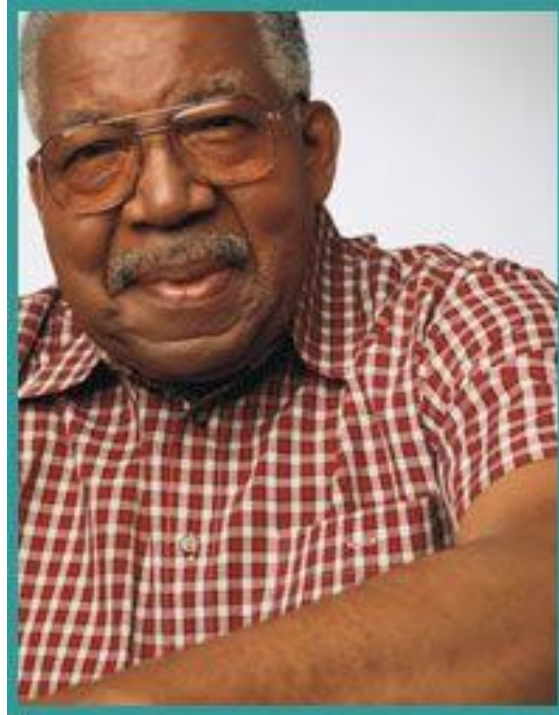


Novel Coronavirus Disease (COVID-19)

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 years old Diabetes, Hypertension Headache, feeling weak and achy, hot to the touch and sweaty, persistent cough	Those over 60 have a higher chance of being affected by contraction of virus. Underlying disease may worsen the case. These symptoms are all present on the CDC's list of possible symptoms of COVID-19.
RELEVANT Data from Social History:	Clinical Significance:
Lives in inner city with 3000 cases Married Active in church	Increases his chance of coming into contact with the virus in public. Wife may have come into contact with virus. May have come into contact with someone at church who was unaware they had contracted the virus.

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?

Did you take your temperature when you were hot to the touch and sweaty? What was it?
Do you have any shortness of breath at rest? Is your cough productive?
Does your wife have any similar symptoms?
Have you been practicing social distancing?

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

The client should be put on isolation precautions for COVID-19 until it is determined that he does not have the virus. A COVID-19 test should be performed. An RPP, flu screening, strep test, chest x-ray, and sputum culture should also be ordered.

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	Hand hygiene, gown, gloves, surgical mask, and face shield/goggles are sufficient until a confirmation of positive or negative test result is determined.

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)	Provoking/Palliative:	“moving makes it worse”
P: 118 (regular)	Quality:	“achy”
R: 22 (regular)	Region/Radiation:	“all over”
BP: 164/88 MAP: 113	Severity:	5/10
O2 sat: 92% room air	Timing:	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):
Low grade fever Tachycardia Increased respirations with lowered oxygen saturation	May be indicative of infection or virus Patient does not have history of heart disease, this is abnormal. Patient does not have history of lung disease, this is abnormal.	Administer tylenol for fever. Implement oxygen at 2L nasal cannula. Continue to monitor vital signs regularly.

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: Respiratory	PRIORITY Nursing Assessments:
Respiratory	Cough, productive? Auscultation- adventitious sounds? Use of accessory muscles Oxygen saturation after application of oxygen.

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/Health Promotion & Maintenance)

RELEVANT Assessment Data:	Clinical Significance:
Weakness Crackles bilaterally, diminished, non-productive cough Skin hot to touch	Indicates infection or virus in body. Indicates respiratory compromise. Possible fluid in the lungs. Causes decreased aeration during breaths. Indicates continuing fever.

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:
Crackles with diminished breath sounds Fever, weakness	Crackles with diminished breath sounds.	May cause patient to go into respiratory distress depending on how quickly the condition worsens.

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:	Respiratory issues	
GOAL of Care:	Increase oxygenation	
Nursing Interventions:	Rationale:	Expected Outcome:
Apply 2L oxygen via nasal cannula	Increase oxygenation, decrease effort with each breath.	Oxygen saturation increase from 92% to at least 95%.
Notify provider of crackles, diminished breath sounds, non-productive cough	These issues may require medication to resolve. Provider should be aware of possible complications.	Medications ordered.
Administer medication ordered by provider to resolve crackles, cough	Attempt to lessen need for oxygen and effort required to breath. Decrease frequency of cough.	Oxygen saturation increase. Cough decrease. Crackles decrease, breath sounds return to normal.
Monitor cough	Monitor to ensure it remains non-productive.	Cough remains non-productive.

[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:
	Experiencing: Anxiety and fear of virus and possibility of needing ventilated or dying. Engage: Offer yourself and your time to the client. Ensure that they will be well taken care of.

[KR2]

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	Decrease the possibility of spreading the cause of the patient's symptoms are, whether COVID-19 or another virus.	Safety for staff and other patients maintained.
Influenza swab	Determine if this is the cause of the patient's symptoms.	Negative.
COVID-19 swab (only if influenza neg)	The patient's symptoms and social history make this a possibility.	Positive.
Chest x-ray	Determine if there is fluid or infiltrate in the lungs.	Presence of one or the other.
Complete blood count (CBC)	Assess the client for signs of infection.	Levels will be normal.
Metabolic panel (BMP)	Assess the clients system functions and electrolytes.	Levels will be normal.
Lactate	Determine acid-base balance of client.	Level will be normal.
Nasal cannula titrate to keep O2 sat >90% ^[KR3]	Client has no respiratory disease and was saturating at 92% on room air.	Client's oxygen saturation will improve.

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.	Ensure protection of staff and other patients from this moment on.
	Nasal cannula titrate	Improve clients condition as quickly as possible.
	COVID-19 swab	Determine the cause of the symptoms quickly.

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	Cause of lower oxygenation status. May indicate infection, fluid, or pneumonia.

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 10 ³ /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	CO ₂	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)	Indicative of viral infection	Needs to improve
Neutrophils 92% (high)	May be due to the inflammation or infection.	Needs to improve
Lymphocytes 8% (low)	May be due to viral infection or increased stress.	Needs to improve.
CO ₂ 16 (low)	Indicative of alkalosis or hyperventilation.	Needs to improve.
Glucose 178 (high)	May increase the rate at which the infection spreads.	Needs to improve.

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, African American male, 68 years of age.

BRIEF summary of primary problem: Client presents to the ED with complaints of persistent non-productive cough, fever, shortness of breath during COVID-19 outbreak.

Day of admission/post-op #: Admitted 4/14/2020, 1744.

Background:

Primary problem/diagnosis: COVID-19 positive.

RELEVANT past medical history: John has hypertension and Type 2 Diabetes Mellitus. John is married and has been active in his church since the outbreak began.

Assessment:

Most recent vital signs: T- 100.3 F oral; P- 118; RR- 22; BP-164/88 MAP- 113; O2- 92% ra

RELEVANT body system nursing assessment data: Diminished breath sounds with crackles present all lobes bilaterally.

RELEVANT lab values: WBC 3.5; Neutrophils 92%; Lymphocytes 8%; CO2 16; Glucose 178; Flu test negative; COVID-19 test positive

How have you advanced the plan of care? Nasal cannula applied titrate to >95% O2 sat.; airborne-contact isolation initiated

Patient response: Patient stable with no change in status. Tolerating care.

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

Recommendation:

Suggestions to advance the plan of care: Continue isolation protocol. Monitor oxygenation, vital signs, and respiratory system frequently for worsening of symptoms.