

Part I: Recognizing RELEVANT Clinical Data

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:
Chronic back pain , COPD, spinal fusion L4-S1, blood loss, 2500 mL of LR- fluid overload, pain increase with movement, PCA- 0.2 mg/bolus 0.1 mg, 4L n/c	Knowing this patient’s history is important. The chronic back pain is the reason she had the spinal fusion, the nurse would need to know the location of the surgery, and that pain is increased when she moves. She would need to know the dosage of hydromorphone to determine appropriate pain management and actions necessary (if it’s too high or could go down some- lowest therapeutic dose is recommended). The patient has COPD and some COPD patients do well on less oxygen when their normal O2 is <90. You really need to establish her normal range to avoid respiratory acidosis/hypercapnia.
RELEVANT Data from Social History:	Clinical Significance:
Divorced/estranged children Apartment	This patient just had a significant back surgery and will likely need assistance when she gets discharged. Will she need a home health nurse or will someone be there to help her. She also lives in an apartment. Is this a 1 st floor apartment or is there an elevator as stairs will likely be very taxing/impossible for her upon discharge. Furthermore, if there is a complication, does she have a POA or someone other than her ex-husband/children who will be making decisions for her if needed. This should have been covered before surgery though.

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:
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Temperature, pulse, respirations, blood pressure, O2, 6/10-continuous	Her temperature is borderline febrile. Her temperature could be climbing due to pain increase, but she did just have surgery, so it is definitely something you would want to monitor. Her pulse is going up while her blood pressure is going down which could indicate a problem. Normally, her pulse and blood pressure would go up as her pain level increased, so with only the pulse rising and her blood pressure trending down, this could indicate a bleeding issue from the surgery and should be watched very closely. It is also concerning for her to be on 4L of oxygen, her respirations are going up, but her O2 saturations are going down. It seems this patient received a good amount of fluid during surgery (2500 mL) and with her O2 going down while on 4L, the nurse should try to identify if this is from fluid overload or trending toward respiratory acidosis. Her pain level is also staying at a 6/10. Severe pain puts a great deal of stress on the body. The nurse should get work to get this under control to get a more accurate reading of the vitals, so she can better identify a bigger issue for the patient.
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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, diminished respirations/cough, GI- hypoactive bowels, nausea	The nurse’s priority is the bilateral diminished breath sounds with the nonproductive cough. This could indicate a problem with airway clearance, especially after anesthesia. The nurse should start pursed-lip deep breathing techniques with the client to clear the anesthesia and try to return the O2 back to normal while expelling CO2. The patient is clearly in pain, and severe pain exacerbates other problems for the patient. This patient could potentially need a secondary analgesic for breakthrough pain or a different drug altogether to manage it at a more therapeutic level.

Diagnostic Results:

Basic Metabolic Panel (BMP)					
	Na	K	Gluc.	Creat.	
Current:	134	3.8	148	0.9	
Most Recent:	136	3.9	98	1.1	
Complete Blood Count (CBC)					
	WBC	HGB	PLTs	% Neuts	
Current:	11.8	10.4	220	85	
Most Recent:	7.2	14.2	258	68	

What data must be interpreted as clinically significant by the nurse? (Reduction of Risk Potential/Physiologic Adaptation)

RELEVANT Diagnostic Data:	Clinical Significance:	TREND: Improve/Worsening/Stable:
Per Dean Brassard, current is baseline and most recent is trending. This indicates her labs are improving and in normal range.	With the patient's CBC within normal range indicates there is not infection. The neutrophil count is slightly elevated, but it is trending down. The BMP is all in normal healthy range as well.	The trend indicates improvement and/or stable on all levels.

Part II: Put it All Together to THINK Like a Nurse!

1. After interpreting relevant clinical data, what is the primary problem?

(Management of Care/Physiologic Adaptation)

Problem:	Pathophysiology in OWN Words:
I would conclude the primary problem is pain and O2/respiratory.	This patient should have the CO2 level checked to ensure she is receiving the appropriate amount of oxygen therapy. This could explain the increased respirations as the patient could be trying to overcompensate (hyperventilate) in an effort to expel more CO2 from her body. A complicating issue poor pain control. When a person is experiencing pain, it can change their vitals. Her respirations and pulse are trending up which could be due to the pain increase. It is common for blood pressure to also increase with intense pain, however the patient is on morphine which can lower blood pressure. One concern after a surgery when B/P goes down is bleeding, but her hemoglobin is trending up. Anesthesia can also cause a drop in B/P and with her having the dry nonproductive cough, she could not be expelling the anesthesia out through her lungs properly.

Collaborative Care: Medical Management

2. State the rationale and expected outcomes for the medical plan of care. (Pharm. and Parenteral Therapies)

Medical Management:	Rationale:	Expected Outcome:
<p>Hydromorphone PCA— Settings: *Bolus: 0.1–0.3 mg every 10” *Continuous: 0.1–0.3 mg *Max every 4 hours: 6 mg</p> <p>Continuous pulse oximetry</p> <p>Ondansetron 4 mg IV push every 4 hours prn nausea</p> <p>Titrate O2 to keep sat >90%</p> <p>Incentive spirometer (IS) 5–10x every hour while awake</p> <p>0.9% NS 100 mL/hour IV</p> <p>Clear liquids/advance diet as tolerated</p> <p>Apply lumbar orthotic brace when up in chair or ambulating</p>	<p>Provides a continuous analgesic infusion controlled by the patient.</p> <p>This is to monitor her O2 status. With her on 4L of O2 and having COPD, this is an important vital sign to monitor continuously.</p> <p>Control nausea/vomiting.</p> <p>Make adjustments to oxygen PRN to maintain O2 at >90%.</p> <p>Improve/maintain airway</p> <p>Hydrate the patient</p> <p>The patient just had surgery and has hypoactive bowel sounds and nausea. Clear liquids allow for some nutrition without overloading it too soon.</p> <p>This provides support to the patient in the surgical area.</p>	<p>The patient will receive a low-dose pain medication as they need it to control their pain and keep it at a tolerable level for them.</p> <p>The patient will keep her O2 >90 with no hypoxia or hypercapnia.</p> <p>The patient will have no n/v.</p> <p>This will allow for the patient to remain constant without giving too much O2 or too little.</p> <p>The patient will use the IS to expel remaining anesthesia and improve oxygenation.</p> <p>This patient will maintain proper hydration to maintain electrolyte and fluid balance.</p> <p>The patient will consume clear liquids with no complications and advance to a full diet when her body is able to process it.</p> <p>The patient will maintain a good posture while alleviating addition stress/strain on the surgical site which will also help reduce pain.</p>

Collaborative Care: Nursing

3. What nursing priority (ies) will guide your plan of care? (Management of Care)

Nursing PRIORITY:		
PRIORITY Nursing Interventions:	Rationale:	Expected Outcome:

Airway management, deep breathing exercises, and incentive spirometer	Ensure the patient is receiving appropriate oxygen therapy for their condition while teaching them deep breathing exercises and using an incentive spirometer to expel anesthesia.	Patient will maintain O2 >90%, deep breathing will improve lung function and provide better oxygenation, and eliminate anesthesia.
Pain management	Provide analgesics, comfort, and assist patient with repositioning to help pain level stay at a tolerable level.	Patient will be pain free or have minimal pain.
Monitor Vitals and labs	Labs and vitals should be monitored to identify potential complications or infections.	Patient will not experience any complications and will remain infections free.

4. What psychosocial/holistic care PRIORITIES need to be addressed for this patient? (Psychosocial Integrity/Basic Care and Comfort)

Psychosocial PRIORITIES:		
PRIORITY Nursing Interventions:	Rationale:	Expected Outcome:
CARING/COMFORT: <i>How can you engage and show that this pt. matters to you?</i> Physical comfort measures:	You can listen to the patient, show empathy and understanding. Planning your schedule around being able to spend extra time in their room to allow for her to feel more cared for and less lonely would help. Helping this patient with repositioning, any ADL assistance necessary, and quickly answering call lights/bathroom assistance would be helpful to her.	The patient will feel well cared for and a priority without feeling like a burden.
EMOTIONAL SUPPORT: <i>Principles to develop a therapeutic relationship</i>	The nurse should start by allowing the necessary time to communicate and care for the patient. She should build rapport with her, listen with intent, and answer any questions she may have. She definitely shouldn't rush her as this will make the patient feel like a burden.	The patient will be open and honest with the nurse and get all of her needs met.
SPIRITUAL CARE/SUPPORT:	<i>The nurse should inquire about the patient's spirituality and if appropriate, have a chaplain or spiritual advisor available to speak with. If the nurse is familiar with the patient's spirituality and would prefer it, the nurse could also potentially assist the patient with this.</i>	The patient will be able to communicate her spiritual needs and have them met with care and peace.

5. What educational/discharge priorities need to be addressed to promote health and wellness for this patient and/or family? (Health Promotion and Maintenance) The first priority will be if the patient has anyone at home

available to help her upon discharge or if she needs in-home healthcare, as well as addressing her apartment situation as mentioned above. If she lives on a second floor or high with no elevator access, different arrangements may need to be made if she cannot physically/safely climb the stairs. The patient should be aware of any weight or activity restrictions after the surgery. She needs to be informed of follow-up appointments with her doctor or physical therapy and any medication changes. Encouraging a high protein diet will also promote healing.