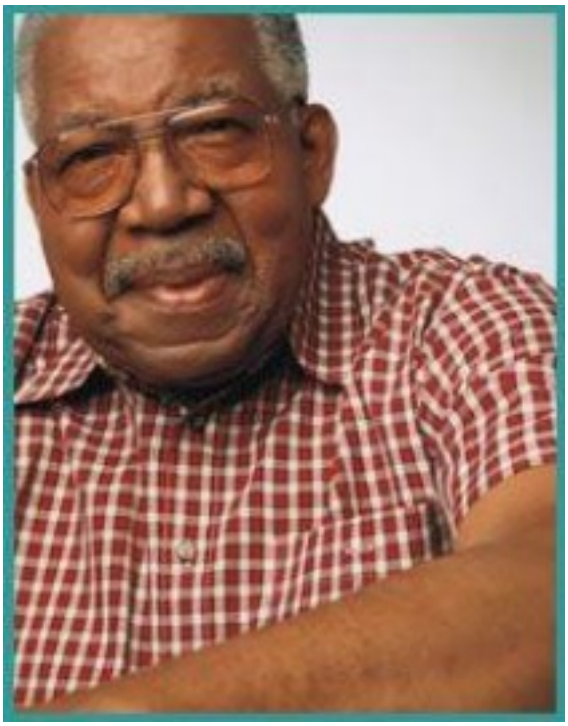
Novel Coronavirus Disease (COVID-19)

UNFOLDING Reasoning



John Taylor, 68 years old

Primary Concept			
Immunity			
Interrelated Concepts (In order of emphasis)			
• Clinical judgment • Communication			
NCLEX Client Need Categories	**Covered in Case Study**	**NCSBN Clinical Judgment Model**	**Covered in Case Study**
Safe and Effective Care Environment		Step 1: Recognize Cues	✓
• Management of Care	✓	Step 2: Analyze Cues	✓
• Safety and Infection Control	✓	Step 3: Prioritize Hypotheses	✓
Health Promotion and Maintenance	✓	Step 4: Generate Solutions	✓
Psychosocial Integrity	✓	Step 5: Take Action	✓

Physiological Integrity		Step 6: Evaluate Outcomes	
• Basic Care and Comfort			
• Pharmacological and Parenteral Therapies	✓		
• Reduction of Risk Potential	✓		
• Physiological Adaptation	✓		

Part I: Initial Nursing Assessment

Present Problem:

John Taylor is a 68-year-old African-American male with a history of type II diabetes and hypertension. He came to the emergency department (ED) triage window because he felt crummy, complaining of a headache, runny nose, feeling weaker, "achy all over" and hot to the touch and sweaty the past two days. When he woke up this morning, he no longer felt hot but began to develop a persistent "nagging cough" that continued to get worse throughout the day. John is visibly anxious and asks, "Do I have that killer virus that I hear about on the news?"

Personal/Social History:

John lives in a large inner-city that has had over three thousand confirmed cases of COVID-19. He has been married to Maxine, his wife of 45 years, and is a retired police officer and active in his local church.

1. What data from the histories are RELEVANT and must be NOTICED as clinically significant by the nurse?
(NCSBN: Step 1 Recognize cues/NCLEX: Reduction of Risk Potential)

RELEVANT Data from Present Problem:	**Clinical Significance:**
68 year old African American Male **He felt crummy, complaining of a headache, runny nose, feeling weaker, "achy all over", and hot to the touch and sweaty the past two days.** **Developed a persistent "nagging cough" and continues to worsen throughout the day.**	**History of type II diabetes and hypertension** **Patient has COVID-19 symptoms**
RELEVANT Data from Social History:	**Clinical Significance:**
Lives in a large inner-city **Married to Maxine for 45 years** **Retired police officer** **Active in his local church**	**Over three thousand confirmed cases of COVID-19**

2. What additional clarifying questions does the triage nurse need to ask John to determine if his cluster of physical symptoms is consistent with COVID-19?

The triage nurse needs to ask John if he has additional symptoms like shortness of breath or difficulty breathing, fatigue, muscle or body aches, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea. The triage nurse would have to ask where Mr. Taylor has traveled to and if his wife is presenting with any symptoms.

3. Based on the clinical data collected, identify what measures need to be immediately implemented using the following clinical pathway.

Provide Mr. Taylor with a mask if he was not already wearing one and performs a COVID test for confirmation. Also, isolate the patient from other patients and use contact/droplet precautions until tests come back. Ensure that the triage nurse is wearing proper PPE for the precautions.

4. What type of isolation precautions does the nurse need to implement if COVID-19 is suspected? What specific measures must be implemented to prevent transmission?

Type of Isolation:	**Implementation Components:**
Contact/droplet precautions	**For contact/droplet the proper PPE are N95 mask, gloves, gown, face shield, and hand hygiene.**

Part II: Patient Care Begins in the ED:

John is brought back to a room. As the nurse responsible for his care, you collect the following clinical data:

Current VS:	**P-Q-R-S-T Pain Assessment:**	
T: 100.3 F/38.8 C (oral)	**P**rovoking/Palliative:	"moving makes it worse"
P: 118 **(**regular)	**Q**uality:	"achy"
R: 22 (regular)	**R**egion/Radiation:	"all over"
BP: 164/88 **MAP**: 113	**S**everity:	5/10

O2 sat: 92% room air	**T**iming:	continuous

1. What VS data are RELEVANT and must be NOTICED as clinically significant by the nurse?
(NCSBN: Step 1 Recognize cues/NCLEX: Reduction of Risk Potential /Health Promotion and Maintenance)

RELEVANT VS Data:	**Clinical Significance:**	**Nursing Intervention (if needed):**
T: 100.3 F (oral) **P: 118 (regular)** **R: 22 (regular)** **BP: 164/88 MAP: 113** **O2 sat: 92% room air** **Pain: 5/10**	**Temperature is slightly elevated which could be a possible infection.** **The pulse although regular, is slightly high which could be a result from feeling anxious since coming to the hospital.** **Respirations are slightly high too and O2 saturation is normal but monitor in case it drops lower than 92%.** **Patient states pain.**	**Labs drawn like CBC** **Have the patient perform breathing exercises in a room that is isolated from others and any stressful stimuli.** **See if the patient would like anything for his pain.**

2. What body system(s) will you assess most thoroughly performing a FOCUSED assessment based on the primary/priority problem? Identify correlating specific nursing assessments.
(NCLEX: Reduction of Risk Potential/Physiologic Adaptation)

PRIORITY Body System:	**PRIORITY Nursing Assessments:**
Respiratory	*Inspect: skin, signs of discoloration, breathing patterns, and chest.* *Auscultate: Listen to lung sounds bilaterally, posterior and anterior.*

Current FOCUSED Nursing Assessment:	
GENERAL SURVEY:	Appears anxious, body tense
NEUROLOGICAL:	Alert & oriented to person, place, time, and situation (x4), generalized weakness
HEENT:	Head normocephalic with symmetry of all facial features. Lips, tongue, and oral mucosa pink and moist.
RESPIRATORY:	Breath sounds fine dry crackles bilat. with diminished aeration on inspiration and expiration in all lobes anteriorly, posteriorly, and laterally, non-labored respiratory effort, episodic non productive cough
CARDIAC:	No edema, heart sounds regular, pulses strong, equal with palpation at radial/pedal/post-tibial landmarks, brisk cap refill. Heart tones audible and regular, S1 and S2 noted over A-P-T-M cardiac landmarks with no abnormal beats or murmurs. No JVD noted at 30-45 degrees.
ABDOMEN:	Deferred
GU:	Deferred
INTEGUMENTARY:	Skin hot, dry, intact, normal color for ethnicity. Skin integrity intact, skin turgor elastic,

	no tenting present.

3. What assessment data is RELEVANT and must be NOTICED as clinically significant by the nurse? *(NCSBN: Step 1 Recognize cues/NCLEX: Reduction of Risk Potential Reduction of Risk Potential/Health Promotion & Maintenance)*

RELEVANT Assessment Data:	**Clinical Significance:**
General Survey **Respiratory** **Neurological** **Integumentary**	**Patient appears anxious and his body is tense.** **Fine, dry crackles bilaterally with diminished aeration on inspiration and expiration in all lobes anteriorly, non productive cough, and non-labored respiratory effort.** **Patient states generalized weakness.** **Patient's skin is hot and dry.**

4. Interpreting clinical data collected, what problems are possible? Which problem is the PRIORITY? Why? *(NCSBN: Step 2: Analyze cues/Step 3: Prioritize hypotheses/NCLEX: Management of Care)*

Problems:	**Priority Problem:**	**Rationale:**
Respiratory problems **Neurological problems**	**Respiratory problems: non productive cough with fine, dry crackle sounds bilaterally in the lungs**	**Educate the patient on breathing techniques and ways to promote a productive cough.** **If not on fluid restrictions, ensure that the patient is increasing his fluid intake to help break down secretions to cough up.**

1. What nursing priority(ies) and goal will guide how the nurse RESPONDS to formulate a plan of care? *(NCSBN: Step 4 Generate solutions/Step 5: Take action/NCLEX: Management of Care)*

Nursing PRIORITY:	**Maintain airway**	
GOAL of Care:	**Maintain adequate oxygen level and clear lung sounds**	
Nursing Interventions:	**Rationale:**	**Expected Outcome:**
Sit patient up in Semi-Fowler position. **Encourage the patient to deep breathe and cough every hour.** **Monitor the patient's vital signs, especially his O2 saturation.**	**Promotes lung expansion and helps perfusion.** **Controlled coughing will result in moving secretions to clear the airway.**	**Improved breathing and O2 saturation levels.** **Patient has a productive cough and the airway clears with his coughing.**

Obtain a respiratory assessment/ another focused assessment.		

[KR1]

Caring and the "Art" of Nursing

6. What is the patient likely experiencing/feeling right now in this situation? What can you do to engage yourself with this patient's experience, and show that they matter to you as a person? (*NCLEX: Psychosocial Integrity)*

What Patient is Experiencing:	How to Engage:
[KR2] The patient might not have enough information on COVID-19 since it is a new disease. Patient appears anxious during his stay. Being able to talk, educate, or explain information could help reduce the patient's anxiety.	Wear proper PPE while with patient Educate the patient and address any concerns or questions. Provide therapeutic communication when talking with the patient. Let the patient know that you are advocating for him.

The ED physician assesses John and orders the following:

Collaborative Care: Medical Management

7. State the rationale and expected outcomes for the medical plan of care. *(NCLEX: Pharm. and Parenteral Therapies)*

Care Provider Orders:	Rationale:	Expected Outcome:

Contact-Airborne-Droplet precautions	To prevent the spread of COVID-19	Isolated patient to prevent the spread of COVID-19 disease
Influenza swab	To test if the patient has influenza	The results from the influenza swab came back negative
COVID-19 swab (only if influenza neg)	To test if the patient has COVID-19 if the influenza swab is negative	The results from the COVID-19 swab came back positive
Chest x-ray	To visibly check the patient's lungs to see if there are any signs of fluid in the lungs	Showed that there are possible signs of pneumonia caused from COVID-19
Complete blood count (CBC)	To see if there are any abnormal levels in the patient's blood to help determine if there is an infection or not	The patient had abnormal levels of WBCs
Metabolic panel (BMP)	To see if there are any abnormal levels that could lead to what is happening to the patient metabolically	The patient had high level of glucose
Lactate	To check the patient's condition and possible uncontrolled diabetes	Patient's lactate level was within normal limits
Nasal cannula titrate to keep O2 sat >90%[KR3]	To improve his oxygen saturation	Nasal cannula titrate helps maintain the patient's airway

8. Which orders do you implement first? Why? *(NCLEX: Management of Care)*

Care Provider Orders:	**Order of Priority:**	**Rationale:**
• Contact-Airborne-Droplet precautions • COVID-19 swab • Nasal cannula titrate to keep O2 sat >95%	Contact/airborne/droplet precautions	To isolate the patient with a possible contact/airborne/droplet disease transmission. COVID-19 swab results could take a while to get back so to start isolation precautions would be the first to implement then get the swab taken.

Part III: Interpreting Diagnostic Data

The following diagnostic results just posted in the electronic health record:

Radiology Reports:

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

(NCSBN: Step 1 Recognize cues/NCLEX: Reduction of Risk Potential/Reduction of Risk Potential/Physiologic Adaptation)

Radiology: Chest X-Ray	
Results:	**Clinical Significance:**
Diffuse bilateral pulmonary infiltrates	Potential type of pneumonia as a result of COVID-19.

Lab Results:

Hematology (CBC)								
	WBC	**HGB**	**PLTS**	**% Neuts**	**% Lymphs**	**% Monos**	**% Eosin**	**Bands**
Norms:	(4.5-11.0 mm 3)	(12-16 g/dL)	(150-450x 103/µl)	(55-70)	(20-40)	(2-8)	(1-4)	(3-5%)
Current:	3.5	12.8	224	92	8	0	0	0

Metabolic Panel (BMP)										
	Na	**K**	**Cl**	**CO2**	**AG**	**Gluc**	**Ca**	**BUN**	**Creat**	**GFR**
	135-145 mEq/L	3.5-5.0 mEq/L	101-111 mmol/L	20-29 mmol/L	(7-16 mEq/L)	64-110 mg/dL	8.5-10.2 mg/dL	10-20 mg/dL	0.8-1.2 mg/dL	>60 mL/min
Current:	141	3.9	105	16		178		18	1.10	>60

Misc.					
	Influenza	**COVID-19**	**Lactate (Ven)**		
	Neg	Neg	(0.5-2.2 mmol/L)		
Current:	Neg	Pos	1.9		

[KR4]

What lab results are RELEVANT and must be NOTICED as clinically significant by the nurse? *(NCSBN: Step 1 Recognize cues/NCLEX: Reduction of Risk Potential Reduction of Risk Potential/Physiologic Adaptation)*

RELEVANT Lab(s):	**Clinical Significance:**	**TREND: Improve/Worsening/Stable:**

WBC: 3.5 (low) **Neuts: 92 (high)** **Lymphs: 8 (low)** **Monos: 0 (low)** **Eosin: 0 (low)** **Bands: 0 (low)** **CO2: 16 (low)** **Gluc: 178 (high)** **COVID-19: Pos**	**Possible signs of infection** **Glucose level high so possible sign that the patient's diabetes is uncontrolled or needs insulin** **COVID-19 results are positive so it confirms the patient's symptoms to the disease**	**All can be improved now that the COVID-19 results are in to treat the patient and manage his blood sugar level.**

There has been no change in John's status in the ED and is currently stable. He is being admitted to the general med/surg floor for observation.

To ensure a hand-off that will promote safe patient care to the next nurse, communicate a concise SBAR that captures the essence of John's status and summarizes the excellent care you have provided!

Situation:
Name/age: John Taylor 68 year-old male **BRIEF summary of primary problem: Male of African American descent who has had type II diabetes and hypertension in the past. He arrived at the emergency department (ED) triage desk because he had been feeling lousy for the previous two days, complaining of a headache, a runny nose, feeling weaker, "achy all over," and hot to the touch and perspiring. He didn't feel hot when he woke up this morning, but he started to get a "nagging cough" that persisted and worsened all day.** **Day of admission/post-op #: 1**
Background:
Primary problem/diagnosis: **RELEVANT past medical history: Patient has type II diabetes and hypertension.**
Assessment:

Most recent vital signs: T: 100.3 F (oral), P: 118 (regular), R: 22 (regular), BP: 164/88 MAP: 113, O2 sat: 92% room air, Pain: 5/10

RELEVANT body system nursing assessment data:

RELEVANT lab values: WBC: 3.5 (low), Neuts: 92 (high), Lymphs: 8 (low), Monos: 0 (low), Eosin: 0 (low), Bands: 0 (low), CO2: 16 (low), Gluc: 178 (high), COVID-19: Pos

How have you advanced the plan of care? I have advanced his plan of care after receiving the positive COVID-19 swab result to begin treatment and continue to implement isolation precautions.

Patient response: The patient is understanding of the isolation precaution and is ready to begin treatment after finding out that his COVID-19 swab came back positive.

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

Recommendation:

Suggestions to advance the plan of care: Suggest that the triage nurse explains to the wife that she should be tested as well since her husband's results are positive. Continue to have them isolated together since they live together so she has a high risk of also having COVID-19.