

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 ₂ Sat: 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?

- If she has been in contact with anyone known or suspected to have covid
- If she knows how high her fever has been
- If she has tried to manage her fever at home with acetaminophen or ibuprofen and when she last took the medicine.
- If she has traveled recently

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?

- **Tachycardia**
- **Crepitus and expiratory wheezes bilaterally**
- **Flushed skin**
- **Weakness or tired**

Explain the significance of these signs and symptoms.

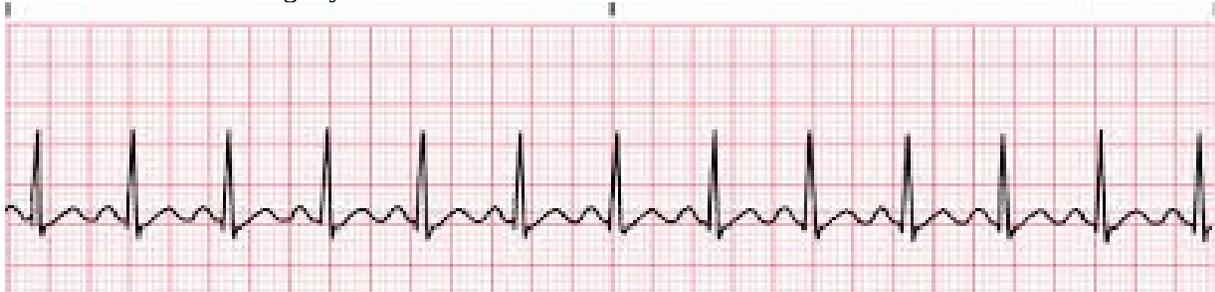
- **Tachycardia is often seen in patients with covid 19 that I have seen, her heart is putting in more effort to accommodate**
- **Crepitus and wheezes means she is having trouble breathing and we should treat this and possibly obtain a chest x-ray.**
- **Flushed skin can be a sign of fever**
- **Weakness and tiredness also known as fatigue is common when individuals are experiencing an illness**

What type of isolation precautions should this patient have?

- **Contact**

Emergency Room: Part 2 Time: 2 hours later

You notice the following rhythm:



What rhythm is this patient experiencing?
-sinus tachycardia

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

- N95 Mask, Gown and Gloves. Possibly eyewear

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

Patient is experiencing worsening shortness of breath with RR: 28 and O₂SAT: 84%. You work with the healthcare team to complete the following orders:

Apply O₂ 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: WBCs, RBCs, H/H, etc.

BMP: Na, K⁺, Ca⁺, etc.

Other Labs?

- WBC would be elevated
- RBC and H/H may be slightly lower than normal
- Na may be slightly decreased <130
- K⁺ could be decreased.
- Ca⁺ could be abnormal.

3) How would you know if the non-rebreather mask is working?
- the patient's oxygen saturation will begin to increase

Emergency Room: Part 3 Time: 15 minutes later

O₂Sat increases to 90% with supplemental O₂
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): patient is being transferred to the icu with a diagnosis of bacterial pneumonia. Patient is currently at 90% on oxygen via non rebreather mask

B (Background): patient presented with shortness of breath, Productive cough, and fever

A (Assessment): patients most recent vitals are as follows o2 is 90% on supplemental oxygen, patient is in sinus tachycardia rhythm, BP is 110/60.

R (Recommendations): continue supplemental oxygen, reassess vitals and labs

ICU Room: Part 4 Time: 1 hour later

You complete an assessment

Vitals: T: 38.6 BP: 88/50 Pulse: 130 RR: 30 O ₂ SAT: 86% NRB	Focused Assessment: Patient becoming more hypoxic, agitated. Pale, cool clammy skin	<u>What actions should you take next? Make a check list below</u> <ul style="list-style-type: none">• <u>Increase o₂</u>• <u>Consult respiratory therapist</u>• <u>Monitor labs and vitals</u>
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Task Alert:

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

What are your findings?

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

- **Monitor vitals, start an IV, reassess labs**

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.

The patient is currently suffering from a condition known as sepsis which is a complication of her infection of bacterial pneumonia. We are currently assisting your sister and she is in great hands

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
<ul style="list-style-type: none">• Start Levophed drip	Assist with intubation
<ul style="list-style-type: none">• Administer a Normal saline fluid bolus	Start levophed drip
<ul style="list-style-type: none">• Assist with intubation	Administer bolus of normal saline
<ul style="list-style-type: none">• Call the laboratory to draw blood cultures	Draw cultures

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.

- $4000/250 = 16\text{gtt}/\text{min}$

ICU Room: Part 6 Time: 2 hours later

You complete an assessment

Vitals: T: 37.4 BP: 110/70 Pulse: 90 RR: 14 O ₂ SAT: 92% (Vented 100% FiO ₂)	Focused Assessment: Patient is sedated, course lung sound present throughout, secretions thick with yellowish hue	<u>ABG's noted below.</u> <ul style="list-style-type: none">• pH- 7.34• CO₂- 35• HCO₃-18• pO₂- 200
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What's the significance of the assessment?

- To see how the patient is responding post recent interventions and if she is improving.

Any recommendations for treatments not currently being given?

- Possibly suction secretions

Follow up considerations:

- 1) Identify potential exposed persons, nature of exposure and discuss necessary actions
 - Her family when she visited china, have them quarantine and get tested

2) What are next steps for individuals who may have been inadvertently exposed?

They should be tested and quarantine while awaiting their results and pending their results quarantine for the recommended time

- 2) Discuss potential risk factors involved with the care of this patient
 - Her increased shortness of breath
 - She may begin to experience anxiety since she's alone in isolation and had to be intubated
 - Cultural considerations

- 3) Discuss legal ethical considerations that you might consider in caring for this patient
 - Does she have a power of attorney, living will or a DNR on file

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
 - How to monitor her o2 saturation
 - How to limit her exposure to covid 19
 - How to monitor her blood pressure

- 2) What will you share with the patient regarding these 3 points?
 1. Use a finger O2 saturation probe, they sell them at pharmacies, to assess your oxygen level if you are experiencing shortness of breath and are below 92% please be reevaluated
 2. Limit travel and going out, wear masks and proper hand hygiene
 3. She can assess her blood pressure at home with an automatic cuff and come in to be reevaluated if it is elevated or low

- 3) Consider any visuals or other resources you might use to demonstrate and teach regarding these 3 points.
 - Bring in an o2 finger check and blood pressure machine

- 4) What questions do you anticipate the patient might have once you provide teaching?
 - where she can get access to a o2 machine and blood pressure machine

- 5) How will you answer these questions?
 - They are available at your local pharmacy but we can also prescribe them for pickup from our local medical supply

