Post-op Pain Management: Cardiac Arrest *(2/2)

Sheila Dalton, 52 years old

Primary Concept
Perfusion
Interrelated Concepts (In order of emphasis)
1. Gas Exchange 2. Acid-Base Balance 3. Fluid and Electrolyte Balance 4. Clinical Judgment 5. Patient Education 6. Communication 7. Collaboration

UNFOLDING Reasoning Case Study: STUDENT

Post-op Pain Management 2/2: Cardiac Arrest

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 earlier today. Her 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 that is 0.2 mg and continuous rate of 0.2 mg/hour.

The nurse reported that her nausea has improved after receiving ondansetron IV four hours ago. She was having increased pain despite using the PCA every 10 minutes. Her pain has decreased from 6/10 to 2/10 since the PCA bolus was increased from 0.1 mg to 0.2 mg of hydromorphone IV one hour ago.

Current VS:
T: 99.8 F/37.7 C (oral)
P: 78
R: 12
BP: 92/48
O2 sat: 89% room air 4 liters n/c

What data from the history is RELEVANT and has clinical significance to the nurse?

RELEVANT Data from History:	**Clinical Significance:**
Temperature 99.8F R - 12 B - 92/48 O2 sat - 89% RA 4 liters n/c COPD Hydromorphone Spinal Fusion	Temperature is slightly elevated Respirations are lower than expected and could be due to the narcotics BP is low and could also be from medications O2 sat is low and could be from medications as well as patient has COPD so expected to be low but need to know patients normal O2 sat. COPD because the patient has respiratory issues. Hydromorphone used to ease patients pain must be monitored for any respiratory depression Spinal Fusion, patient is post-operative so must be monitored for any complications, bleeding, and pain levels

Your shift continues…

Thirty minutes later she is feeling more nauseated, and you administer ondansetron 4 mg IV push prn. Five minutes later she puts the call light on again. You are not able to respond immediately because you are helping your other patient get on the commode. Little do you know that Sheila is going to depend on your ability to THINK LIKE A NURSE and clinically reason to save her life. When you arrive in her room you observe the following…

Patient Care Begins:

Current Assessment:	
GENERAL APPEARANCE:	Lethargic, unresponsive, ashen pale in color
RESP:	Minimal spontaneous respiratory effort present. When you arrive at the bedside you observe that her mouth is full of liquid emesis with chunks of undigested food that is drooling out the side of her mouth
CARDIAC:	Unable to palpate radial pulse, you go straight to the carotid pulse on the neck and note a weak pulse with 2 palpable beats in 5 seconds. Calculate pulse rate:_____/minute
NEURO:	Unresponsive, does not arouse or awaken to vigorous physical stimuli
GI:	Not assessed
GU:	Not assessed
SKIN:	Not assessed

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

RELEVANT Assessment Data:	Clinical Significance:
Increase nausea Weak Pulses Lethargic and unresponsive Undigested food in mouth Minimal respiratory effort	Zofran used to relieve nausea Could be cause of patient being unresponsive Patient unresponsive to stimuli Possible aspiration Could be a side effect of the pain medication causing respiratory distress.

Current VS:
T: not assessed
P: 24
R: 4
BP: 72/40
O2 sat: 76% 4 liters n/c

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

RELEVANT VS Data:	Clinical Significance:
Temperature not assessed Pulse 24 Resp 4 O2 76%	Temperature needs to assessed Bradycardia indicates poor cardiac function Resp indicates the patient has minimal to no breathing Patient needs to be switched to a different device used for oxygen

Clinical Reasoning Begins…

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

   Respiratory arrest.

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

   Respiratory arrest due to the side effects of the Hydromorphone and post-operative state decreased mobility. Narcotics have a CNS and a respiratory depression affect

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

   Airway clearance
   Breathing
   Decreased cardicac output

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

Nursing Interventions:	Rationale:	Expected Outcome:
Airway Oral Suction Assess LOC Turn pt to side Vitals Heart Monitor	Airway, breathing, circulation Clear the patients airway in case anything is suck in the patients throat Assess patient LOC and responsiveness Prevent any aspiration Assessment of patient Monitor patient telemetry and ECG	Patient able to cough and improvement of circulation with suctioning Patient responds to neuro assessment appropriately Patient responsive and can cough and turn

5. ***What body system(s) will you most thoroughly assess based on the primary/priority concern?***

Pulmonary and Cardiovascular

6. ***What is the worst possible/most likely complication to anticipate?***

Patient dies due to respiratory arrest or myocardial infarction

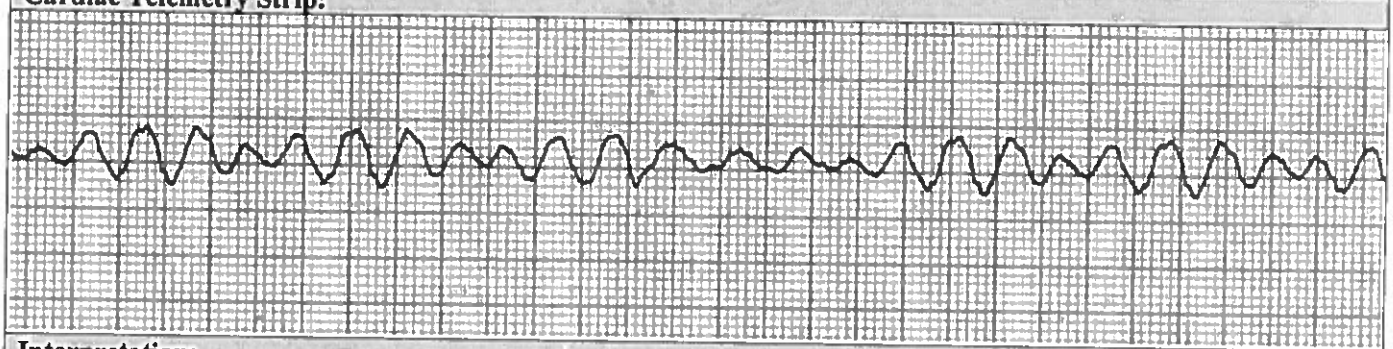
7. ***What nursing assessments will identify this complication EARLY if it develops?***

Vitals, heart monitor, s/s of cyanosis, monitoring airway and respirations.

8. ***What nursing interventions will you initiate if this complication develops?***

Call a code and initiate CPR

A crash cart is brought into the room, and the patient is placed on the cardiac monitor/defibrillator. The following rhythm is displayed:

Cardiac Telemetry Strip:

Interpretation:
V-Fib
Clinical Significance:
Check patient pulses

Medical Management: Rationale for Treatment & Expected Outcomes

I recognize that most students/new nurses have not had ACLS training or exposure to this certification in nursing school. It is important for the new nurse to understand the most common ACLS algorithms as it is relevant to clinical practice. If and when ACLS certification as a registered nurse is taken, this case study will have provided practice of this essential skill! Please recognize that doing this case study does not qualify for ACLS interventions in practice! You must be officially certified to actually intervene with these measures in a code.

Nurses who are BLS certified can have an active part in the code such as chest compressions; pulse check; bag ventilation; and vital sign checks. Nurses should feel that they can work within their scope and certification. So many times, nurses who are not ACLS certified will not even do those things that are taught in the BLS certification course.

But there is a place for a nurse who is not ACLS certified during a code that is an important role...the RECORDER. Every crash cart has a simple 1-2 page form that documents the code and is self-explanatory. Though this role should ultimately be done by a certified ACLS nurse when one arrives, until then begin documentation and remain present in the room so that you as the primary nurse can communicate to the code team and physician the patient's story and what led up to the code. ***Once the code team arrives, the role of the primary nurse is to contact physician, family, and pastoral care to update on patient status and assist with care.***

Care Provider Orders:	Rationale:	Expected Outcome:
ACLS Priorities: ABC's AED's Circulation CPR	Being able to bring the patient back to life while performing good CPR, and advancing airway	patient has normal sinus rhythm, respiration return to normal range, O2 tuns into normal range for COPD pt and patient is stable

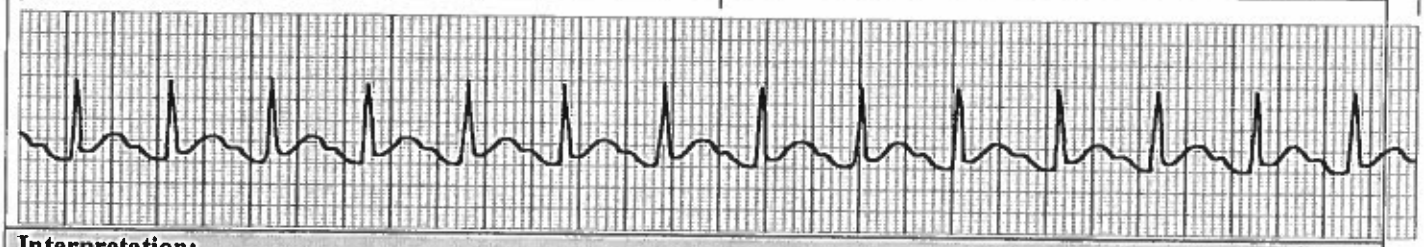
Medication Dosage Calculation:

Medication/Dose:	Mechanism of Action:	Volume/time frame to Safely Administer:	Nursing Assessment/Considerations:
Epinephrine **1:10,000** **1 mg/10 mL IV/IO** **every 3-5" push**	Vasopressor, helps stimulate the heart	**10 mL syringe** **IV Push:** **Volume every 15 sec?**	monitor patient vital signs

Medication/Dose:	Mechanism of Action:	Volume/time frame to Safely Administer:	Nursing Assessment/Considerations:
Amiodarone **300 mg IV push** **150 mg/3 mL vial**	Anti-arrhythmic, helps stabilize the heart	**IV Push:** **Volume every 15 sec?**	If patient is not responding to previous medication, give this medication. Used after CPR Monitor Vital signs

TEN minutes post-arrest:

After two doses of epinephrine and amiodarone bolus and the third defibrillatory unsynchronized shock at 360 joules, the following rhythm is present on the monitor:

Cardiac Telemetry Strip:

Interpretation:
Sinus Tachycardia
Clinical Significance:
increased response to pain, fever, and increase O2 demand
Nursing Priority Intervention:
Give oxygen. Treat underlying cause, need to monitor since patient just underwent CPR. Monitor vitals.

The in-house physician running the code orders a stat ABG right after she is successfully resuscitated and is now intubated. You obtain the following results:

Arterial Blood Gases:	Current:	High/Low/WNL?
pH (7.35–7.45)	7.15	Low
pO2 (80–100)	64	Low
pCO2 (35–45)	78	High
HCO3 (18–26)	22	WNL
O2 sats (>92%)	90%	Low
Oxygen delivery	100%	High

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

RELEVANT Lab(s):	Clinical Significance:
Low Low High WNL Low High	Uncompensated respiratory acidosis, patient needs help getting adequate tissue perfusion into the circulatory system

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

Lab:	Normal Value:	Why Relevant?	Nursing Assessments/Interventions Required:
pH **Value:** **7.15**	**Critical Value:**	What keeps out bodies functioning and works directly with our lungs and kidneys	1.Continue with ventilation. 2. Monitor for shock 3. Monitor for MI. 4. Monitor electrolytes, including potassium. 5. Muscle weakness 6.Hydration

Evaluation: ONE minute post-resuscitation:

After determining that her current rhythm also has a pulse, you collect the following assessment data:

Current VS:
T: 99.1 F/37.3 C (oral)
P: 128 (regular)
R: ambu bag rate of 20/minute (physician ordered increased rate)
BP: 128/88
O2 sat: 92% 100% O2

Current Assessment:	
GENERAL APPEARANCE:	Resting comfortably, appears in no acute distress
RESP:	Color slightly improved. Is pale/pink, coarse crackles/rhonchi scattered in both lung fields even after suctioning. No spontaneous resp. effort. Requires ambu bagging
CARDIAC:	Pulses 2+ throughout. Strong femoral pulse. No edema in extremities. Heart rate regular–S1S2.
NEURO:	Remains unresponsive. Responds to pain stimuli by bringing both hands toward the source of pain
GI:	Abdomen soft, non-tender with active bowel sounds
GU:	Foley placed, 30 mL clear, yellow urine present in bag
SKIN:	Surgical incision intact, no redness, drainage, or dehiscence present

1. ***What clinical data is RELEVANT that must be recognized as clinically significant?***

RELEVANT VS Data:	**Clinical Significance:**
Pulse Resp BP O2	Vitals all going back into within normal limits
RELEVANT Assessment Data:	**Clinical Significance:**
Pulses Rhonchi/crackles Unresponsive	Pulses strong Airflow to lungs is noted Neuro check is out of range needs to be assessed

2. ***Has the status improved or not as expected to this point?***

   Status has improved

3. ***Does your nursing priority or plan of care need to be modified in any way after this evaluation assessment?***

   Yes, respiratory points will need continued monitoring

4. ***Based on your current evaluation, what are your nursing priorities and plan of care?***

   Respiratory status

Think ABC's…

A: AIRWAY–Maintain placement and integrity of endotracheal tube

B: BREATHING–Impaired gas exchange

C: CIRCULATION–Maintain adequate blood pressure and stable cardiac rhythm (impaired tissue perfusion)

TEN minutes post-resuscitation:

Medical Management: Rationale for Treatment & Expected Outcomes:

Care Provider Orders:	Rationale:	Expected Outcome:
ACLS Priorities: Airway Breathing Circulation	Maintaining airway and ventilation Neuro function	Patient will have good respirations, O2 will be improved and neuro function will be back to normal limits

Medication/Dose:	Mechanism of Action:	Volume/time frame to Safely Administer:	Nursing Assessment/Considerations:
Nalaxone 0.02 mg IV push every 2 minutes 0.4 mg maximum dose	Antidote for opioid Reverses an overdose	**IV Push:** **Volume every 15 sec?**	Monitor the patient for cardiac arrest and respirations , blood pressure and respiratory depression

The room is now ready and it is now time to transfer to ICU. Effective and concise handoffs are essential to excellent care and if not done well can adversely impact the care of this patient. You have done an excellent job to this point, now finish strong and give the following SBAR report to the nurse who will be caring for this patient:

Situation:

Name/age:

Sheila Dalton
Age 52

BRIEF summary of primary problem:

Chief complaint of nausea and vomiting with an increased pain level. Patient is post-op and currently on Zofran, PCA pump. Patient aspirated and coded, CPR performed

Day of admission/post-op #:

Post-operative day 0

Background:

RELEVANT past medical history:

History of COPD and lower back pain

Assessment:

Most recent vital signs:

Temperature 99.1
P 128
R 20 ambu bag
02 92%
BP 128/22

RELEVANT body system nursing assessment data:

Lungs coarse with rhonchi and crackles. Pulses strong no edema noted. Responds to pain by guarding

RELEVANT lab values:

PH 7.15, pO2 64, PCO2 78, HCO3 22, O2 90%

INTERPRETATION of current clinical status (stable/unstable/worsening):

Unstable

Recommendation:

Suggestions to advance plan of care:

Continue to monitor. Follow physician orders for ventilation use

TWENTY minutes post-resuscitation:

Radiology Reports: Portable Chest X-ray

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

RELEVANT Results:	Clinical Significance:
Tip of ET tube 1 cm above the carina. Heart size normal.	Tube in place

Arterial Blood Gases:	Current:	High/Low/WNL?	Prior:
pH (7.35–7.45)	7.29		7.15
pO2 (80–100)	102		64
pCO2 (35–45)	48		78
HCO3 (18–26)	23		22
O2 sats (>92%)	100%		90%
Oxygen delivery	100%		100%

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

RELEVANT Lab(s):	Clinical Significance:	TREND: Improve/Worsening/Stable:
pH pO2 PCO2	Patient still in respiratory acidosis Limits improving	All improving

Complete Blood Count (CBC):	Current:	High/Low/WNL?	Prior:
WBC (4.5–11.0 mm 3)	8.9		7.8
Hgb (12–16 g/dL)	10.2		11.8
Platelets (150-450 x10^3/µl)	148		155
Neutrophil % (42–72)	85		81

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

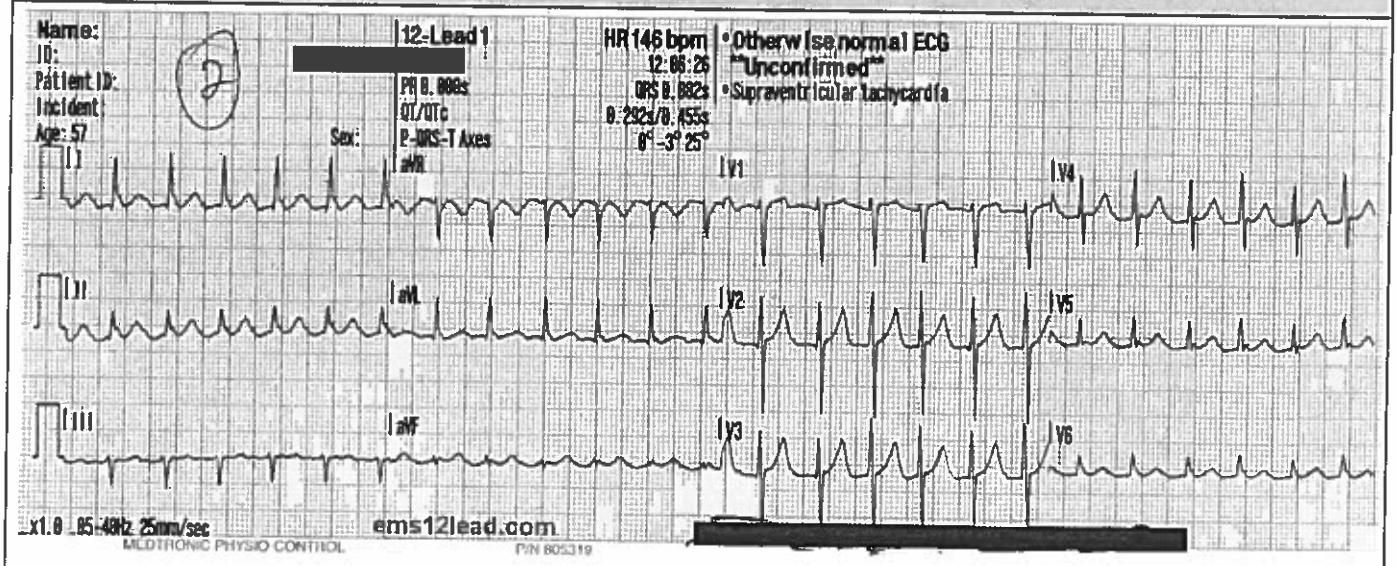
RELEVANT Lab(s):	Clinical Significance:	TREND: Improve/Worsening/Stable:
Hgb Platelets Neutrophils	Monitor for bleeding Body is fighting off an infection	All worsening

Basic Metabolic Panel (BMP):	Current:	High/Low/WNL?	Prior:
Sodium (135–145 mEq/L)	138	WNL	140
Potassium (3.5–5.0 mEq/L)	4.1	WNL	3.8
CO2 (Bicarb) (21–31 mmol/L)	20	Low	22
Glucose (70–110 mg/dL)	152	High	122
Creatinine (0.6–1.2 mg/dL)	1.7	High	1.1
Misc:			
Lactate (<2.6)	4.9	High	N/a

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

RELEVANT Lab(s):	Clinical Significance:	TREND: Improve/Worsening/Stable:
High glucose High creatinine High lactate	Monitor patients intake of sugar Monitor for dehydration Indicate infection	

12 Lead EKG:



Interpretation:

Supra ventricular Tachycardia

Clinical Significance:

Requires increase in oxygen

Education Priorities/Discharge Planning

1. ***What will be the most important discharge/education priorities you will reinforce with their medical condition to prevent future readmission with the same problem?***

Teach patient about opioid use and side effects, follow up with cardiologist, use of an incentive spirometer, no smoking, follow up with doctor, call ambulance if worse

2. ***What are some practical ways you as the nurse can assess the effectiveness of your teaching with this patient?***

Sit with the patient, answer question sand have patient teach back what you told her

Caring and the "Art" of Nursing

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

The family is probably anxious yet relieved because of the coding of their family member.

2. What can you do to engage yourself with this patient's experience and show that he/she matters to you as a person?

Sit and talk with the patient and stay around for any questions the patient may have. refer the patient to different resources available

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?

I learned the readings of the cardiac monitor and how to critically think in all aspects of the patients care

2. What would I do differently (if applicable) in this situation to prevent this outcome?

I would have taught the patient how to identify signs and symptoms of respiratory distress better. assuring the patient can talk and swallow properly as well as suctioning herself

3. How can I use what has been learned from this situation to improve patient care in the future?

ask questions and follow up with patient

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

Sheila Dalton, 52 years old

Primary Concept
Pain
Interrelated Concepts (In order of emphasis)
1. Gas Exchange 2. Glucose Regulation 3. Perfusion 4. Inflammation 5. Clinical Judgment 6. Patient Education

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:**
RELEVANT Data from Social History:	**Clinical Significance:**

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:**

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:

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:

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:

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

Lab:	Normal Value:	Why Relevant?	Nursing Assessments/Interventions Required:
Hemoglobin **Value:** 10.4	**Critical Value:**		

Pharmacology:

Home Med:	Classification:	Mechanism of Action (in own words):	Nursing Considerations:
Atenolol			
Lisinopril			
Citalopram			
Hydrocodone/ acetaminophen			
Aspirin			

Pathophysiology:

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

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

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 • Depression • COPD • Hypertension • 2 ppd smoker x 32 years	Atenolol 50 mg daily Citalopram 40 mg daily Acetaminophen/hydrocodone 1-2 tabs every 4 hours prn pain 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 • Depression • COPD • Hypertension • 2 ppd smoker x 32 years	**What Then Followed:**

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 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	

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 2. Continuous pulse oximetry 3. Ondansetron (Zofran) 4 mg IV push every 4 hours prn nausea 4. Titrate O2 to keep sat >90% 5. Incentive spirometer (IS) 6. Apply lumbar orthotic brace when up in chair or ambulating 7. Clear liquids/advance diet as tolerated		

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

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

Nursing Priority:	Nursing Interventions:	Rationale:	Expected Outcome:

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

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

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

Caring & the "Art" of Nursing

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

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

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?***

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