

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?

Fever, tachycardia, & crepitus and expiratory wheezes bilaterally, alongside a productive cough.

Explain the significance of these signs and symptoms.

- Crepitus and wheezing-
- tachycardia-
- Fever-

What type of isolation precautions should this patient have?

This patient should immediately be placed in an airborne isolation room, due to suspected COVID exposure.

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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?

- Have you traveled outside of the United States recently?
- Have you been around anyone with COVID, or other illnesses?
- How long have you had your symptoms, & have they progressed?
- When did your symptoms start?
- Have you taken any other medications besides your current medications? If so, what kind and time?
- Have you experienced these symptoms before. If so, how did you treat it?
- Have you received any treatment for your current symptoms?
- When was the last time you took any medications? How much, what medication, & what time?

Emergency Room: Part 2 Time: 2 hours later

You notice the following rhythm:



What rhythm is this patient experiencing?

Tachycardia (130 bpm)

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

N95 mask (that you were personally fitted for), gown, gloves, and eye protection.

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. WBC: 12.6, RBC: 5.60, HCT: 47.4%, Hgb: 17.2, Neutrophils: 75
BMP: Na, K+, Ca+, etc. Na: 142, K+: 3.6, Ca+: 9.8, Chloride: 107, ALT: 39, AST: 12
Other Labs? ABGs pH: 7.20, CO₂: 50, HCO₃: 25, O₂ sat: 85%

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

When the patient's oxygen saturation has gone up and the patient isn't struggling to breathe.

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):

B (Background):

A (Assessment):

R (Recommendations):

S: This is Grace Yi. She is being transferred to ICU for COVID respiratory problems. Grace is 35-year-old female with no known medical history. Grace Yi presents to the ED with fever, coryza, shortness of breath, cough, & rhinorrhea. She was diagnosed with bilateral COVID pneumonia & has been stabilized with oxygen on a non-rebreather mask.

B: There is no known medical history. Grace doesn't take any daily medications besides the occasional Acetaminophen and Ibuprofen. She has no known drug allergies listed. Grace recently took a trip to China, a week ago, & showed symptoms when she arrived home.

A: Vitals = temp: 102°F, pulse: 118 bpm, B/P: 100/60, RR: 20, O₂%: 90% with a non-rebreather mask. No use of accessory muscles to breathe now. She is alert and oriented to person, place & time. Chest x-ray showed bilateral pneumonia.

R: Monitor vitals closely, including ABGs & CBC levels. Continue Medication for pain, SOB & fevers PRN. Pulmonologist consult is needed.

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	What actions should you take next? Make a check list below • Call for a sepsis Alert.
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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? Grace Yi scored a 3; this is high risk.

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

laboratory testing, fluid resuscitation, & antibiotic administration

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.

I would introduce myself to everyone in the room. Explain that I would be giving her sister care needed, and that I'm solely here for them in whatever they needed. I would then explain how sick she was and see if there's any questions or anything I could help with.

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	3
• Administer a Normal saline fluid bolus	4
• Assist with intubation	2
• Call the laboratory to draw blood cultures	1

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.

$$\frac{250\text{mL}}{4\text{mg}} \times \frac{1\text{mg}}{1,000\text{mcg}} \times \frac{4\text{mcg}}{1\text{min.}} \times \frac{60\text{min}}{1\text{hr.}} = \frac{60,000}{4,000}$$

$$= \underline{15} \text{ mL/hr.}$$

Follow up considerations:

- 1) Identify potential exposed persons, nature of exposure and discuss necessary actions

Any close exposure with anyone; including friends/family. Getting a hold of family in china to relay information of COVID.

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

Watch for symptoms related to COVID, & get tested if symptoms are present & take precautions if the patient is

- 3) Discuss potential risk factors involved with the care of this patient

Abrupt deceleration in the patient's overall condition, ^{asymptomatic.} contracting COVID-19, decreased cardiac output, fluid volume excess, & alteration of mental status.

- 4) Discuss legal ethical considerations that you might consider in caring for this patient

English is a second language for Grace, so a translator should be available, if necessary.

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	ABG's noted below. <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?

This would show if the mechanical ventilation & Levophed are working to restore the ABG levels to Normal.

Any recommendations for treatments not currently being given?

- Nebulizer treatment
- Continued IV fluids
- bicarbonate bolus