

## 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:
<p>L4-S1 posterior spinal fusion today with 675 mL blood loss</p> <p>2500 mL lactated ringers</p> <p>Pain 2/10 controlled, but increases with movement</p> <p>PCA with IV bolus 0.1 mg/ continuous hourly rate of 0.2 mg</p> <p>COPD</p> <p>Requires 2 liters of O2 to stat at &gt;90%</p>	<p>The patient has had spinal fusion surgery and therefore has an incision that is putting them at an increased risk for infection.</p> <p>The patient lost an emergent amount of blood during their procedure and has been given 2500 mL to compensate for this.</p> <p>The patient's pain is currently controlled but will need to be monitored as the patient recovers from their sedation and begins to attempt to ambulate independently.</p> <p>The patient can control the pain medication they are receiving. They are receiving an opiate and will need to be monitored for signs of overdose (low respirations, nausea, vomiting).</p> <p>This patient has COPD, which lowers their baseline O2 saturation level. We must be careful not to reduce their baseline O2 with O2 therapy.</p>
RELEVANT Data from Social History:	Clinical Significance:
<p>The lives alone and is estranged from her children.</p>	<p>An L4-S1 is a major surgery, and the patient will have a long recovery ahead of her. With no one at home to help care for her, she may need to be placed in a care facility while she recovers until she can perform activities of daily living independently.</p>

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## Patient Care Begins—Arrives from PACU to Surgical Floor

Current VS:	P-Q-R-S-T Pain Assessment (5th VS):	
<b>T:</b> 100.2 F/37.9 C (oral)	<b>Provoking/Palliative:</b>	Movement/lying still
<b>P:</b> 110 (regular)	<b>Quality:</b>	Ache
<b>R:</b> 24	<b>Region/Radiation:</b>	Lumbar-incisional
<b>BP:</b> 98/50	<b>Severity:</b>	6/10-gradually increasing
<b>O2 sat:</b> 88% 4 liters per n/c	<b>Timing:</b>	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:
<p>T: 100.2F/37.9</p> <p>P: 110</p> <p>R: 24</p> <p>BP: 98/50</p> <p>O2 sat: 88% 4 liters per n/c</p> <p>Continuous, aching, incisional pain gradually increasing from a 6/10.</p>	<p>A raised temp could be a sign of infection</p> <p>A raised pulse can be a manifestation of pain</p> <p>Raised respirations can be a manifestation of pain and inadequate O2 saturation</p> <p>Low BP the patient lost a considerable amount of blood during surgery and will require fluids to compensate.</p> <p>O2 sat too low on n/c could indicate that the patient is not receiving enough oxygen even while being provided with 4 liters through nasal cannula.</p> <p>The patient is experiencing pain as an adverse effect of the procedure that has been performed on them. So far there are no signs of infection except a small rise in temperature, but the patient must be continuously monitored and kept under control.</p>

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?***

<b>RELEVANT Assessment Data:</b>	<b>Clinical Significance:</b>
<p>Appears uncomfortable, body tense, frequent grimacing-last used PCA 10 minutes ago</p> <p>Breath sounds diminished bilaterally, occasional moist-nonproductive cough</p> <p>Hypo active bowel sounds in all four quadrants, nausea</p>	<p>The patient is having trouble with their pain management and needs to be observed and kept comfortable with medications, positioning, and nutrition.</p> <p>Diminished breath sounds can be a symptom of COPD but could also indicate atelectasis or aspiration after surgery.</p> <p>The patient has been under general anesthesia and is receiving opioid medications. Opioids are known to cause constipation, but the general anesthesia could have caused the peristalsis in the bowels to slow down and possibly cause an obstruction, hypoactive bowel sounds will require monitoring for this patient.</p> <p>The patient is experiencing nausea as an adverse effect of their general sedation and will need a prescription for an antiemetic until this subsides.</p>

**Diagnostic Results:**

<b>Basic Metabolic Panel (BMP )</b>					
	<b>Na</b>	<b>K</b>	<b>Gluc.</b>	<b>Creat.</b>	
<b>Current:</b>	134	3.8	148	0.9	
<b>Most Recent:</b>	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:
Sodium	Sodium has decreased to 134 from 136. Low sodium was possibly originally caused by blood loss.	Sodium is worsening
Glucose	Glucose has risen to 148 from 98. Infection and stress can cause a rise in glucose.	Glucose is worsening
Creatinine		
WBC	WBC has risen to 11.8 from 7.2 indicating an infection.	WBC is worsening
Hgb	Hgb has decreased from a 14.2 to a 10.4, possibly due to the loss of 675ml of blood during surgery.	Hgb is worsening
% Neutrophils	% Neutrophils have risen to 85% from 68%, indicating that the body is trying to fight off an infection.	% Neutrophils are worsening

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## 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:
	The patient's body is trying to recover from a major surgery that has left them hypovolemic and fighting off infection.

### 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:
Hydromorphone PCA— Settings: *Bolus: 0.1–0.3 mg every 10” *Continuous: 0.1–0.3 mg *Max every 4 hours: 6 mg  Continuous pulse oximetry  Ondansetron 4 mg IV push every 4 hours prn nausea	The purpose of this is to keep the patient's pain at a tolerable level.  Pulse oximetry is used to observe the patient's oxygen saturation, which can reach a dangerously low level in a COPD patient if it is not closely monitored.  Ondansetron is used to relieve nausea, which is common postoperatively.	The patient's pain will remain within a tolerable range.  Pulse oximetry will remain >90%

<p>Titrate O2 to keep sat &gt;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>Oxygen is required to maintain this patient’s baseline O2 saturation, which is &gt;90%</p> <p>Incentive spirometry is used to clear and strengthen the lungs.</p> <p>Required to keep the patient hydrated and maintain an appropriate blood pressure after dangerous blood loss.</p> <p>The patient has had surgery, and her bowel sounds were observed to be hypoactive.</p> <p>The patient has had spine surgery, and the lumbar orthotic brace will provide support for the patient while they are ambulating.</p>	<p>The patient will experience relief from the symptoms of nausea.</p> <p>The patient will be able to clear their own airway independently.</p> <p>The patient has had surgery and experienced blood loss.</p> <p>The patient has hypoactive bowel sounds, and a clear liquid diet needs to be temporarily maintained to avoid any possible GI complications.</p> <p>The lumbar brace will prevent the patient from receiving an injury when they ambulate as they heal.</p>
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## Collaborative Care: Nursing

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

<p><b>Nursing PRIORITY:</b></p>	<p>The main priorities with this patient are to keep their oxygen levels appropriate and manage their pain.</p>	
<p><b>PRIORITY Nursing Interventions:</b></p>	<p><b>Rationale:</b></p>	<p><b>Expected Outcome:</b></p>

<p><b>Monitor O2 saturation levels and titrate oxygen accordingly.</b></p> <p><b>Administer pain medication as ordered.</b></p>	<p><b>This patient has COPD. We need to keep their O2 saturation at an appropriate level, while being careful not to affect their baseline.</b></p> <p><b>The patient is in a fragile state and experiencing pain with exertion.</b></p>	<p>The patient will maintain a safe and consistent oxygen level.</p> <p>The patient will be administered pain meds at a safe rate that does not cause over sedation and their pain level will remain at a tolerable level.</p>
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**4. What psychosocial/holistic care PRIORITIES need to be addressed for this patient?** (Psychosocial Integrity/Basic Care and Comfort)

<p><b>Psychosocial PRIORITIES:</b></p>		
<p><b>PRIORITY Nursing Interventions:</b></p>	<p><b>Rationale:</b></p>	<p><b>Expected Outcome:</b></p>
<p><b>CARING/COMFORT:</b></p> <p><i>How can you engage and show that this pt. matters to you?</i></p> <p><b>Physical comfort measures:</b></p>	<p>I can show caring/comfort to this patient by checking on them routinely, listening to their descriptions of their symptoms intently, and providing a nonjudgmental space for the patient to express their concerns.</p>	<p>The patient will feel seen and know that I have her best interest at heart.</p>
<p><b>EMOTIONAL SUPPORT:</b></p> <p><i>Principles to develop a therapeutic relationship</i></p>	<p>This patient is in a lonely situation to recover in; she would benefit from being connected to a social worker to help her find the correct resources she needs for recovery.</p>	<p>The patient will be provided with resources that will help her obtain the proper at-home care</p>

	I can develop a therapeutic relationship with the patient by listening to them and showing compassion,	and possibly therapy.
<b>SPIRITUAL CARE/SUPPORT:</b>	Spiritual care and support should be offered to the patient but not forced.	The patient feels comfortable expressing whether or not they identify as religious and what that religion is.

**5. What educational/discharge priorities need to be addressed to promote health and wellness for this patient and/or family? (Health Promotion and Maintenance)**

This patient will need to be educated on their physical limits while they are healing, how to properly use any assistive devices they will be using at home, the benefits of incentive spirometry/exercise, how to safely use oxygen in their home, and how to properly administer all medications to themselves.