Suspected Corona Virus Patient Case Study

TRIAGE **Date: Today Time: Now**					
Patient Name: Ms. Grace Yi			Age: 35	Gender: F	Weight: 60kg
Presenting complaint: Shortness of breath, cough, fever					
Temp: 39.2	HR: 140	BP: 100/60	RR: 22	O_2Sat: 90%	FiO_2: RA
Cap glucose: 130			GCS: 15		
Triage note: 35-year-old woman became febrile last night with coryza and woke up acutely short of breath with productive cough, rhinorrhea, and a subjective fever.					
Allergies: None					
Past Medical History: None			Current Medications: Ibuprofen 600mg q 6 hours PRN Acetaminophen 500 mg q 4 hours PRN		

Task Alert:
Review a COVID-19 screening tool:
https://www.chop.edu/clinical-pathway/2019-novel-coronavirus-emergency-clinical-pathway

What questions would be important to ask this patient?

1. Have you or anyone in your household traveled internationally in the last 6 months? Have you been around anyone who has been sick recently? Any exposure to COVID in the last 2 weeks? When did the symptoms start? Do you have any underlying diseases? Do you smoke? Do you have any allergies to any medications? Are you taking any medications to manage the symptoms?

Extra Patient Information

A. Further History
She has traveled from China a week ago because she was visiting family. She also has seasonal allergies.

B. Physical Exam	
List any pertinent positive and negative findings	
Cardio: Tachycardia	Neuro: WNL
Resp: Crepitus and expiratory wheezes bilaterally, productive cough	Head & Neck: Coryza
Abdo: WNL	MSK/skin: Flushed
Other: She feels very weak and tired	

She screens positive for potential coronavirus exposure due to fever, respiratory symptoms and a high-risk travel history.

What signs and symptoms are most concerning?

Cardio: Tachycardia. Resp: Crepitus and expiratory wheezes bilaterally, productive cough. O2 is 90% on RA and Temp is 102.5 F.

Explain the significance of these signs and symptoms.

The symptoms she is experiencing, along with recent travel to China, makes her more likely to have a positive COVID test. A COVID test is needed to confirm a diagnosis of COVID. The patient is experiencing tachycardia due to the low oxygen saturation. The elevated temperature is indicative of an infection.

What type of isolation precautions should this patient have?

This patient should be placed on droplet precautions, with a negative pressure airborne isolation room.

Emergency Room: Part 2 Time: 2 hours later

You notice the following rhythm:

What rhythm is this patient experiencing?

Normal Sinus Rhythm, heart rate is 130 bpm indicative of tachycardia.

Before you go into assess the patient describe what PPE you will use:

Perform hand hygiene. PPE: Gloves, gown, N95 mask, face shield.

Now you are in the patient's room and notice the following changes:

Patient is experiencing worsening shortness of breath with RR: 28 and O_2SAT: 84%. You work with the healthcare team to complete the following orders:

Apply O_2 by NRB mask
Portable chest Xray, BMP, CBC, ECG

Task Alert:
1) Review the chest x-ray results here: https://emsimcases.com/2020/02/18/suspected-covid-19/

Results indicate bilateral pneumonia.

2) Create a set of lab values based on what you might expect to see:
CBC:
- WBC: 12.6 k/uL
- RBC: 5.60
- Hct: 47.4%
- Hgb: 17..2
- Neutrophils: 75.9%
- Lymphocytes: 17.5%
- Monocytes: 5.2%
- Eosinophils: 0.9%
- Basophils: 0.2%

BMP:
- Glucose: 78

- BUN: 5
- Creatinine: 0.67
- Sodium: 142
- Potassium: 3.6
- Chloride: 107
- CO2: 20.0
- Calcium: 9.8
- Protein: 7.3
- Albumin: 5.0
- AST: 12
- ALT: 39

ABGs: Respiratory Acidosis

- pH: 7.3
- CO2: 47
- HCO3: 26
- O2 Sat: 85%

3) How would you know if the non-rebreather mask is working?

O2 saturation levels would improve. Patient wouldn't be as short of breath, ABG would also improve.

Emergency Room: Part 3 Time: 15 minutes later

O_2Sat increases to 90% with supplemental O_2
Swabs for flu and coronavirus are sent

The patient will transfer to ICU. Write Report in SBAR frame you would give to the ICU RN.

S (Situation):
Grace Yi is transferring to the ICU following COVID respiratory complications. Ms. Yi is a 35-year-old female with no significant medical history, presenting to the ED with fever, coryza, SOB, productive cough, and rhinorrhea. A chest x-ray was performed, and Ms. Yi was diagnosed with bilateral COVID pneumonia and is currently on supplemental oxygen via a non-rebreather mask. Ms. Yi is being transferred for close monitoring and continued treatment.

B (Background):
Ms. Yi has no known medical history. She reports not taking any daily medications except for the occasional acetaminophen and/or ibuprofen. She has no known medication allergies. She just returned from a recent trip to China last week, and her symptoms presented after returning home.

A (Assessment):
Vital signs are as follows: T- 102 F, Pulse- 118, BP- 100/60, RR- 20, O2 Saturation- 90% via non-rebreather. Ms. Yi reports that she can breathe better and isn't using accessory muscles like she was upon arrival to the ED. She is A&O to person, place, and time. Recent lab work results are in her chart,

and ABGs suggest respiratory acidosis. Chest x-ray shows bilateral pneumonia, and she has been placed on airborne isolation with her symptoms and suspected COVID.

R (Recommendations):
Ms. Yi requires close monitoring of her ABGs and CBC levels, with frequent vital checks. She should continue to receive medications for pain, SOB, and elevated temperatures as needed. A pulmonary consult should be requested for further evaluation and treatment planning. Grace's family needs to be informed of her condition and treatment plan, with provided information about her prognosis and expected outcomes.

ICU Room: Part 4 Time: 1 hour later

You complete an assessment

Vitals: T: 38.6 BP: 88/50 Pulse: 130 RR: 30 O_2SAT: 86% NRB	**Focused Assessment:** Patient becoming more hypoxic, agitated. Pale, cool clammy skin	What actions should you take next? Make a check list below ● **Call a rapid response**

Task Alert:
Complete the QSOFA Score found here https://www.mdcalc.com/qsofa-quick-sofa-score-sepsis

What are your findings?

Grace scored a 3- high risk in in-hospital mortality.

You call a code sepsis. What actions do you expect next?

- Hospitalist should arrive, assess the patient, and place any additional order on the sepsis protocol list.
- RT to draw ABGs
- Lab to draw CBC and BMP
- Pharmacy to bring IV ATB and RN to administer
- House supervisor to be on standby for any additional help

While the team is providing care for the patient, the patient's sister comes into the room upset and wanting to know what happened. Describe how you would handle the situation.

"Hi, my name is Makynzie and I am the RN taking care of your sister today. She is very ill and we need to get her stabilized as soon as possible. Can I see you to the waiting room until we can get her stabilized and situated?"

ICU Room: Part 5 Time: 15 minutes later

You must complete the following actions. What order will you complete these interventions. Place them in order of priority highest to lowest.

Interventions:	Prioritized Interventions
• Start Levophed drip	3rd
• Administer a Normal saline fluid bolus	4th
• Assist with intubation	2nd
• Call the laboratory to draw blood cultures	1st

Task Alert:
Calculate the rate (ml.hr) for the Levophed drip. The order is to give 4mcg/min. The pharmacist prepares a bag of Levophed with 4 mg/250 ml. 15 mL/hour

ICU Room: Part 6 Time: 2 hours later

You complete an assessment

Vitals: T: 37.4 BP: 110/70 Pulse: 90 RR: 14 O_2SAT: 92% (Vented 100% FiO2)	**Focused Assessment:** Patient is sedated, course lung sound present throughout, secretions thick with yellowish hue	ABG's noted below. ● pH- 7.34 ● CO2- 35 ● HCO3-18 ● pO2- 200

What's the significance of the assessment?

To ensure that the current interventions (mechanical ventilation & Levophed) are improving her overall status, and restore her ABGs.

Any recommendations for treatments not currently being given?

Continous IV fluids to remain hydrated, Duo neb treatment through the ventilator, bicarbonate bolus via IV.

Follow up considerations:

1) Identify potential exposed persons, nature of exposure and discuss necessary actions
Contact any family she was closely around, any people with close exposure and work alongside the sister in being able to gain contact with family in China.

2) What are next steps for individuals who may have been inadvertently exposed?
Watch for symptoms and take precautions.

3) Discuss potential risk factors involved with the care of this patient
Sudden decline in overall condition, staff contracting COVID, decreased cardiac output, fluid volume overload, risk for injury due to mental status being altered.

4) Discuss legal ethical considerations that you might consider in caring for this patient.
There might be a language barrier between Grace and her sister, possibly being a second language. The code status was unknown before ventilating her. Her family should have been contacted first.

ICU Room: Part 7 Time: 5 days later

The patient is doing much better, so you the nurse are preparing for the patient for discharge.

Review the COVID-19 Fact Sheet for Nurses pdf document and prepare to educate the patient using the prompts below.

Patient education

1) Choose 3 points under the patient teaching sections general and/or discharge planning

2) What will you share with the patient regarding these 3 points?

3) Consider any visuals or other resources you might use to demonstrate and teach regarding these 3 points.

4) What questions do you anticipate the patient might have once you provide teaching?

5) How will you answer these questions?