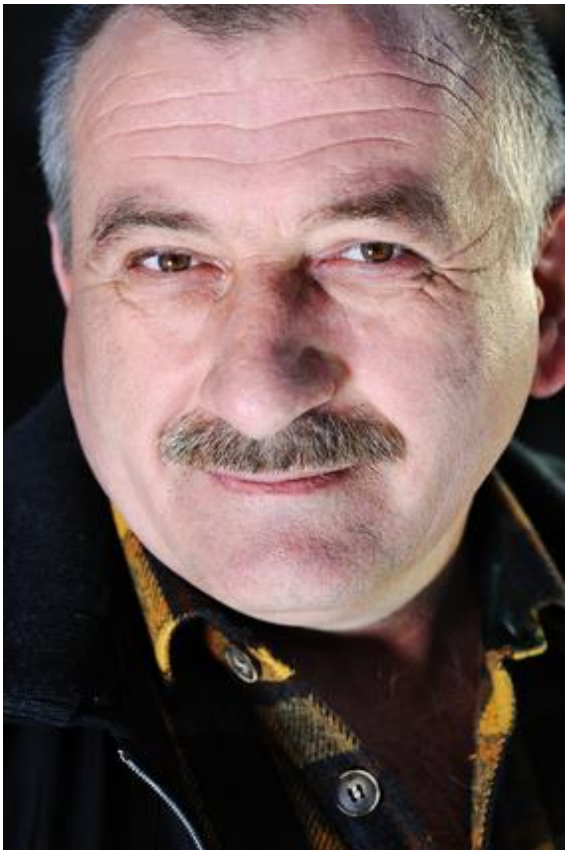
Hypertension



Mike Kelly, 51 years old

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

UNFOLDING Reasoning Case Study: STUDENT

Hypertension

History of Present Problem:

Mike Kelly is a 51-year-old Caucasian male who is 6 feet tall and weighs 275 pounds (BMI 37.3) with an abnormal distribution of weight around his abdomen. He does not regularly exercise, does not like to cook, and eats fast food three to five times during the week. He has smoked one pack per day since the age of 20 (31 pack years). He has a history of hyperlipidemia, but is unable to afford his medication (atorvastatin), and has not taken since he was diagnosed 5 years ago. He has no current diagnosed medical problems. He became concerned and came to the emergency department because he is more easily fatigued and has had a headache the past three days that has not improved.

Personal/Social History:

Mike is self-employed and owns his own auto mechanic business. He has no health insurance. His father had hypertension and died of a myocardial infarction (MI) at the age of 50. Angelina, his wife, came with him to urgent care. She shares that he is usually stoic about health problems, so this must really bother him or he is afraid. He took Excedrin and Motrin for pain and it didn't help.

What data from the histories is RELEVANT and has clinical significance for the nurse?

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

Patient Care Begins:

Current VS:	**P-Q-R-S-T Pain Assessment (5th VS):**	
T: 98.9 F/37.2 C (oral)	**P**rovoking/Palliative:	Nothing/Nothing
P: 88 **(**regular)	**Q**uality:	Ache
R: 20	**R**egion/Radiation:	Global head ache (HA)
BP: 220/118	**S**everity:	8/10
O2 sat: 95% room air	**T**iming:	Continuous

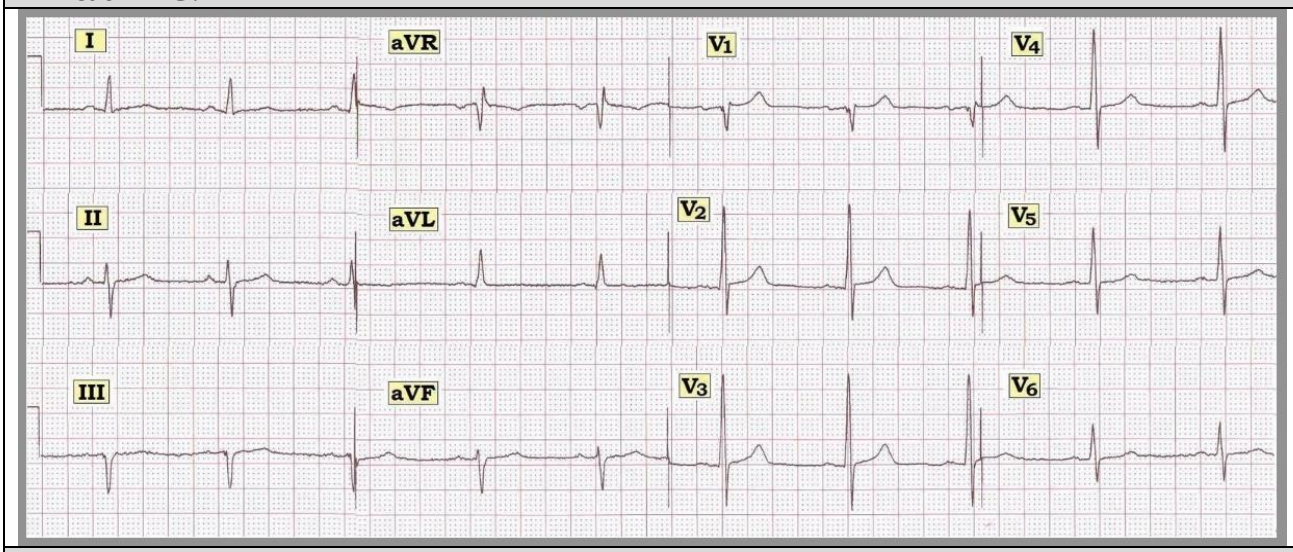
What VS data is RELEVANT and must be recognized as clinically significant by the nurse?

RELEVANT VS Data:	**Clinical Significance:**

Current Assessment:	
GENERAL APPEARANCE:	Appears uncomfortable, body tense with occasional grimacing
RESP:	Breath sounds clear with equal aeration bilaterally ant/post, nonlabored respiratory effort
CARDIAC:	Pink, warm and dry, no edema, heart sounds regular–S1S2, pulses bounding, 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 audible per auscultation in all 4 quadrants
GU:	Voiding without difficulty, urine clear/yellow
SKIN:	Skin integrity intact, skin turgor elastic with no tenting

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

RELEVANT Assessment Data:	**Clinical Significance:**

12 Lead EKG:

Interpretation:
Clinical Significance:

Radiology Reports: Chest x-ray

What diagnostic results are RELEVANT that must be recognized as clinically significant to the nurse?

RELEVANT Results:	Clinical Significance:
The cardiac size is enlarged. There are no focal infiltrates or consolidations or pleural effusions. IMPRESSION: 1. No acute disease in the chest. 2. Moderate to severe cardiomegaly	

Lab Results:

Complete Blood Count (CBC:)	Current:	High/Low/WNL?
WBC (4.5–11.0 mm 3)	10.5	
Hgb (12–16 g/dL)	15.3	
Platelets(150–450x 103/µl)	422	
Neutrophil % (42–72)	68	

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

RELEVANT Lab(s):	Clinical Significance:

Basic Metabolic Panel (BMP:)	Current:	High/Low/WNL?
Sodium (135–145 mEq/L)	136	
Potassium (3.5–5.0 mEq/L)	4.0	
Glucose (70–110 mg/dL)	188	
BUN (7–25 mg/dl)	32	
Creatinine (0.6–1.2 mg/dL)	1.5	

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

RELEVANT Lab(s):	Clinical Significance:

Cardiac Labs:	Current:	High/Low/WNL?
BNP (B-natriuretic Peptide) (<100 ng/L)	758	

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

RELEVANT Lab(s):	Clinical Significance:

Lipid Panel:	Current:	High/Low/WNL?
Low density lipoprotein–LDL (<130 mg/dL)	260	
High density lipoprotein–HDL (>40 mg/dL)	28	
Total cholesterol (<200 mg/dL)	290	
Triglycerides (30–149 mg/dL)	484	

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

RELEVANT Lab(s):	Clinical Significance:

Urine Analysis (UA:)	Current:	High/Low/WNL?
Color (yellow)	Yellow	
Clarity (clear)	Clear	
Specific Gravity (1.015–1.030)	1.018	
Protein (neg)	Moderate	
Glucose (neg)	Moderate	
Ketones (neg)	Negative	
Bilirubin (neg)	Negative	
Blood (neg)	Positive	
Nitrite (neg)	Negative	
LET (Leukocyte Esterase) (neg)	Negative	
MICRO:		
RBC's (<5)	3	
WBC's (<5)	2	
Bacteria (neg)	Negative	
Epithelial (neg)	Negative	

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

RELEVANT Lab(s):	Clinical Significance:

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

Lab:	Normal Value:	Why Relevant?	Nursing Assessments/Interventions Required:
BNP (B-natriuretic Peptide) **Value: 758**	**Critical Value:**		

Clinical Reasoning Begins…

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

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

Collaborative Care: Medical Management

Care Provider Orders:	Rationale:
Basic metabolic panel (BMP) Complete cell count (CBC) BNP (B-natriuretic Peptide) Lipid profile Urine analysis (UA) 12 lead EKG Chest X-ray Labetalol 20 mg IV push every 10". Maximum 300 mg dose. Goal-BP: 160/100	

Collaborative Care: Nursing

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

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

Nursing Interventions:	Rationale:	Expected Outcome:

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

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

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

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

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

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

Medication Dosage Calculation:

Medication/Dose:	Mechanism of Action:	Volume/time frame to Safely Administer:	Nursing Assessment/Considerations:
Labetalol 20 mg IV push 5 mg/mL vial		**4 mL** **IV Push: Volume every 15 sec?**	

Evaluation:

Evaluate your patient's response to nursing and medical interventions during your shift. All physician orders listed under medical management have been implemented..

Two hours later…

Mike has received a third dose of labetalol 20 mg IV push and you obtain the following clinical data when he is re-assessed:

Current VS:	Most Recent:	Current PQRST:	Previous:
T: 98.6 (oral)	**T:** 98.9 (oral)	**P**rovoking/Palliative: Nothing/Nothing	Nothing/Nothing
P: 82 **(**regular)	**P:** 78 **(**regular)	**Q**uality: Ache	Ache
R: 16	**R:** 20	**R**egion/Radiation: global HA	Global HA
BP: 176/104	**BP:** 188/102	**S**everity: 3/10	8/10
O2 sat: 96% RA	**O2 sat:** 95% (RA)	**T**iming: Continuous	Continuous

Current Assessment:	
GENERAL APPEARANCE:	Resting comfortably, appears relaxed and in no acute distress
RESP:	Breath sounds clear with equal aeration bilaterally ant/post, nonlabored respiratory effort
CARDIAC:	Pink, warm and dry, no edema, heart sounds regular with no abnormal beats, 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 audible per auscultation in all 4 quadrants
GU:	Voiding without difficulty, urine clear/yellow
SKIN:	Skin integrity intact

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

RELEVANT VS Data:	**Clinical Significance:**
RELEVANT Assessment Data:	**Clinical Significance:**

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

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

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

The ED primary care provider decides to admit Mike to the hospital. The admitting primary care provider assesses Mike and writes the following orders:

Collaborative Care: Medical Management

Care Provider Orders:	Rationale:	Expected Outcome:
Heart echocardiogram in the morning		
Hydrocodone 5 mg/acetaminophen 325 mg 1–2 tabs PO every 4 hours prn–HA		
Hydrochlorothiazide 25mg PO daily		
Lisinopril 10 mg PO daily		
Simvastatin 20 mg PO daily		
Aspirin 81 mg PO daily		
Cardiac diet		
Hgb A1c		

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 who is being admitted on the telemetry floor:

Situation:

Name/age:

BRIEF summary of primary problem:

Day of admission/post-op #:

Background:

Primary problem/diagnosis:

RELEVANT past medical history:

Assessment:

Most recent vital signs:

RELEVANT body system nursing assessment data:

RELEVANT lab values:

TREND of any abnormal clinical data (stable-increasing/decreasing):

How have you advanced the plan of care?

Patient response:

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

Recommendation:

Suggestions to advance plan of care:

Education Priorities/Discharge Planning

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

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

Caring and the "Art" of Nursing

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

2. ***What can you do to engage yourself with this patient's experience and show that he matters to you 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.

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?***