COVID- 19: Triage and Diagnosis

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COOK COUNTY HEALTH

Disclaimer

- No conflicts of interests to disclose

Stroger Emergency Department

- Annual census approx. 116,000

- 60- bed+
- Over 30 Attendings Physicians, 68 residents, 9 Physician Assistants, nurses, ERT's
- Visiting residents and medical students


R2

Triage

Universal Masking

No visitors*

Screening Tool

Initial Triage Screening

Questions for Patients:

Have you had the following signs and symptoms (check all that apply)?

☐ Fever[1] ☐ Cough ☐ Shortness of breath

Date of symptom onset_____

In the 14 days before symptom onset, have you:

Travelled to or lived in Wuhan City, China?	☐ Y	☐ N	☐ Unknown
Had close contact[2] with a person who is under investigation for 2019-nCoV while that person was ill?	☐ Y	☐ N	☐ Unknown
Had close contact[2] with a laboratory-confirmed 2019-nCoV case while that case was ill?	☐ Y	☐ N	☐ Unknown

Presence of fever, respiratory symptoms, travel history, and close contact should trigger the Infection Prevention and Control Recommendations for Patients Under Investigation (PUI) for 2019 Novel Coronavirus (2019-nCoV) algorithm (see attached).

Current Triage Screening

Questions for Patients:

A. Within the past 14 days, have you had the following signs and symptoms (check all that apply)?

☐ Cough ☐ Shortness of breath or Difficulty Breathing

Or at least two of the following symptoms

☐Sore throat ☐Headache ☐Chills ☐ Repeated Shaking ☐ New loss of taste or smell
☐Muscle Pain ☐Fever

Date of symptom onset:_____

AND/OR

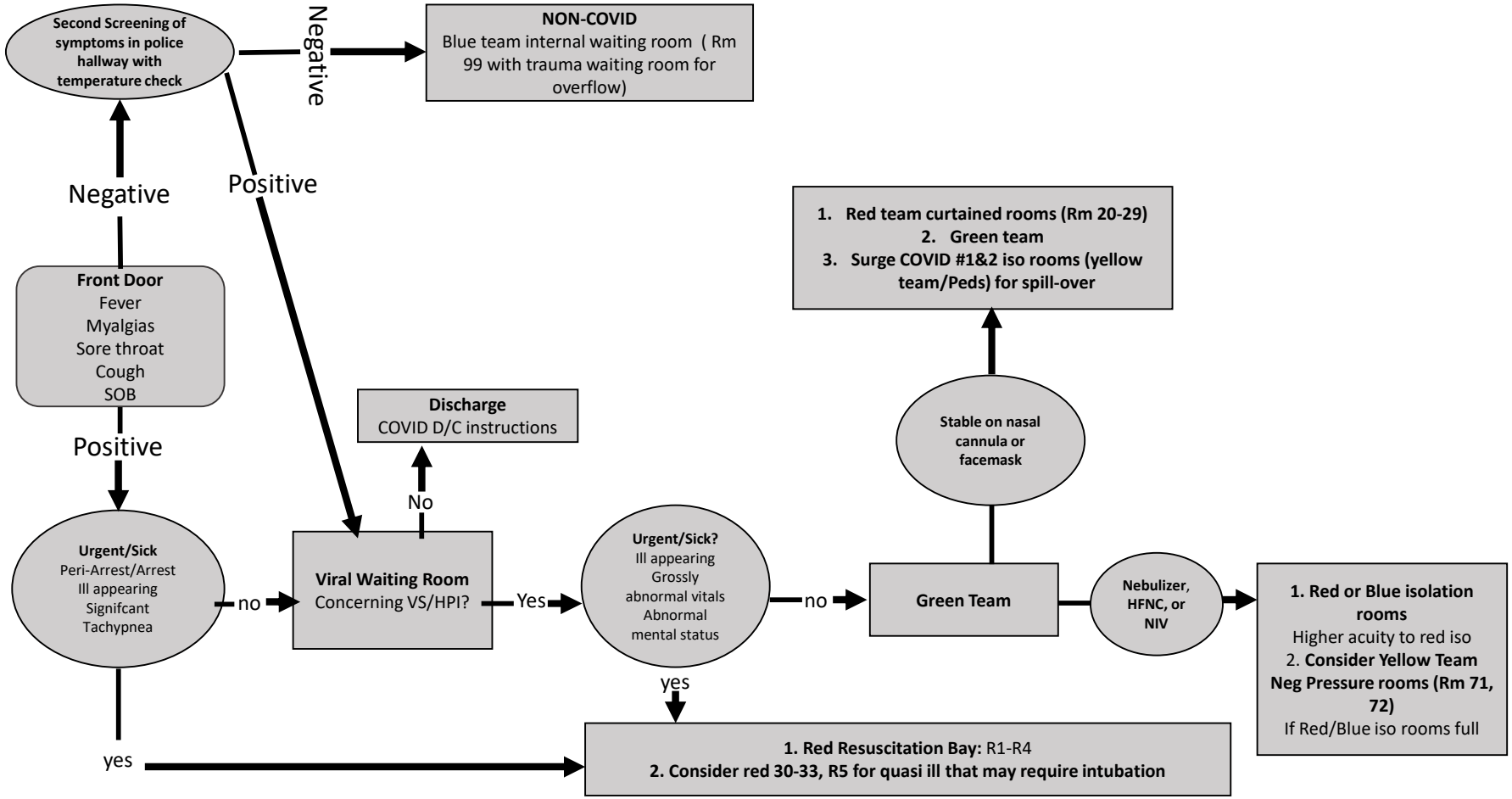
In the 14 days before symptom onset, have you:

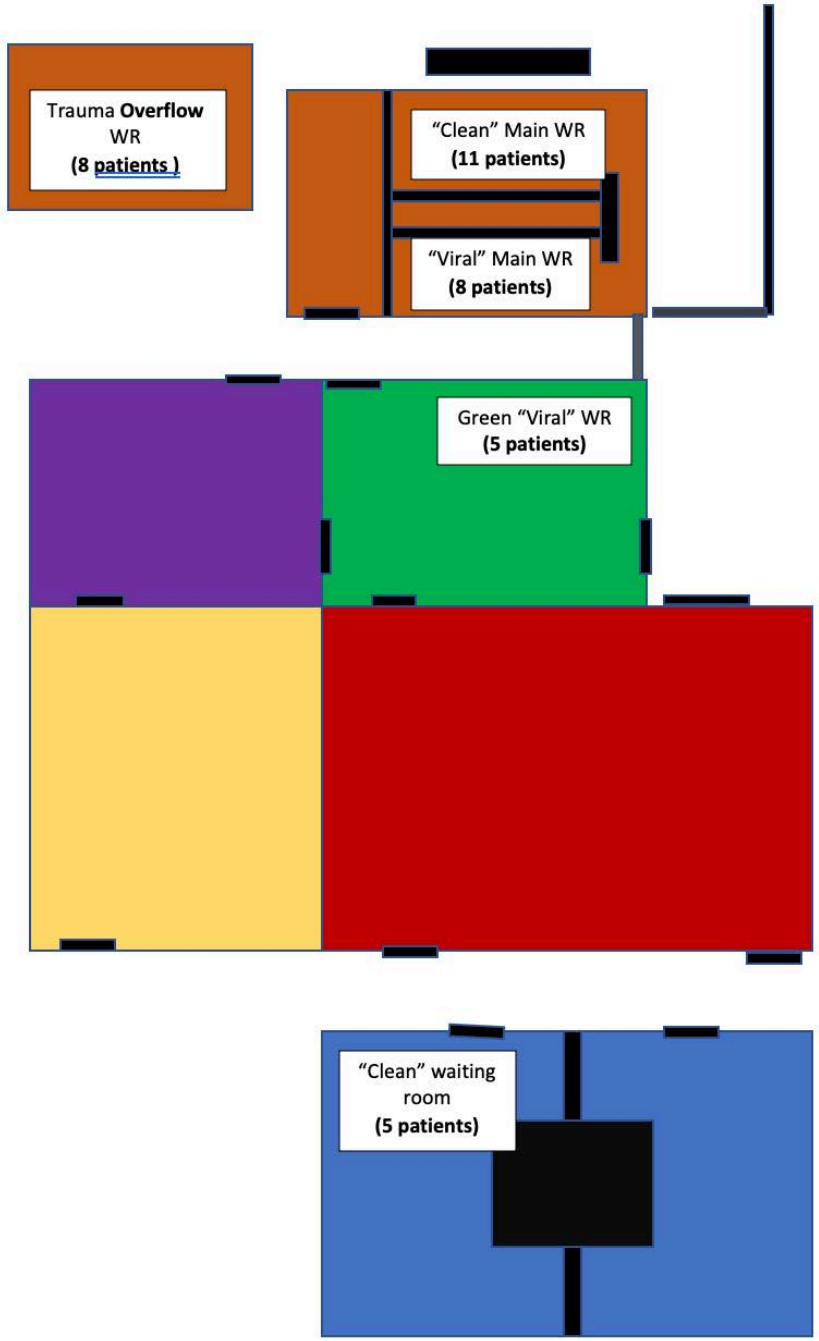
B. Had close contact[2] with a person who has laboratory-confirmed Coronavirus Disease (COVID-19)?	☐ Y	☐ N	☐ Unknown

The presence of symptoms listed in A and/or B should trigger Infection Prevention and Control Recommendations for Patients Under Investigation (PUI) for Coronavirus Disease (COVID-19).

Immediate Isolation

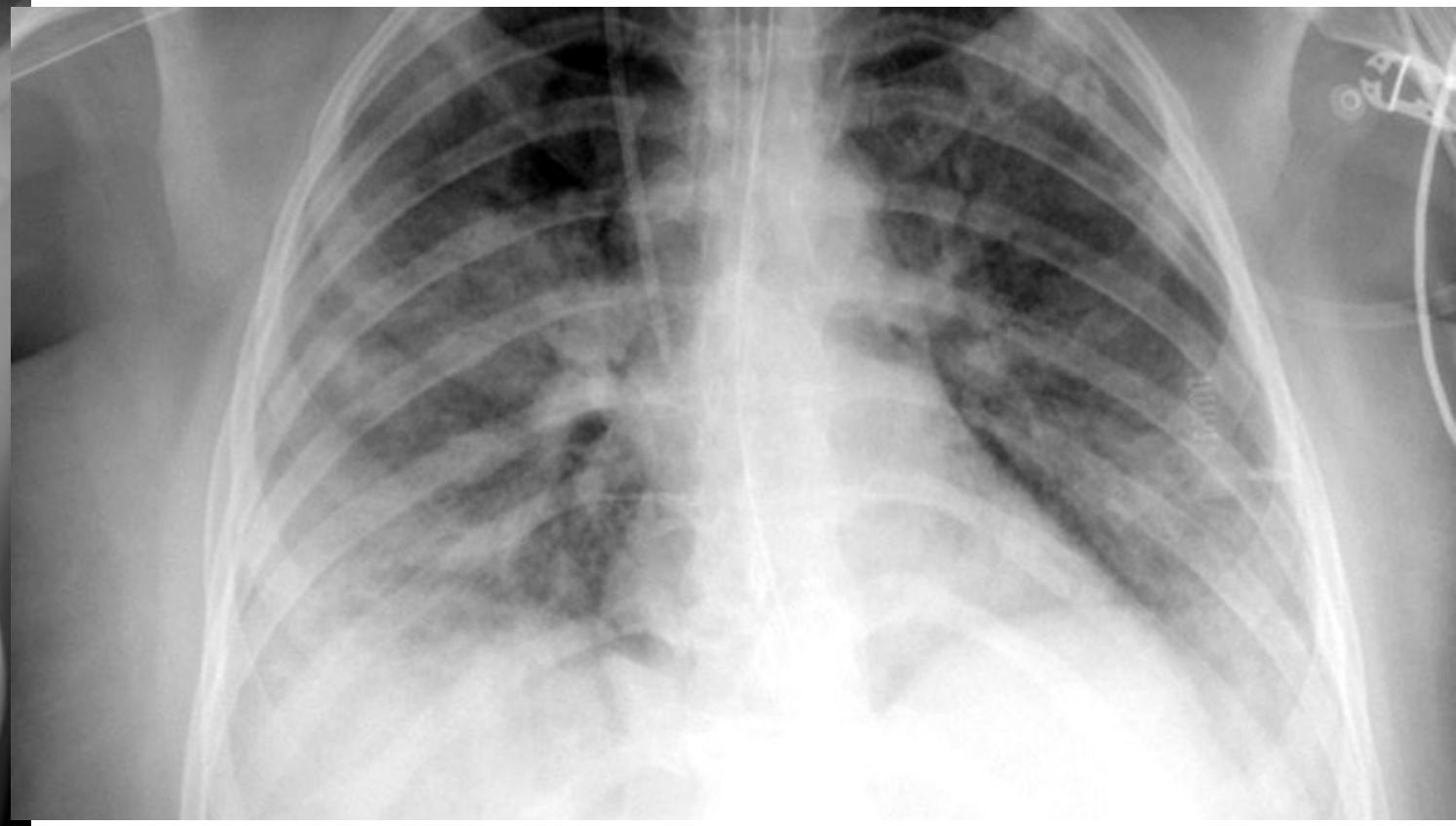
Updated 3/28/20: Surge Flow Sheet

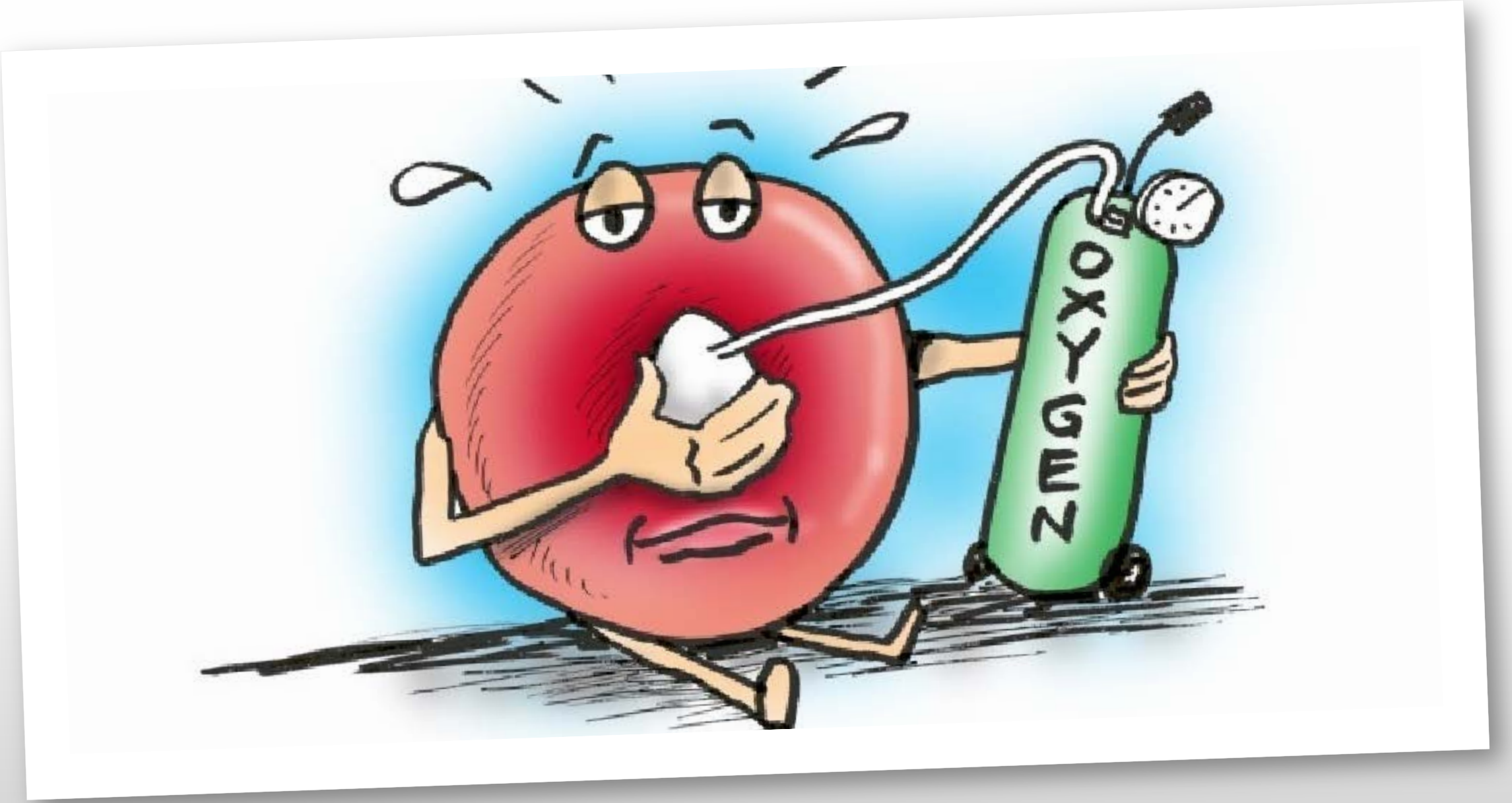



Trauma **Overflow** WR
(8 patients)
"Clean" Main WR
(11 patients)
"Viral" Main WR
(8 patients)
Green "Viral" WR
(5 patients)
"Clean" waiting room
(5 patients)

Diagnosis

- History – KNOWN exposure, symptoms – Cough/Chest pain/Shortness of breath
- CXR
- Oxygenation
- Swab (No rapid testing)





Airway Algorithm

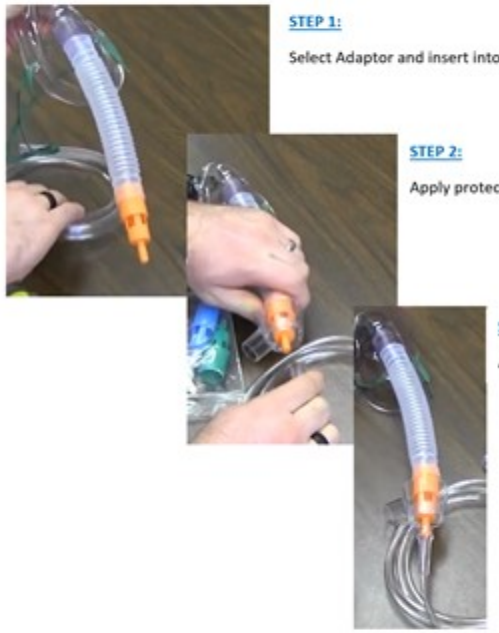
We suggest using **surgical mask to cover all oxygen therapy modalities** whenever feasible, especially when patient care work or exam is being performed.

The goals of oxygen therapy is to achieve oxygen saturation between 90-92%.

Start with **nasal cannula** and titrate up to **3 liters** ONLY. This will provide FiO2 around 32%.

If oxygen saturation is still below 90-92%, change to **Venturi Mask** (FiO2 can be titrated between 35 and 50%).

Venturi Mask



STEP 1:

Select Adaptor and insert into large bore tubing

STEP 2:

Apply protective cap

STEP 3:

Attach tubing to adaptor

Device		Flow Rate	FiO_2
Nasal Cannula		1 L/min	~24%
		2 L/min	~28%
		3 L/min	~32%
Venturi Mask	Blue	3 L/min	24%
	Yellow	6 L/min	28%
	White	8 L/min	31%
	Green	12 L/min	35%
	Pink	15 L/min	40%
	Orange	15 L/min	50%
Non-Rebreather Mask		15 L/min	~85%

Ventui Mask Set Up

Step 1: Select White Adaptor.

FiO2	LPM
35%	9
40%	12
50%	15

Step 2: Firmly slide into place. Line up tab to indicate FiO_2.

Step 3: Slide safety guard over adaptor.

Step 4: Connect Star Lumen Tubing to distal end.

*Do NOT connect to a bubbler humidification system.

Airway Algorithm

Next step is to use NRB Mask (8-10 liters). This provides approximate FiO2 of 70%.

If more respiratory support still needed, may carefully consider **CPAP in a negative pressure room**.

- Use non-vented face mask only
- Use only dual limb circuit
- Limit pressure to 10-12 cm H2O
- FiO2 maximum of 60%
- Minimize leak from around the mask during use
- Switch device to stand-by when removing mask
- Assess tolerance and response frequently. In the case of no response of intolerance discuss goals of care and either revert to NRM or intubate

Intubation

- Negative Pressure Room
- Full PPE
- Video assisted if possible
- RSI (Rapid Sequence Intubation)
- No bagging
- Ventilator- closed circuit with viral filters
- Intubating Teams*

Limitations

- No High-Flow oxygen
- No nebulized treatments
- CPAP- in negative pressure rooms only

Disposition

- Home – stable vitals, O2>94%*
- General Medical Admission (NC, VM)
- ICU Admission (CPAP, NRB, Intubated)