinophilia	Hepatitis, hypotension
Side Effects/Adverse Reactions (2)	UTI, female genital	Hyperuricemia, orthostatic hypertension	Headaches, angioedema	Atopic dermatitis, abdominal	Dizziness, pulmonary edema

	mycotic infections			pain	

Medications Reference (APA):

Sarah Bush Lincoln Health Reference Guide. (2020). Sarah Bush Lincoln: Cerner.

https://www.sarahbush.org/

Assessment

Physical Exam (18 points)

GENERAL: **Alertness: Y** **Orientation: Y** **Distress: Y** **Overall appearance: Y**	**Alertness:** Alert and responsive **Orientation:** A&Ox4 (person, place, time, situation **Distress:** Pain (grimacing w/ movement) **Appearance:** Appropriate
INTEGUMENTARY: **Skin color: Y** **Character: Y** **Temperature: Y** **Turgor: Y** **Rashes: N** **Bruises: Small bruise on L brachial surface, IV site bruise on forearm** **Wounds: N (minus lumbar incision)** **Braden Score: 19** **Drains present: Y☐ N ☒** **Type: N/A**	**Skin color:** Usual for ethnicity, erythema proximal to IV site on L arm **Character:** Dry, intact **Temperature:** Warm **Turgor:** Tight
HEENT: **Head/Neck: Y** **Ears: Y** **Eyes: Y** **Nose: Y** **Teeth: Y**	**Head:** Face and skull symmetrical **Neck:** Supple, no tracheal deviation, no palpable lymph nodes, **Eyes:** PERRLA, normal EOM, white sclera(s), reading glasses **Ears:** Scant cerumen, visibly gray TM **Oral cavity:** white teeth (32) pink, moist buccal mucosa pink, firm, moist gingiva **Nose:** Bilateral patency, pink, moist, no drainage .
CARDIOVASCULAR: **Heart sounds: Y**	**Hearth rhythm:** Regular **Heart sounds:** S1, S2

S1, S2, S3, S4, murmur etc. **Cardiac rhythm (if applicable): Y** **Peripheral Pulses: Y** **Capillary refill: Y** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema: N/A**	**Pulses:** Radial 3+, Carotid 3+ **Cap refill:** <2 **Edema:** 0, wearing ted hose
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Y**	**Respirations:** Regular, unlabored **Respiratory pattern:** Regular **Respiratory sounds:** Clear **Lung aeration:** Equal
GASTROINTESTINAL: **Diet at home: Eats TID, eggs, fruit, sandwiches consisting of ham** **Current Diet: Y** **Height: 170.2 cm** **Weight: 95.2 kg** **Auscultation Bowel sounds: Active** **Last BM: AM 10/13/2020** **Palpation: Pain, Mass etc.: No distention, painless** **Inspection: Y** **Distention: Y** **Incisions: N** **Scars: N** **Drains: N** **Wounds: N** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size: N/A** **Feeding tubes/PEG tube Y ☐ N ☒** **Type: N/A**	**Bowel sounds:** Active
GENITOURINARY: **Color: Y** **Character: Y** **Quantity of urine: 700 mL** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals: N/A** **Catheter: Y ☐ N ☒** **Type: N/A** **Size: N/A**	**Color:** Yellow **Clarity:** Clear
MUSCULOSKELETAL: **Neurovascular status: Y**	**Neurovascular:** cap refill <2 seconds, warm extremities, wearing ted hose

ROM: Y **Supportive devices: N** **Strength: Y** **ADL Assistance: Y☒ (Ambulating) N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 60** **Activity/Mobility Status: Y** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☒**	**ROM:** Active **Strength:** 4-weakness in legs due to pain from back surgery
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no - Legs ☒ (pain) Arms ☐ Both ☐** **Orientation: Y** **Mental Status: Normal** **Speech: Clear** **Sensory: Responsive to light and deep touch, receptive of pain (7/10)** **LOC: Y**	**Orientation:** A&Ox4 **Cognition:** Normal **Speech:** Clear **LOC:** Alert
PSYCHOSOCIAL/CULTURAL: **Coping method(s): Y** **Developmental level: Y** **Religion & what it means to pt.: Y** **Personal/Family Data (Think about home environment, family structure, and available family support): Y**	**Coping Methods:** Long walks, read books **Developmental level:** Bachelor's degree **Religious/Spiritual:** Catholic, practicing **Personal/Family:** Lives alone, has 3 children and 3 grandchildren, communicates with them daily

Vital Signs, 1 set (5 points)

Time	Pulse (bpm)	B/P (mm Hg)	Resp Rate	Temp (Celsius)	Oxygen (%)
1017	76 bpm	122/76 mm Hg	16	37.3 Celsius	95%

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0852	Numerical	Low back	7/10	Sharp w/ movement, dull	Sitting relieves pain more so

				at rest	than lying down, pain medication

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
N/A (no intake charted or witnessed)	700 (voided)

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. Risk for infection related to surgical incision as evidenced by: "Can I get the bandage wet?"	The patient needed education on treatment of her surgical wound. A wet bandage would be a breeding ground for microbial growth.	**1.** Educated the patient on her chances of infection and further complications if her bandage was to become wet **2.** Educated the patient on using a washcloth to bathe without showering or sitting in a bathtub.	Evaluation outcomes were unattainable because the patient was discharged the day of this clinical.
2. Risk for falls related to age and back surgery as evidenced by a fall risk score of 60.	The patient's risk for falling is higher than other simply due to her age, and her surgical procedure has placed limitations on her ability to ambulate.	**1.** Kept the bed in the lowest position after completion of care. **2.** Assisted with movement to the bathroom.	The patient's risk for falls was decreased with a low-bed position. Her fall risk was also reduced by helping with ambulation and transfer.

Other References (APA): N/A

Concept Map (20 Points

Subjective Data

She experienced back pain in her lumbar region that radiates to her right lower extremity. Her pain is verbalized as a 7/10. The pain began six months ago and is characterized by the patient as both dull and sharp. The pain is unrelieved with treatment, and nothing appears to worsen it.

Nursing Diagnosis/Outcomes

1. Risk for infection related to surgical incision as evidenced by: "Can I get the bandage wet?"
Evaluation outcomes were unattainable because the patient was discharged the day of this clinical.

2. Risk for falls related to age and back surgery as evidenced by a fall risk score of 60.
The patient's risk for falls was decreased with a low-bed position.
Her fall risk was also reduced by helping with ambulation and transfer.

Objective Data

The patient's vitals were within normal ranges. She experienced discomfort as evidenced by intense grimacing with adjustments in positioning. The patient ambulated without any assistive devices.

Patient Information

A 64-year-old female has a history of osteoarthritis, osteoporosis, and sciatica. She has been experiencing back pain in her lumbar region that radiates down her right leg. Her pain is said to be a 7/10. The pain began six months ago and is characterized by the patient as "sharp when I move" and "dull when I am resting." Also, the pain has been persistent with unsuccessful attempts of relief with rest and ibuprofen. The patient claims nothing worsens the pain; it only changes characteristics without an alteration in severity. The patient underwent a laminectomy lumbar navigation implant fusion to eliminate her pain and enhance her quality of life.

Nursing Interventions

1. Educated the patient on her chances of infection and further complications if her bandage was to become wet
2. Educated the patient on using a washcloth to bathe without showering or sitting in a bathtub.
3. Kept the bed in the lowest position after was completed.
4. Assisted with movement to the bathroom.