FUNDAMENTAL Reasoning: STUDENT

Post-op Pain Management: Day of Surgery (1/2)

History of Present Problem:
Sheila Dalton is a 52-year-old woman who has a history of chronic low back pain and COPD. She had a posterior spinal fusion of L4-S1 today. She had an estimated blood loss (EBL) of 675 mL during surgery and received 2500 mL of Lactated Ringers (LR). Pain is currently controlled at 2/10 and increases with movement. She was started on a hydromorphone patient-controlled analgesia (PCA) with IV bolus dose of 0.1 mg and continuous hourly rate of 0.2 mg. Last set of VS in post-anesthesia care unit (PACU) P: 88; R: 20; BP: 122/76; requires 4 liters per n/c to keep her O2 sat >90 percent. You are the nurse receiving the patient directly from the PACU.

Personal/Social History:
Sheila is divorced and currently lives alone in her own apartment. She has two grown children from whom she is estranged.

What data from the histories are RELEVANT and have clinical significance to the nurse?

RELEVANT Data from Present Problem:	Clinical Significance:
posterior spinal fusion L4-S1	Monitor for infection

RELEVANT Data from Social History:	Clinical Significance:
COPD	Monitor O2 Sat

Developing Nurse Thinking by Identifying Significance of Clinical Data
Patient Care Begins–Arrives from PACU to Surgical Floor

Current VS:		P-Q-R-S-T Pain Assessment (5th VS):	
T: 100.2 F/37.9 C (oral)		Provoking/Palliative:	Movement/lying still
P: 110 (regular)		Quality:	Ache
R: 24		Region/Radiation:	Lumbar-incisional
BP: 98/50		Severity:	6/10-gradually increasing
O2 sat: 88% 4 liters per n/c		Timing:	Continuous since arrival from PACU

What VS data are RELEVANT and must be recognized as clinically significant by the nurse?

RELEVANT VS Data:	Clinical Significance:
Temp, Pulse, b/p, O2	All could be sign of infection

Current Assessment:

Current Assessment:	
GENERAL APPEARANCE:	Appears uncomfortable, body tense, frequent grimacing—last used PCA 10 minutes ago
RESP:	Breath sounds clear with equal aeration ant/post but diminished bilaterally, non-labored respiratory effort, occasional moist–nonproductive cough
CARDIAC:	Pale-pink, warm and dry, no edema, heart sounds regular–S1S2, pulses strong, equal with palpation at radial/pedal/post-tibial landmarks
NEURO:	Alert and oriented to person, place, time, and situation (x4)
GI:	Abdomen soft/non-tender, bowel sounds hypoactive and audible per auscultation in all 4 quadrants, c/o nausea
GU:	Foley catheter secured, urine clear/yellow, 100 mL the past two hours
SKIN:	Skin integrity intact, skin turgor elastic, no tenting, dressing in place with no drainage noted

What assessment data are RELEVANT and must be recognized as clinically significant by the nurse?

RELEVANT Assessment Data:	Clinical Significance:
General appearance	Patient may be having increasing pain

Developing Nurse Thinking through APPLICATION of the Sciences
Fluid & Electrolytes/Lab/diagnostic Results:

Complete Blood Count (CBC):	Current:	High/Low/WNL?	Prior:
WBC (4.5–11.0 mm 3)	11.8		7.2
Hgb (12–16 g/dL)	10.4		15.2
Platelets (150–450 x10³/µl)	220		258
Neutrophil % (42–72)	85		68
Band forms (3–5%)	1		1

What lab results are RELEVANT and must be recognized as clinically significant by the nurse?

RELEVANT Lab(s):	Clinical Significance:	TREND: Improve/Worsening/Stable:
WBC Hgb Neutrophil bands	signs of infection	worsening worsening worsening worsening

Basic Metabolic Panel (BMP):	Current:	High/Low/WNL?	Prior:
Sodium (135–145 mEq/L)	134		136
Potassium (3.5–5.0 mEq/L)	3.8		3.9
Glucose (70–110 mg/dL)	148		98
BUN (7–25 mg/dl)	20		22
Creatinine (0.6–1.2 mg/dL)	0.9		1.1

What lab results are RELEVANT and must be recognized as clinically significant by the nurse?

RELEVANT Lab(s):

	Clinical Significance:	TREND: Improve/Worsening/Stable:
sodium glucose	neuro assessment	worsening worsening

Lab Planning–Creating a Plan of Care with a PRIORITY Lab:

Lab: Normal Value:	Critical Value:	Why Relevant?	Nursing Assessments/Interventions Required:
Hemoglobin		decrease in oxygen	neuro assessment Monitor O2 Sat
Value: 10.4			

Pharmacology:

Home Med:	Classification:	Mechanism of Action (in own words):	Nursing Considerations:
Atenolol	Beta- blocker	to help w/ high b/p	Monitor blood pressure
Lisinopril	ACE inhibitor	to treat blood pressure	monitor blood pressure
Citalopram	SSRIs	treats depression	Monitor diet, sleep, & if pt has suicial thoughts
Hydrocodone/ acetaminophen	Opioid	Used to treat pain	treat pt if pain meets guide lines
Aspirin	NSAIDs	to prevent blood clots	monitor platelets.

Pathophysiology:

1. What is the primary problem that your patient is most likely presenting? Sepsis

2. What is the underlying cause/pathophysiology of this primary problem? Infection

Developing Nurse Thinking by Identifying Clinical RELATIONSHIPS

1. What is the RELATIONSHIP of the past medical history and current medications?
(Which medication treats which condition? Draw lines to connect)

Past Medical History (PMH):	Home Meds:
• Low back pain with lumbar compression fracture	Atenolol 50 mg daily
• Depression	Citalopram 40 mg daily
• COPD	Acetaminophen/hydrocodone 1-2 tabs every 4 hours prn
• Hypertension	pain
• 2 ppd smoker x 32 years	Lisinopril 40 mg daily
	Aspirin 81 mg daily

2. Is there a RELATIONSHIP between any disease in PMH that may have contributed to the development of the current problem? (Which disease likely developed FIRST then began a "domino effect"?)

PMH:	What Came FIRST:
• Low back pain with lumbar compression fracture	smoking → COPD → Depression
• Depression	What Then Followed:
• COPD	smoking → HTN
• Hypertension	
• 2 ppd smoker x 32 years	

3. What is the RELATIONSHIP between the primary care provider's orders and primary problem?

Care Provider Orders:	How it Will Resolve Primary Problem/Nursing Priority:
Hydromorphone PCA–Settings: *Bolus: 0.1–0.3 mg every 10" *Continuous: 0.1–0.3 mg *Max every 4 hours: 6 mg	hydromorphone can decrease v/s including o2 sat
Continuous pulse oximetry	
Ondansetron 4 mg IV push every 4 hours prn nausea	
Titrate O2 to keep sat >90%	
Incentive spirometer (IS) 5–10x every hour while awake	

© 2016 Keith Rischer/www.KeithRN.com

0.9% NS 100 mL/hour IV	
Clear liquids/advance diet as tolerated	
Apply lumbar orthotic brace when up in chair or ambulating	
Basic Metabolic Panel (BMP) in morning	
Complete Blood Count (CBC) in morning	

Developing Nurse Thinking by Identifying Clinical PRIORITIES

1. **Which Orders Do You Implement First and Why?**

Care Provider Orders:	Order of Priority:	Rationale:
1. Hydromorphone PCA	4	to help w/ pain
2. Continuous pulse oximetry	2	to keep O2 sat from decreasing, to monitor O2 sat
3. Ondansetron (Zofran) 4 mg IV push every 4 hours prn nausea		keep pt in proper position in case pt develops nausea, from movement
4. Titrate O2 to keep sat >90%	3	
5. Incentive spirometer (IS)	6	to help pt keep lungs healthy
6. Apply lumbar orthotic brace when up in chair or ambulating	5	
7. Clear liquids/advance diet as tolerated	7	if pt can tolerate advance diet

2. **What nursing priority(ies) will guide your plan of care? (if more than one-list in order of PRIORITY)**

O2 sat and diet

3. **What interventions will you initiate based on this priority?**

Nursing Priority:	Nursing Interventions:	Rationale:	Expected Outcome:
Hydromorphone – for pain		to prevent pain	• no pain
Titrate	Monitor O2 sat	to help prevention of decrease O2 sat	• can breath
advance diet	• if pt can tolerate	• proper nutrition to help with healing process	• advance nutrition

4. **What are the PRIORITY psychosocial needs that this patient and/or family likely have that will need to be addressed?**

Depression

5. **How can the nurse address these psychosocial needs?**

Explain to family that patient will need assistance at home.

6. **What educational/discharge PRIORITIES will be needed to develop a teaching plan for this patient and/or family?**

Family will need to help patient with keeping the incision clean and dry. Medication administration.

Caring & the "Art" of Nursing

1. **What is the patient likely experiencing/feeling right now in this situation?**

lonely, sad, depression, pain

2. **What can I do to engage myself with this patient's experience, and show that he/she matters to me as a person?**

Ask the patient about her concerns going home. Listen to the patient and also ask open-ended questions

Use Reflection to THINK Like a Nurse

Reflection-IN-action (Tanner, 2006) is the nurse's ability to accurately interpret the patient's response to an intervention in the moment as the events are unfolding to make a correct clinical judgment and transfer what is learned to improve nurse thinking and patient care in the future.

1. **What did I learn from this scenario?** Not every patient has a family to go home to. And patient will not have the desire to care for themselves at home.

2. **How can I use what has been learned from this scenario to improve patient care in the future?**

be more engaged with patients and the care I'm providing to them.