COVID-19 in the Ambulatory Care Setting
A Practical Guide for the Multidisciplinary Team

A CME/CE-certified Activity

Friday, March 20, 2020

Jointly provided by

pcme®

Rockpointe

CME = QUALITY

Approved by Maryland Nurses Association

In Collaboration with

MedChi

The Maryland State Medical Society

In Partnership with

CME Coalition

Policy & Medicine
Program Faculty

Anthony D. Harris, MD, MPH
Professor
Epidemiology & Public Health
Division Head, Health Care Outcomes Research
University of Maryland
Baltimore, MD

Karen Hoffmann, RN, MS, CIC, FSHEA, FAPIC
Clinical Instructor
Division of Infectious Diseases
University of North Carolina School of Medicine – Chapel Hill
Chapel Hill, NC
Disclosures

Program Faculty
The program faculty reported the following relevant financial relationships that they or their spouse/partner have with commercial interests:

Anthony D. Harris, MD, MPH: Nothing to disclose

Karen Hoffmann, RN, MS, CIC, FSHEA, FAPIC: Nothing to disclose

Non-faculty Content Contributors
Non-faculty content contributors and/or reviewers reported the following relevant financial relationships that they or their spouse/partner have with commercial interests:

Terry Ann Glauser, MD, MPH; Blair St. Amand; Katie Propst, PhD; Janice Agazio, PhD, CRNP, RN, FAANP, FAAN: Nothing to disclose
Educational Objectives

At the conclusion of an activity, participants should be able to:

- Develop protocols that address the situation of a patient with suspected COVID-19 in the ambulatory care setting, including private office, clinic, or urgent-care facility
- Indicate which specimens to obtain from a patient with suspected COVID-19 and send those samples to a laboratory capable of testing them
- Determine an appropriate disposition for a patient suspected of having COVID-19
- Describe measures needed to clean and disinfect the office after a patient suspected of having COVID-19 departs
187,689 worldwide cases as of March 17, 2020

- 81,058 China
- 27,980 Italy
- 16,169 Iran
- 11,309 Spain
- 8,320 South Korea
- 8,084 Germany
- 4,661 USA
- 439 Canada

https://experience.arcgis.com/experience/565c0ac5216488a5beeece1b9125cd
World Heatmap – Data Is Rapidly Changing

https://coronavirus.jhu.edu/map.html
CDC Has Useful Information

[Image of CDC COVID-19 symptoms poster]

COVID-19: What Should I Look For?

Those infected experience mild to severe respiratory illness

Common symptoms
- Fever
- Cough
- Shortness of breath

Severe complications
- Pneumonia in both lungs
- Multi-organ failure
- Death

COVID-19: How Does It Spread?

- Being in close contact (within about 6 feet) with one another
- Coming in contact with respiratory droplets produced when an infected person coughs or sneezes
- Touching a surface or object that has the virus on it and then touching your own mouth, nose, or eyes
- Risk of infection is higher for those who are in close contact with someone known to have COVID-19 – for example family members or healthcare workers without personal protective equipment – or those who live in or have recently been in an area with ongoing spread

Telephone Triage

- Modify your existing triage algorithms
- Severity of symptoms: tachypnea, tachycardia should affect triage
- Comorbid conditions should affect triage
- Age should affect triage
- Key coronavirus questions
  - Fever
  - Cough
  - Myalgia
  - Exposure history

https://emergency.cdc.gov/han/2020/HAN00429.asp
https://covid-19.uwmedicine.org/Pages/default.aspx
Telephone Triage Pathway Options

• Option 1: Send to emergency room
  – Only choose this option if you think the patient needs to be admitted

• Option 2: Come to ambulatory clinic
  – Choose this option if you think the patient is not sick enough to go to emergency room, but not well enough to stay home

• Option 3: Stay home
  – Reassure the patient
  – Make sure to tell patient to practice social distancing
Plan for COVID-19 assessment in the Office

- Ask the key questions quickly upon entry to clinic
  - Do you have a fever, or cough, or have exposure to someone known positive for COVID-19?
- If answer to questions is yes, give patient a regular surgical mask
- Send positive screening-question patient ideally to a person under investigation (PUI) side of the room
- Have healthcare workers, when seeing a PUI patient, wear gloves, gowns, face shield, and mask (if available, an N95, if not use a surgical mask)

Ask screening questions

+ COVID PUI waiting room
- COVID negative waiting room

https://www.cdc.gov/ncov/infection-control/control-recommendations.html
Clinic Should Educate Healthcare Workers About COVID-19

- Make sure to teach healthcare workers how to be safe
- Explain major mechanism of transmission, i.e. droplet
- Stress importance of gloves, gowns, mask, and eye shield
- Explain that it is the same mechanism of spread as influenza
- Reassure healthcare workers that you are protecting them

Donning and Doffing Personal Protective Equipment (PPE)

- Teach proper donning and doffing techniques
- Key aspect is washing hands before putting on mask
- Key aspect is washing hands after taking off mask

Donning PPE

- Perform hand hygiene
- Don isolation gown
- Don mask and eye protection
- Don gloves

https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf
Doffing PPE

- Healthcare worker removes gowns and gloves
- Healthcare worker leaves mask and eye protection on
- Healthcare worker performs hand hygiene
- Healthcare worker removes mask and eye protection
- Healthcare worker performs hand hygiene

https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf
COVID-19 and PPE

- Major mechanism of transmission is droplet and not airborne
- Droplet precautions consist of
  - Mask (does not need to be N95)
  - Gloves and gown
  - Eye shield
- Controversy exists relative to what is an airborne-generating procedure

What is an Airborne-Generating Procedure?

- Intubation
- Bronchoscopy
- Nebulizer treatment

In these situations, if supplies were plentiful, N95 and/or PAPR would be ideal

- However, most ambulatory care clinics do not have this
- And testing is important when testing is readily available
Why is Testing Important?

- Patients who are mildly symptomatic and COVID positive are more likely to comply with self-quarantine if they know they are positive
- Negative test result is reassuring
- Consider testing for other respiratory viruses as part of COVID testing
- Understanding the epidemiology of COVID helps us assess surge planning
Is Nasopharyngeal Swab an Airborne-Generating Procedure?

- WHO and most states are not characterizing this as an airborne-generating procedure
- CDC is classifying this as an airborne-generating procedure
How Do I Test My Patient for COVID-19?

• Find out where to send your test
  - This is a moving target in many parts of Canada and the United States
  - Find out the turn-around time of your test and use this information to help guide your decision of whom to test and whether to test

• Nasopharyngeal swab
  - Only need nasopharyngeal and not nasopharyngeal + oropharyngeal

How to Maintain PPE Equipment?

- Depends upon your supply issues
- Most of you not likely to be N95 fit tested or have PAPRS
  - If you do, there are mechanisms to clean these

Know Your Local Health Authorities

- Get to know your local health authorities
- When there is testing shortage, you may need authorization from them relative to obtaining testing
- You may need to inform them of patients who you are performing COVID-19 testing on
Deciding on Patient Disposition

- I would use similar rules to how you assess COPD or pneumonia patients
- Severity of illness is a key deciding factor
- Oxygen saturation is an important criteria
- Consider using the Pneumonia Severity Index
- Another validated prediction score is CURB
- Heart disease or pulmonary disease (comorbidities) affect decision

CURB Score
Could Be Modified to Help with Patient Disposition

The CURB-65 and CRB-65 scores — the CURB-65 score is based upon five easily measurable factors. Each item is scored 1 point:

- **Confusion** (based upon a specific mental test or new disorientation to person, place, or time)  
  0-1 = outpatient care
  2 = inpatient or observation
  ≥3 = inpatient

- **Urea** (blood urea nitrogen in the United States) >7 mmol/L (20 mg/dL)

- **Respiratory rate** ≥30 breaths/minute

- **Blood pressure** (BP; systolic <90 mmHg or diastolic ≤60 mmHg)

- **Age** ≥65 years
Some Key Questions to Help Decide on Disposition

- Ability to eat and drink
- Pulse less than 100 beats/minute
- Respiratory rate less than 30 breaths/minute
- Systolic blood pressure greater than 90 mm Hg
- Oxygen saturation greater than 92%

Resources

• CDC

• University of Washington website: Great resource

• Nebraska
  - https://www.nebraskamed.com/for-providers/covid19

• Johns Hopkins worldwide coronavirus cases
  - https://coronavirus.jhu.edu/map.html
Welcome to the UW Medicine COVID-19 Public Site. The clinical and administrative teams throughout our system (Harborview Medical Center, UW Medical Center-Montlake, UW Medical Center-Northwest, Valley Medical Center, UW Neighborhood Clinics and Airlift Northwest) and partners Seattle Cancer Care Alliance have developed policies and protocols in response to the outbreak in Western Washington. Most of these documents have been written since Monday, February 24th 2020 and are undergoing frequent revisions as the COVID-19 situation evolves. When using the documents, we caution you to be mindful of the date the document was produced and to check that against current knowledge and evolving clinical standards.

Since the outbreak began, our colleagues, locally and nationally, have been reaching out to us for assistance as they start to see cases. We hope that by sharing our work, we can assist your teams and facilities to move more quickly and to spend more time responding and less time typing.

This is a “rough” draft of what we hope will be much more to come. Our vision is to continue to add the many more protocols and flow diagrams we have ranging from the Airlift Northwest team to our exposure protocol. We hope to add a discussion board and maybe even the ability for others to upload their documents (ex. from the LTCF community).

Please feel free to contact us with questions and recommendations at covid19@uw.edu.

C OVID-1 9 RESOURCES FOR PROVIDERS

Nebraska Medicine and the University of Nebraska Medical Center have led the world in treatment, training and quarantine methods for highly infectious diseases since caring for patients during the 2014 Ebola outbreak.

Personal protective equipment (PPE):

- PPE for the care of patients infected or suspected with COVID-19 [VIDEO] (updated 03/12/2020)
- PPE for COVID-19 infographic (updated 03/06/2020)
- Donning: Step-by-step process (updated 03/06/2020)
- Doffing: Step-by-step process (updated 03/12/2020)

Protocols and checklists:

- ED novel coronavirus (COVID-19) screening protocol (updated 03/06/2020)
- Clinic novel coronavirus (COVID-19) screening protocol (updated 03/06/2020)
- COVID door-to-door user guide

https://www.nebraskamed.com/for-providers/covid19

Purpose of this document: This interim guidance outlines goals and strategies for all U.S. healthcare facilities to prepare for and respond to community spread of coronavirus disease-2019 (COVID-19). Although it is not possible to predict the future course of the outbreak, planning for a scenario in which many persons become ill and seek care at the same time is an important part of preparedness and can improve outcomes if an outbreak occurs. Therefore, preserving healthcare system functioning is paramount. It is critical for healthcare facilities to continue to provide care for all patients, irrespective of COVID-19 infection status, at the appropriate level (e.g., home-based care, outpatient, urgent care, emergency room, or hospitalization). Facilities may need to respond to a surge in patients requiring care. Concentrated efforts will be required to mobilize all aspects of healthcare to reduce transmission of disease, direct people to the right level of care, and decrease the burden on the healthcare system.

Key Considerations for Healthcare Facilities:

Currently there are no medications to treat or vaccines to prevent COVID-19. Therefore, community approaches to slowing transmission including appropriate hand hygiene, cough etiquette, social distancing, and reducing face-to-face contact with potential COVID-19 cases are needed to slow disease transmission and reduce the number of people

References for Pneumonia Severity Index (PSI) Score


Outpatient COVID-19 Response

- Post visual alerts pdf icon (e.g. signs, posters) at the entrance and in strategic places (e.g. waiting areas, elevators, cafeterias) to provide patients and HCPs with instructions (in appropriate languages) about hand hygiene, respiratory hygiene, and cough etiquette.

- Provide supplies for respiratory hygiene and cough etiquette, including alcohol-based hand rub (ABHR) with 60%-95% alcohol, tissues, and no-touch receptacles for disposal, at healthcare facility entrances, waiting rooms, and patient check-ins.

Outpatient COVID-19 Response

- Post visual alerts PDF icon (e.g., signs, posters) at the entrance and in strategic places (e.g., waiting areas, elevators, cafeterias) to provide patients and HCP with instructions (in appropriate languages).

- Install physical barriers (e.g., glass or plastic windows) at reception areas to limit close contact between triage personnel and potentially infectious patients.

Patients Screening Onsite in Office

• If an individual has:
  – (1) traveled outside the US in the past 14 days OR has been in contact with anyone who has
  – (2) experienced a fever, a persistent cough, or shortness of breath OR has signs and symptoms themselves (cough, sore throat, fever)

• kindly ask to return home!

Initial Patient Management

- Patient immediately offered facemask
- Move patient away from other patients and staff
- Place patient in separate rooms with the door closed
- In event room not available, seat patient 6 feet from staff and other patients
- Use Standard, Droplet, and Contact Precautions - Don PPE equipment (gloves, gown, facemask, and eye protection)

COVID-19 Testing Criteria

Testing criteria – criteria may change as more information becomes available regarding COVID-19

Currently, NO testing is allowed on asymptomatic persons (CDC)

If symptomatic and high risk-Respiratory Pathogen Panel or equivalent (per your facility guidelines) should be performed prior to ordering COVID-19

CDC COVID-19 Test Criteria

**Test Criteria 1:** Fever or signs/symptoms of lower respiratory illness (e.g. cough or shortness of breath)

- **AND**
- Any person, including healthcare personnel, who has had close contact with a laboratory-confirmed COVID-19 patient within 14 days of symptom onset

**Test Criteria 2:** Fever and signs/symptoms of lower respiratory illness (e.g. cough or shortness of breath)

- **AND**
- Negative influenza test (rapid or PCR)
- **AND**
- No other more likely diagnosis

COVID-19 Specimen Collection

- Obtain one Nasopharyngeal (NP) swab

  *Note: NP swab is the preferred specimen*

- For a demonstration of proper collection technique, review the NEJMVideo YouTube video. https://www.youtube.com/watch?v=DVJNWefmHjE

- A throat swab can be obtained if nasopharyngeal swab is contraindicated

- Lower respiratory-tract specimens should not be sent for COVID-19 PCR

Specimen Transport

Transport Conditions: Deliver immediately or courier on cold packs

If transport is delayed, refrigerate specimen.

Ensure specimen is sealed and properly transported in a biohazard bag
Patients Under Investigation

All patients being tested for COVID are considered Patients Under Investigation (PUI) by Departments of Public Health and must be isolated either at home or in a hospital based on their need for care.

Survivability of COVID-19 in the Environment

- Van Doremalen et al.
  - Suspended in air for 3 hours
  - Cardboard for 24 hours
  - Copper for 4 hours
- Kamfp et al.
  - Plastic and stainless steel for 2-3 days
  - Surfaces for 9 days

Environmental Cleaning and Disinfection

- COVID-19 is an enveloped virus...very sensitive to cleaning and disinfection products
- Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly
- Routine cleaning and disinfection procedures
  - e.g. using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product's label
- Refer to List N external icon on the EPA website for EPA-registered disinfectants that have qualified under EPA’s emerging viral pathogens program for use against SARS-CoV-2
  - URL: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2
EPA N List: Products with COVID-19 Claims

- Quaternary ammonium compounds
- Hydrogen peroxide household 3%
- Sodium hypochlorite
- Alcohol
- Phenolic
- Contact times vary from 1 to 10 minutes...follow manufacturer’s instructions for use

https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2
Household Products Effective Against COVID-19

- 3% hydrogen peroxide
- Bleach – dilute 4 tsp per quart or 1/3 cup per gallon
- 70% rubbing alcohol isopropyl
- Benzalkonium chloride spray

Effective with a one-minute contact time. Wet surface and allow to air dry.

https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2
Healthcare Personnel (HCP) Risks

HCP testing: Consider for exposure to a person with suspected COVID-19 without laboratory confirmation.


URL:
HCP Exposure Risk Assessment

- Data to inform the definition of close contact are limited.
- Considerations when assessing close contact include the duration of exposure (e.g. longer exposure time likely increases exposure risk) and the clinical symptoms of the person with COVID-19 (e.g. coughing likely increases exposure risk as does exposure to a severely ill patient).
- Special consideration should be given to healthcare personnel exposed in healthcare settings as described in CDC’s Interim US Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with COVID-19.
Definition of Close Contact

1) Being within approximately 6 feet of a COVID-19 case for a prolonged period of time; close contact can occur while caring for, living with, visiting, or sharing a healthcare waiting area or room with a COVID-19 case
   – or –

2) having direct contact with infectious secretions of a COVID-19 case (e.g. being coughed on)
   • If such contact occurs while not wearing recommended personal protective equipment or PPE (e.g. gowns, gloves, facemask, eye protection), criteria for PUI consideration are met

Additional information is available in CDC’s updated Interim US Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with Coronavirus Disease (COVID-19)

Modified HCP Recommendations

March 7, 2020

- Facilities should develop a plan for how they will screen for symptoms and evaluate ill HCP
  - Optional: HCP report absence of fever and symptoms prior to starting work each day
- Allowing asymptomatic HCPs who have had an exposure to a COVID-19 patient to continue to work after options to improve staffing have been exhausted
- Fever is either measured temperature ≥100.0°F or subjective fever

Summary: Preparing for COVID-19 in the Ambulatory Settings

- Hand hygiene
- Social distancing
- PPE
- Environmental cleaning and disinfection
COVID-19 in the Ambulatory Care Setting
A Practical Guide for the Multidisciplinary Team

Thank you for joining us today!

Please remember to complete the POST-TEST and EVALUATION.

Your participation will help shape future CME/CE activities.