CO-EVALUATION OF CHILDREN AND PARENTS FOR COVID

All fever/respiratory patients brought into ED through team D

Pediatric patient presents to ED for evaluation of any complaint
AND
Does not meet criteria for triage away from ED
Mask both patient and parent immediately

START

KEY CONTACTS
Charge RN: 12812
Peds ED: 4-1405
Peds ED attending hip phone: 5-5405
Team D attending: 4-1441
Adult COVID ID pager: 1232685
Peds COVID ID pager: 1232689
Peds admin on call: 123-3975
House supervisor: 4-5402

Does the **CHILD** have fever or respiratory sx?

NO → Does the **PARENT** have fever or respiratory sx?

NO → Place child in PED bed 3,4,5, or 7

YES → Does the **PARENT** have fever or respiratory sx?

YES → Does the **PARENT** require ED eval?

NO → Place child in PED respiratory bed. If parent meets RDC testing criteria then register & test parent. PED Attending to perform medical screening exam of parent. Document MSE with smartphrase: **.PEMCOVIDCOEVALPARENTCHILD**

YES → **Triage/Charge RN + Team D Attending + PED Attending huddle** to determine appropriate location (Team D vs. PED respiratory bed) and evaluation plan for both child and parent. **Refer to next page and appendices for a guide to adult eval**

NO → Place child in PED respiratory bed. Evaluate and treat as indicated. If child is admitted to the hospital and parent has developed active symptoms then family must arrange for an asymptomatic guardian to accompany child into the Children's Hospital.

COVID EVALUATION OF ADULT PARENT IN PED

This is intended as a suggested course of action. Each scenario may require an individualized approach.

During COVID pandemic UNCH is operating under its Emergency Management Plan. Under this plan any UNCH privileged provider may practice outside their general scope of practice in an emergency situation to provide the most appropriate and timely care for our patients. Care for parents of children seen in the pediatric ED would fall under the "Emergency Privileges" category of UNCH bylaws.

RDC COVID TESTING CRITERIA

1. Developed non-allergy respiratory sx of cough or SOB in past 7 days AND
2. Meet ONE OR MORE of these criteria:
   - a. Close contact with person dx with COVID-19
   - b. Works in healthcare setting
   - c. ≥65 yo or ≤2 yo
   - d. Pregnant or 2 weeks postpartum
   - e. Morbidly obese: BMI≥40
   - f. Chronic condition: DM, immunosuppressed

Adult parent/caregiver with COVID-related complaints requiring ED evaluation and currently in PED with child

PED Nurse performs vitals
PED Attending performs H&P
Register Parent/Caregiver

Does the PED attending assess the parent to be significantly ill?*

YES → **Transfer to Team D Attending**

* unstable vitals or PED attending discretion

NO

KEY CONTACTS

Team D attending: 4-1441
Eric Golike cell: 252-259-9036

Chest pain + cough

Consider these orders - COVID-19 PCR (if testing criteria met), ECG, CXR, CMP, CBC, Pro-BNP. Trop, Repeat Trop @ 3HR. ASA 324 mg. Cardiac monitor. Consider PE (see **appendix A**)

Therapeutics - Tylenol, Lidocaine patch

Dispo- Type "COVID" into SmartSets area of Dispo tab

Consult Team D attending or Eric Golike for any questions

Refer to Appendix A for further details of work up

Cough/SOB

Consider these orders - COVID-19 PCR (if testing criteria met), ECG, CXR, CMP, CBC, Troponin, pro-BNP. Consider PE (see **appendix A**)

Therapeutics - Albuterol 6 puffs, Asthma/COPD -> Umeclidinium MDI 62.5mcg once, Prednisone/Solumedrol 60 mg

Dispo- Type "COVID" into SmartSets area of Dispo tab

Consult Team D attending or Eric Golike for any questions

Refer to Appendices A and B for further details of work up and symptom management

GI sx

Consider these orders -
COVID-19 PCR (if testing criteria met), ECG, CBC, CMP, Lipase, UA w/ UCx

Therapeutics - Zofran 4 mg PO/IV, Metoclopramide 10 mg PO/IV, Promethazine 12.5 mg PO/IV, Pepcid 20 mg IV, Bentyl 20 mg PO, Loperamide 4 mg PO once

Dispo- Type "COVID" into SmartSets area of Dispo tab

Consult Team D attending or Eric Golike for any questions

Refer to Appendices A and B for further details of work up and symptom management

Fever

Consider these orders -
COVID-19 PCR (if testing criteria met), CXR, CMP, CBC, UA w/ UCx, Consider CT Abd/Pelvis w/ GU/GI concern
Therapeutics - Abx source directed
Dispo- Type "COVID" into SmartSets area of Dispo tab

If patient develops unstable vitals consider adding the following orders and preparing transfer to Team D attending:

ECG, VBG crit w/ lactic acid, Troponin, Blood Cx x2, 30 cc/kg LR bolus, Abx using Sepsis order set

Consult Team D attending or Eric Golike for any questions. **Refer to Appendix A for further details of work up**

Appendix A. Adult Evaluation of Low-Moderate Risk COVID-associated Complaints in the PED

Primary chest pain complaint

- **Considerations** - Primary concern is MI/ACS acute rule out and appropriate documentation. Myocarditis possible with associated viral infection.
- **Orders** - ECG, CXR, CMP, CBC, Pro-BNP. Troponin. ASA 324 mg. Cardiac monitor. Consider repeat ECG if any concerns for abnormal first ECG or uncomfort with presentation
    - HEART <= 4 -> Troponin x 2 Q3HR
    - HEART >4 -> Troponin x 1. Call for admission post normal labs
- **Risk Scores**
        - HEART score ALL patients with primary chest pain
        - Wells Modified PE
        - PERC only low risk pretest group not on slowing antiarrhythmic (BB/CCB/etc)
- **Documentation**
        - Skin exam -> Shingles common
        - MDM - Document HEART score all primary chest pain presentation
        - Document Risk discharge discussion ->.HEARTLOWRISK or .HEARTMODRISK
        - Physical exam & MDM document focal tenderness when present (justifies lower risk concerns)
        - Cautious for history using "**pleuritic pain"** w/o PE consideration or well documented MSK or PNA source.
    - High Risk considerations
        - Aortic Dissection - Increased suspicion
            - History of aortic aneurysm, connective tissue/vascular disorder
            - 'Sudden onset'
            - 'Tearing' and referred to back
            - Chest Pain + 1 symptoms
                - +Abd pain or + Back pain
                - +Ext weakness/Numbness
                - + stroke symptoms
                - +Ext pulse deficit
        - Angina/Unstable - characteristic cardiac chest pain. Worse with exertion.
            - Repeat ECG for dynamic changes.
            - Please admit HEART < 4 if classic anginal chest pain w/o other cause
- **FYI**
        - Adult Cardiology does NOT perform ED consults at UNC, however you can call a cardiology fellow for specific ECG concerns that do not meet STEMI criteria
        - Need to be on cardiac monitor

Management of COPD/Chronic Bronchitis/Chronic Asthma/Emphysema

- Considerations -> High prevalence bacterial PNA in older age groups and more comorbidities. COPD/Bronchitis low threshold for antibiotics w/o CXR PNA.
- Orders - Orders - ECG, CXR, CMP, CBC, Troponin. +/- Cardiac monitor
  - COPD/Bronchitis -> Albuterol Inhaler 6 puffs = 5 mg, Prednisone 60 mg PO or Solumedrol 60-120 mg IV, Magnesium 2g IV over 30 min,
    - Discharge meds
      - Doxycycline or levofloxacin or azithromycin only for moderate-severe bronchitis history (GOLD criteria)
      - Prednisone 5 days 40-60 mg daily
- Risk Score -> Proven Bacterial PNA
  - Confirmed bacterial PNA -> PORT OR CURB65

Pulmonary Embolism Considerations

- Evaluate for PE ONLY if suspicion (for example unexplained Chest pain + SOB, CP + PE risk factors + tachycardia, Unexplained pleuritic pain + PE risk factors)
- Diagnostic Pathway
  - STEP 1: Pre-test probability
    - Use Wells' Score to assess PE risk https://www.mdcalc.com/wells-criteria-pulmonary-embolism
  - STEP 2 1st Diagnostic Test
    - Low Risk < 50 yo -> PERC score -> PERC negative DONE
    - Low Risk >= 50 OR failed PERC -> Order D-Dimer -> D-dimer negative DONE
  - STEP 3 Definitive Diagnostic Test
    - Moderate/High risk Wells' Score OR +D-Dimer -> CTA Chest r/o PE
- Complications -> Discuss with adult ED attending for: PE suspicion in pregnancy, GFR < 30, or unclear suspicion.

APPENDIX B
Symptom Management for Adult Patients with COVID-19
receiving supportive care

- Dyspnea
- Anxiety
- Secretions
- Pain

*Adapted from BC Centre for Palliative Care Guidelines**

Version 2 – 3/30/2020

Opioid Naïve Patient NOT Already Taking Opioids

OPIOIDS
(ALL opioids relieve dyspnea & can be helpful for cough – codeine is not recommended)

- Opioids help relieve acute respiratory distress & agitation, contribute to energy conservation
- Begin at low end of range for frail elderly
- Start with PRN **BUT** low threshold to advance to q4h / q6h scheduled dosing: Avoid PRN = "Patient Receives Nothing"

MORPHINE
2.5 - 5 mg PO **OR** 1 - 2 mg SQ / IV q1h PRN
(SQ / IV can be q30min PRN), if >6 PRN in 24h.

HYDROMORPHONE
0.5 - 1 mg PO **OR** 0.25 - 0.5 mg SQ / IV q1h PRN
(SQ / IV can be q30min PRN), if >6 PRN in 24h.

TITRATE UP AS NEEDED
for relief of dyspnea and/or pain
If using >6 PRNs in 24h, consider dosing at q4h REGULARLY (q6h for frail elderly) **AND** continue a PRN dose.

Also consider bowel regimen for use with opioids: PEG/sennosides.

Patient ALREADY Taking Opioids

- Continue previous opioid, consider increasing by 25%.
- To manage breakthrough symptoms: Start opioid PRN at 10% of total daily (24h) opioid dose.
- Give PRN: q1h PRN if PO, q30min if SQ.

Respiratory secretions/ congestion near end-of-life

- Advise family & bedside staff: not usually uncomfortable, just noisy, due to patient weakness / not able to clear secretions.
- Consider glycopyrrolate 0.4mg SQ q4h PRN **OR** atropine 1% (ophthalmic drops) 1 - 2 drops SL q4h PRN.
- If severe consider furosemide 20mg SQ q2h PRN & monitor response.

For all patients: Other medications

- Opioids are the mainstay of dyspnea management, these can be helpful adjuvants.
- Do not use steroids or NSAIDs in COVID-19 positive.
- Ok to try MDI albuterol. Do NOT use nebulized medications.

For associated anxiety:
LORAZEPAM
0.5 - 1 mg SL q2h PRN, max 3 PRN / 24h, MD to review if max reached.

For severe SOB / anxiety:
MIDAZOLAM
1 - 4 mg SQ q30min PRN, max 3 PRN / 24h, MD to review if max reached.

These recommendations are for reference and do not supercede clinical judgement. We have attempted to decrease complexity to allow barrier-free use in multiple settings.

Evidence supports that appropriate opioid doses do not hasten death in other conditions like advanced cancer or COPD; dosing should be reassessed as patient's condition or goals of care change.

***BC Centre for Palliative Care Guidelines**
http://bit.ly/BCCentreSymptomManagementGuidelines

APPENDIX B **Symptom Management for Adult Patients with COVID-19** receiving supportive care

- Nausea, Vomiting
- Constipation
- Diarrhea

For further assistance including telephone support please contact your Palliative Care team.

Consult pager: 123-9577

Nausea, vomiting

PO or SL

Metoclopramide (Reglan): 10 mg every 6 hours around the clock.

OR

Ondansetron (Zofran): 4 mg every 8 hours PRN, increase to 8mg if no relief from starting dosage.

OR

Prochlorperazine (Compazine) 5-10 mg every 6 to 8 hours PRN. Max dose 40 mg/day.

OR

Promethazine (Phenergan) 12.5-25 mg every 4 to 6 hours PRN. Max dose 100 mg/day.

OR

Haloperidol (Haldol) liquid 2 mg per ml: Give 1⁄4 ml (0.5 mg) to 1⁄2 ml (1 mg) by mouth or under tongue every 2 hours PRN.

Haloperidol tablets: Give 0.5 mg every 1 hour until relief. Increase to 1 mg if no relief from starting dosage. Max dose 10 mg/day.

IV or SQ

Metoclopramide (Reglan) 5 mg/ml: give 1 ml (5 mg) every 6 hours around the clock.

OR

Prochlorperazine (Compazine) 2.5-10 mg every 3 to 4 hours PRN. Max dose 40 mg/day.

OR

Promethazine (Phenergan) 12.5-25 mg every 4 to 6 hours PRN. Max dose 100 mg/day.

OR

Ondansetron (Zofran): 0.15 mg/kg every 8 hours PRN.

OR

Haloperidol (Haldol) 1 mg every 2 hours PRN. Max dose 10 mg/day.

** ***Use anti-emetics PRN if nausea/vomiting is infrequent or mild; may need scheduled dosing if more frequent or severe.***

Preventing Constipation

PEG powder (Miralax): 1-2 packet(s) PO in water or juice daily. If no daily bowel movement increase to 3 packet(s) daily.

AND

Senna: Start 2 tabs PO at bedtime. 2-4 tabs PO daily to BID. Max dose: 8 tabs/day.

AND

Bisacodyl suppository: 1 suppository PR every morning after breakfast.

Diarrhea (likely viral, non-bloody, watery stool):

Supportive care.

Stool testing if needed to rule out bacterial cause.

Loperamide reduces peristalsis in the gut, increases water reabsorption, and promotes fecal continence, making it a potent anti-diarrheal agent. Because it only weakly crosses the blood-brain barrier, loperamide's side effect profile is more favorable than other opioids (e.g. codeine or diphenoxylate). The initial dose of loperamide is 4 mg PO, with titration to 2 mg after each loose stool, with the typical dose being 4-8 mg per day.

Loperamide and simethicone have been used in palliative care settings with few adverse effects and with potential to decrease length of symptoms. Note: Loperamide should be used with caution if an infectious diarrhea (stool with blood or visible mucus) is suspected.

CAPC COVID-19 Response Resources:
www.capc.org/toolkits/covid-19-response-resources/