COVID19 Simulation Case	
CHIEF COMPLAINT: Difficulty Breathing **PATIENT AGE: 46 years** **WEIGHT: 58kg**	
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Setting	**Community Emergency Department**
Brief narrative description of case	Lakeview clinic called in a potential COVID patient. He is a 45-year-old male who returned from Italy 2 weeks ago. He developed cold symptoms after returning. He called clinic because of fever today and not feeling well. He c/o general malaise, fever, and a loose productive cough. He states it has become increasingly more difficult to breathe over the last two hours. Patient comes in with wife in private car. She takes wheel chair to bring him in. Patient evaluated in ED with appropriate PPE and containment measures. Patient develops respiratory distress and needs admission.
Primary Learning Objectives	1. Directs and coordinates the activities of the other team members, assigns tasks, develops team shared mental model, and establishes a positive atmosphere. 2. Discusses with DOH and Infection Control to obtain and coordinate resources for evaluation, testing and management, and share information/Identifies public health emergency issues and at-risk populations resulting from the scenario (if applicable) 3. Adherence to appropriate universal precautions to limit the likelihood of contagious spread in the patient care environment, Implementation of contact isolation precautions, Ensures that Personal Protective Equipment (PPE) is present and available for healthcare staff caring for isolation patient 4. Utilizes proper technique for isolation precautions particularly related to the following skills: • Donning and doffing PPE • Entry and exit of isolation room • Practicing environmental disinfectant protocols

	• Practicing linen waste disposal protocols (if applicable) • Conducting effective high acuity clinical care in the isolation space with either limited personal and/or limited space
	5. Construct and implement initial medical management plan for an adult with respiratory distress in context of COVID19 6. Demonstrate focused history taking from a caregiver in context of COVID19, explain diagnosis and management to caregivers, coordinates admission with the Hospitalist, demonstrate teamwork and closed loop communication

Recommended Supplies	• Manikin: Adult (7-Sigma Simulation Systems) • Moulage: Oral and nasal secretions using "7S3 Infectious Saliva" • Manikin set up: o Respiratory distress with coughing o Extremities available for peripheral IV placement attempts and intraosseous (IO) device access • Equipment: o airway equipment ▪ NPAs ▪ LMAs ▪ Oxymasks, nasal canula, Nebulizer supplies ▪ cuffed endotracheal tubes ▪ laryngoscope blades and handles o BVM with appropriate sized masks o ventilator o IV supplies and tubing o IO supplies o video laryngoscope (optional) • Medications: Acetaminophen, Albuterol MDI, rapid sequence intubation (etomidate, ketamine, succinylcholine, rocuronium), sedation/analgesia (fentanyl, morphine, versed), Rocephin, Zithromax, Vancomycin, cardiac arrest medications (code cart – epinephrine, atropine, calcium chloride, amiodarone, lidocaine, dextrose 50%), IV fluids

Participants/Roles	Participants/Learners: • Team lead MD/PA • Airway (RT) • 2 RNs • Pharmacist (optional) • ED tech • ED registration Confederates • Wife of the patient – provides history of event and SAMPLE history. Asks about evaluation for patient and risk of COVID. ask what's going on and what's going to happen. Does she need to be seen? • Consultant/Infection control – can be the facilitator and provide phone consult if needed.
10 minutes lead time before patient arrival Team Huddle Room preparation Donning Call Infection Control, review COVID resources,	
STAGE 1	Sitting in stretcher, c/o not feeling well. Has intermittent cough
CRITICAL ACTIONS FOR STAGE 1:	o **Team lead assigns roles and shares concern for COVID** o **PPE before entering room** o **Place patient on monitor and obtain full set of vital signs** o **Oxygen, Obtain vascular access and order labs, Cxr** o **Contact Infection control**
Vital Signs	•Temp 39C • HR 88 • BP 110/50 • RR 20 • SpO_2 93% on room air

Airway	No airway obstruction, copious nasal and oral secretions, no stridor.
Breathing	Coughing and shallow breathing at rate of 20 bmp. breath sounds with crackles
HEENT	4mm PEERL, no head or neck trauma. Nose and oropharynx with copious secretions.
Neck	No tenderness; no stepoffs, deformities or crepitus
Lungs	shallow respirations. Crackles bilateral
Cardiovascular	Regular rhythm, tachycardic. No murmurs. Palpable pulses with delayed (>4 sec) cap refill.
Abdomen	No tenderness/masses
Skin	Clammy, diaphoretic
STAGE 2 10 minutes	Develops respiratory distress
CRITICAL ACTIONS FOR STAGE 2:	Identifies respiratory distress and escalates respiratory support, IV fluids and antibiotics, bronchodilators etc. Use N95 or PAPR for nebulizer treatment, Bipap or Intubation (MDI preferred over nebulizer)

	Determines need for admission Communicates with Hospitalist and ensures containment for transfer/admission
Vital Signs	•Temp 39C • HR 100 • BP 90/50 • RR 30 • SpO2 86% on room air
EXAM CHANGES	• RR 30, wheezing • Patient grunting

STAGE 3: REASSESMENT AND DISPOSITION		
CRITICAL ACTIONS FOR STAGE: o **Disposition patient to the Inpatient service** o **Communicate effectively and compassionately with spouse** o **Doffing** ROOM AND STAFF WILL BE SCANNED WITH WOODS LAMP FOR ANY RESIDEUES OF INFECTIOUS SALIVA.		
Support files: Labs and Chest X-ray		
BMP	**CBC**	Rapid Influenza
Procalcitonin	Chest X ray	**CRP**

- - - - - - HEMATOLOGY PROFILE - - - - - -

White Blood Count	13.1	High	X 10e3/uL	4.0-11.0
Red Blood Count	4.50		X 10e6/uL	3.80-5.20
Hemoglobin	13.6		g/dL	12.0-16.0
Hematocrit	41.6		%	35.0-47.0
MCV	92		fL	80-98
MCH	30		pg	27-34
MCHC	33		g/dL	32-36
Platelet Count	299		X 10e3/uL	150-420
RDW-SD	45.4		fL	36.5-46.3
RDW-CV	13.4		%	11.6-14.4

The above 10 analytes were performed by RMC Laboratory
500 S Maple,Waconia,MN 55387

- - - - - - BASIC METABOLIC PANEL - - - - - -

Sodium	140		mmol/L	136-145
Potassium	3.8		mmol/L	3.5-5.1
Chloride	101		mmol/L	98-107
Bicarbonate	28		mmol/L	21-32
Calcium	9.4		mg/dL	8.5-10.1
Glucose	226	High	mg/dL	74-100
Blood Urea Nitrogen	17		mg/dL	7-18
Creatinine	0.71		mg/dL	0.51-0.95
Estimated GFR	>60		mL/min/1.73me2	60-150

Individuals with an estimsted GFR greater than (>) 60 l/min/1.73me2
are classified as having a lower risk for kidney disease.

- - - - - - C-REACTIVE PROTEIN - - - - - -

C-Reactive Protein (CRP)	17.06	High	mg/dL	0.00-0.33

The above 1 analytes were performed by RMC Laboratory
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- - - - - - PROCALCITONIN - - - - - -

Procalcitonin	0.18	ng/mL	0.00-0.50

<0.5 ng/mL represents a low risk of severe sepsis and/or septic shock
>2.0 ng/mL represents a high risk of severe sepsis and/or septic shock
The above 1 analytes were performed by RMC Laboratory
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Rapid Influenza neg

Portable Cxr


PA

COVID Sorting Process—EDs

Primary Screening-Level 1 (In Lobby)

Exposure:	International Travel ***OR*** contact with confirmed CoVid-19 within the last 14-days.
	AND
Symptoms:	Fever ***OR*** Lower Respiratory Symptoms (cough, difficulty breathing, etc.)
	If screening is positive, mask & immediately place in regular room—if child has respiratory distress/requires nebs use Negative Airflow room
	MASK respiratory patients waiting in lobby.

Secondary Screening-level 2-3 (In Room)

PPE	Screening Level & Testing	
Confirmed or suspected CoVid-19: Eye protection, surgical mask, gown & gloves **Use N95 or PAPR and Negative Airflow rooms for aerosolized procedures** (nebs, intubation, open suctioning)	**Level 2:** History of travel from area affected geographic areas (CDC travel alert Level-2 or higher) within 14-days of symptom onset ***OR*** exposure to a group of patients with fever, cough or difficulty breathing ***AND*** Fever ***OR*** Lower Respiratory Symptoms (cough, difficulty breathing, etc.)	**Testing:** **Reference Testing Algorithm Collect all swabs at the same time and hold until needed to reduce exposure. Use inhalers whenever possible
	Level 3: Pneumonia/ARDS of unknown etiology ***AND*** Negative Respiratory Pathogen Testing (ie: influenza, respiratory panel)	**Testing:** • CoVid-19 Testing (send-out)
	At any point in screening, if patient meets CoVid-19 testing criteria—collect swabs and alert IP. Place patient label on tracking form on charge nurse board.	