

## NK5b – EVIDENCE-BASED PRACTICE

### IMPLEMENTING NOVEL ISOLATION PRECAUTIONS FOR COVID-19 PATIENTS IN THE ED

*Provide one example, with supporting evidence, of how a clinical nurse(s) implemented an evidence-based practice that is new or a revision to existing practice in an ambulatory care setting within the organization.*

The Centers for Disease Control and Prevention (CDC) detailed new infection prevention and control guidelines for healthcare workers when caring for patients with suspected or confirmed COVID-19 based on current evidence that was known at the time about the novel coronavirus. The New York State Department of Health (NYS DOH) issued a health advisory with interim guidance for healthcare workers and facilities in New York State (NYS), citing the infection prevention and control evidence-based practices recommended by the CDC was the standard of care for patients in NYS healthcare facilities.

In February 2020, NewYork-Presbyterian (NYP) Hospital infection prevention and control practitioners, including hospital epidemiologists (physicians) and infection preventionists (nurses), reviewed the known evidence related to COVID-19, including evidence provided by the NYS DOH, which was based on the CDC evidence-based practice guidelines, and determined the appropriate levels of isolation required for care. [NK5b.1—NYPH COVID-19 Clinical Bulletin February 2020](#)

In March 2020, patients with confirmed or suspected COVID-19 began to arrive at NewYork-Presbyterian/Columbia University Irving Medical Center (NYP/Columbia). Ashley Caceres, BSN, RN, Clinical Nurse Manager (clinical nurse, at the time), ED (606045-46-48) [ED], quickly reviewed the minimal amount of current literature available since guidelines were new and rapidly evolving, including the NYS DOH, CDC, and NYP infection prevention and control guidelines, to determine the latest evidence-based practices for infection prevention and control while caring for COVID-19 positive or suspected positive patients in the ED. Based on this review of the evidence, Ms.

Caceres ensured the ED clinical nurses implemented a new evidence-based practice specifically related to the type of isolation precautions and appropriate personal protective equipment (PPE) for the required types of isolation. These evidence-based practices for infection control and prevention new to the NYP/Columbia ED were based on evidence from the CDC that was known at the time and included the following:

- Immediately provide patient and any accompanying visitors with a surgical mask and have the patient perform hand hygiene.
- Move the patient and accompanying visitors to an airborne isolation room (i.e., negative pressure room) and keep the door closed.
- Implement airborne, contact, and droplet (eye protection) precautions simultaneously.
- Patient should remain in the airborne isolation room except for medically necessary tests and procedures that cannot be performed inside the airborne isolation room.

Ms. Caceres reviewed the new evidence-based practices with the ED teams on March 2, 2020, during a huddle on both shifts to ensure the clinical nurses would have the information to implement these new evidence-based practices for any patients with suspected or confirmed COVID-19 infection. [NK5b.2—ED Huddle Notes March 2020](#)

Clinical nurses in the ED at NYP/Columbia implemented these new evidence-based practices while caring for patients with a suspected or confirmed COVID-19 diagnosis. For example, Mr. X was placed on airborne, contact, and droplet precautions upon admission to the ED for suspected COVID-19 on March 3, 2020. [NK5b.3—Patient Isolation Orders March 2020](#)

All healthcare workers, inclusive of clinical nurses in the ED, assured compliance with appropriate PPE while providing care to COVID-19 positive patients with the three levels of isolation ordered. The appropriate PPE required when caring for COVID-19 positive patients, based on new evidence from the CDC to place them on airborne, contact, and droplet isolation precautions, included:

- Gown
- N95 mask
- Surgical mask (to conserve N95 mask)
- Protective eye shield or goggles
- Gloves

On March 11, 2020, during leadership rounds in the ED, Courtney Vose, DNP, MBA, RN, APRN, NEA-BC, FAAN, Vice President and Chief Nursing Officer (at the time); Jenna Meyer, BSN, MBA, RN, CEN, Patient Care Director (nurse manager, at the time), ED; Robin Ferrer, MSN, MBA, RN, NE-BC, Director of Nursing (at the time), ED; and Ms. Caceras; noted that Marisol Galvez, MSN, RN, CEN, and Sherwyn Lumaque BSN, RN, clinical nurses, ED, were appropriately donning and doffing the PPE required for airborne, contact, and droplet isolation precautions for patients with or suspected of COVID-19, implementing an evidence-based practice new to NYP/Columbia. [NK5b.4—ED Leadership Rounds Minutes March 2020](#)

## 2019 Novel Coronavirus (2019-nCoV) Outbreak: Clinical Bulletin #3

**February 4, 2020**

### KEY POINTS

- 1) Spread of a novel coronavirus (2019-nCoV) continues to occur in China.
- 2) As of February 4, 2020, 159 cases had been identified in 23 other countries, including 11 cases in the U.S. Most of these cases have occurred in persons with recent travel to/from an affected region of China, most commonly Hubei Province.
- 3) On January 31, 2020, the CDC revised their definitions of a person under investigation (PUI) for 2019-nCoV infection to reflect the current epidemiology of 2019-nCoV transmission.
  - **Clinical features:** fever or signs of lower respiratory illness (e.g., cough or shortness of breath) AND
  - **Epidemiologic risk:** travel from mainland China or close contact with a person with 2019-nCoV infection within 14 days of symptom onset
- 4) **Recommended infection prevention and control strategies remain the same:**
  - **Persons presenting with appropriate clinical features AND epidemiologic risk of 2019-nCoV infection as outlined above should immediately be given a surgical mask and moved to a negative pressure room with AIRBORNE, CONTACT, and DROPLET (eye protection) PRECAUTIONS.**
- 5) Notify Infection Prevention and Control and the local Department of Health of all suspected cases of 2019-nCoV.
- 6) Due to this outbreak, the Centers for Disease Control and Prevention (CDC) recommends avoiding all nonessential travel to China. Additionally, on January 30, the U.S. Department of State issued a “do not travel” advisory for all travel to China.
- 7) NYP personnel who have traveled to China or who have had contact with a person with 2019-nCoV infection should contact Workforce Health & Safety (WH&S) BEFORE returning to work. Persons planning to travel to China should contact WH&S prior to their trip.
- 8) The risk of exposure to 2019-nCoV remains low in the U.S. At NYP, surgical masks and N95 respirators should be used ONLY when indicated (e.g., during invasive procedures, when entering the room of a patient on droplet or airborne precautions, or when personnel who have not received the influenza vaccine are in an area where patients may be present). Personal protective equipment should not be taken from the hospital for personal use.

**Additional information and resources are available on the NYP [Infonet](#)**

This is an emerging, rapidly evolving situation and updated information will be provided as it becomes available.

### BACKGROUND

In December 2019, an outbreak of pneumonia of unknown etiology in Wuhan City, China was reported to the World Health Organization (WHO). Since that time, the cause of the outbreak

has been determined to be a novel type of coronavirus, currently known as 2019-novel coronavirus (2019-nCoV). As of February 4, 2020, the World Health Organization (WHO) has reported a total of 20,630 confirmed cases of 2019-nCoV infection. Of these, 20,471 cases were reported from China. 159 cases have now been reported from 23 countries outside of China. Eleven cases have been confirmed in five U.S. states (Arizona, California, Illinois, Massachusetts and Washington). Seven of these cases occurred in persons with recent travel from Hubei Province, China. The remaining case, reported on January 30, 2020, was the first identified case of person-to-person transmission of 2019-nCoV in the U.S. The transmission occurred between a person who had recent travel to Wuhan, China and that person's spouse. As of February 3, 2020, three patients in New York City hospitals were undergoing testing for 2019-nCoV.

On January 30, 2020, the WHO declared a Public Health Emergency of International Concern, allowing WHO to mobilize financial and political support to contain the outbreak. On the same day, the U.S. Department of State issued a level 4 "do not travel" advisory for all travel to China. On February 2, 2020, the U.S. implemented travel restrictions for foreign nationals who have visited China and U.S. citizens who have visited Hubei Province, China within 14 days.

On January 31, 2020, CDC updated their [recommendations](#) for screening and testing to reflect the current epidemiology of 2019-nCoV transmission. These updated recommendations are outlined below.

## CASE DEFINITIONS

All persons presenting with fever<sup>1</sup> and symptoms of lower respiratory illness should be screened for **travel to mainland China or close contact<sup>2</sup> with a person with 2019-nCoV infection within 14 days of symptom onset** (see PUI Definitions below for more details). Any person meeting those criteria should be managed as outlined in the "Evaluation, reporting, and management of a 2019-nCoV Patient Under Investigation (PUI)" section below. *[Please note that while the formal PUI definition for persons with travel to parts of mainland China other than Hubei Province includes only persons who require hospitalization, ALL persons with fever and signs of lower respiratory illness with a history of travel from mainland China within 14 days of symptom onset should be managed as a PUI during the initial evaluation as it is not always possible to determine at the time of presentation if admission will be required.]*

## PUI Definitions

Clinical Features		Epidemiologic Risk
Fever <sup>1</sup> or signs/symptoms of lower respiratory illness (e.g., cough or shortness of breath)	AND	Any person, including health care workers, who has had close contact <sup>2</sup> with a laboratory-confirmed 2019-nCoV patient within 14 days of symptom onset
Fever <sup>1</sup> and signs/symptoms of lower respiratory illness (e.g., cough or shortness of breath)	AND	A history of travel from <b>Hubei Province</b> , China within 14 days of symptom onset
Fever <sup>1</sup> and signs/symptoms of lower respiratory illness (e.g., cough or shortness of breath) requiring hospitalization	AND	A history of travel from <b>mainland China</b> within 14 days of symptom onset

<sup>1</sup>Fever may not be present in some patients, such as those who are very young, elderly, immunosuppressed, or taking certain fever-lowering medications. Clinical judgment should be used to guide testing of patients in such situations.

<sup>2</sup>Close contact is defined as:

- Being within approximately 6 feet (2 meters), or within the room or care area, of a 2019-nCoV case for a prolonged period of time while not wearing recommended personal protective equipment of PPE (e.g., gowns, gloves, N95 respirator, eye protection); close contact can include caring for, living with, visiting, or sharing a healthcare waiting area or room with a 2019-nCoV case  
OR
- Having direct contact with infectious secretions of a novel coronavirus case (e.g., being coughed on) while not wearing recommended personal protective equipment

**Travel screening protocols** for NYP [Emergency Departments](#) and [outpatient locations](#), including Ambulatory Care Network sites, Medical Group practices, and the WCM and Columbia Doctors physician organizations, have been updated to reflect the new recommendations for travel screening.

## **EVALUATION, REPORTING, AND MANAGEMENT OF A 2019-nCOV PATIENT UNDER INVESTIGATION (PUI)**

### **Infection prevention measures**

- 1) Immediately provide the patient and accompanying visitors with a surgical mask and have the patient perform hand hygiene.
- 2) Move the patient and accompanying visitors to an airborne isolation room (i.e., negative pressure room) and keep the door closed.
  - a. If an airborne isolation room is not immediately available, use a non-negative pressure single-patient room and keep the door closed. Move the patient to a negative pressure room as soon as possible.
- 3) Implement AIRBORNE, CONTACT, AND DROPLET (I.E., EYE PROTECTION) PRECAUTIONS.
  - a. At all NYPH campuses, except at NYP-LH, this can be ordered using the “Emerging Infectious Diseases” precautions order in Allscripts
  - b. At all other hospitals, order airborne, droplet and contact precautions (three separate orders)
- 4) The patient should remain in the airborne isolation room EXCEPT for medically necessary tests and procedures that cannot be performed inside the airborne isolation room. *\*When such a test or procedure is necessary, consult with IP&C or the local health department prior to transporting the patient to other parts of the facility, including Radiology.\**

### **Reporting**

- 1) Immediately notify Infection Prevention & Control (IP&C) of any 2019-nCoV PUI:
  - a. NYP-AH: 212-932-5219
  - b. NYP-CU, MSCH, ACN: 212-305-7025
  - c. NYP-LH: 914-787-3045

- d. NYP-LMH: 212-312-5976
- e. NYP-WC, WBHC, ACN: 212-746-1754
- f. NYP-BMH: 718-780-3569
- g. NYP-HVH: 914-734-3927
- h. NYP-Q: 718-670-1255

- 2) After discussion with IP&C, notify the local Department of Health in order to discuss the case and arrange for possible testing for 2019-nCoV:
  - a. New York City: 866-692-3641
  - b. Westchester County: 914-813-5159

### **Medical evaluation and testing for 2019-nCoV**

Tests that are currently available for the detection of respiratory viruses, including commonly circulating human coronaviruses, do **NOT** detect 2019-nCoV. Testing for 2019-nCoV is currently available only through CDC. If, after discussing the case, the local Department of Health determines that testing for 2019-nCoV is warranted, the DOH will help to arrange testing. The following specimens will be requested: serum, nasopharyngeal swab, oropharyngeal swab, and one lower respiratory tract specimen (e.g., sputum, tracheal aspirate, bronchoalveolar lavage, pleural fluid).

Even in cases when 2019-nCoV is being considered as a potential diagnosis, there may be another, more common etiology of the patient's illness. Thus, routine evaluation should proceed, including, as appropriate based on patient's symptoms and signs:

- 1) Testing for other respiratory pathogens
- 2) Chest x-ray (a portable chest x-ray should be ordered in order to prevent the patient from leaving the negative pressure examination room)

### **Treatment**

There are currently no specific treatments available for 2019-nCoV infection. Treatment is supportive. Specific treatments for other confirmed or suspected diagnoses (e.g., influenza, bacterial pneumonia) should not be withheld while testing for 2019-nCoV is in progress.

### **REFERENCES AND RESOURCES**

Centers for Disease Control and Prevention (CDC). [2019 Novel Coronavirus webpage.](#)

New York City Department of Health. [Novel Respiratory Viruses.](#)

New York State Department of Health. [2019 Novel Coronavirus Information for Providers](#)

World Health Organization. [Novel coronavirus \(2019-nCoV\).](#)

## ED Huddle Notes

March 2, 2020

Huddle Leader: Ashley Caceres, RN

DATE: March 2, 2020

TOPIC	DISCUSSION	FOLLOW-UP
<p><b>COVID 19 New Evidence-Based Practices</b></p>	<p>COVID-19 patients are arriving in the ED. Ashley reviewed the new EBP infection control guidelines from the CDC and NYP infection control team. While little is known at this time because COVID-19 is new, the latest evidence states the following:</p> <ul style="list-style-type: none"> <li>• Immediately provide patient and any accompanying visitors with a surgical mask and have the patient wash hands.</li> <li>• Move the patient and accompanying visitors to an airborne isolation room and keep the door closed. OR put in room with door and keep it closed at all times (if isolation room not available).</li> <li>• Implement airborne, contact, and droplet (eye protection) precautions simultaneously.</li> <li>• Patient should remain in the airborne isolation room except for medically necessary tests and procedures.</li> </ul>	<p>New CDC and NYP EBP attached.</p> <p>Be alert for changes, as little is known about COVID-19 and EBP likely to change rapidly.</p>
<p><b>NEW EBP Infection Control Guidelines for PPE for COVID-19 patients</b></p>	<p>Based on evidence review Ashley completed, all ED team members must implement the following new infection control guidelines for PPE based on the new EBP from the CDC and NYP:</p> <ul style="list-style-type: none"> <li>• Patients are placed on airborne, contact, and droplet isolation</li> <li>• PPE required for all team members includes:                             <ul style="list-style-type: none"> <li>○ Gown</li> <li>○ N95 mask</li> <li>○ Surgical mask (to conserve N95 mask)</li> <li>○ Protective eye shield or goggles</li> <li>○ Gloves</li> </ul> </li> </ul>	<p>All team members to follow new EPB guidelines for PPE while caring for suspected or confirmed COVID-19 patients</p> <p>We have enough PPE, but need to conserve; N95 mask to be worn all shift with surgical mask over it (unless it becomes soiled).</p>

## ED Huddle Notes

March 2, 2020

### CDC Guidelines

Captured from CDC guidelines published January 31, 2020. CDC notes healthcare workers should follow standard precautions (contact), droplet and airborne precautions when caring for suspected or confirmed COVID-19 patients.

#### **Interim Healthcare Infection Prevention and Control Recommendations for Patients Under Investigation for 2019-nCoV**

Although the transmission dynamics have yet to be determined, CDC currently recommends a cautious approach to patients under investigation for 2019-nCoV (<https://www.cdc.gov/coronavirus/2019-nCoV/clinical-criteria.html>). Such patients should be asked to wear a surgical mask as soon as they are identified and be evaluated in a private room with the door closed, ideally an airborne infection isolation room if available. Healthcare personnel entering the room should use standard precautions, contact precautions, airborne precautions, and use eye protection (e.g., goggles or a face shield). Immediately notify your healthcare facility's infection control personnel and local health department.

#### **Additional Infection Control Practices Resources**

- **Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings (<https://www.cdc.gov/infectioncontrol/guidelines/isolation/index.html>)**

## ED Huddle Notes

March 2, 2020

NYPH Infection Control Guidelines



Captured from NYP Clinical Bulletin #3 published February 4, 2020. NYP notes employees to follow airborne, contact and droplet precautions when caring for suspected or confirmed COVID-19 patients.

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- 5) Notify Infection Prevention and Control and the local Department of Health of all

Deceased

Male, Deceased (67 year old),

Preferred Language: SPANISH

Intermittent Check Frequency: None  
Location: None

Search

COVID-19 Vaccine: Unknown  
Infection: None

No attending provider

No orders to acknowledge

DISCHARGED: 3/10/2020 (871 D AGO)

Patient Class: Inpatient  
No active principal problem

Ht: 165.1 cm >365 days  
Last Wt: 57 kg >30 days  
Weight Method: Bed scale >1 day  
Dosing Wt: 58.1 kg  
BSA: 1.62 m<sup>2</sup>  
BMI: —

Summary Chart Review MAR Intake/Output Flowsheets Results Review Notes Education Care Plan Orders Charges Clin

Chart Review

Encounters Notes Labs Path Imaging Procedures ECG Meds LDAs Media Letters Episodes Referrals Other Orders

Preview Refresh (2:52 PM) Select All Deselect All Review Selected Side-by-Side Route Add to Bookmarks

Filters Hide Cancelled OP Immunizations Patient Movement Dialysis

A...	R...	Date	Description	Status	Auth Provider
		03/04/2020	GLUCOSE WHOLE BLOOD METER POC	Final result	Harry Chang, MD
		03/04/2020	GLUCOSE WHOLE BLOOD METER POC	Final result	Harry Chang, MD
		03/04/2020	GLUCOSE WHOLE BLOOD METER POC	Final result	Harry Chang, MD
		03/04/2020	No Specific Isolation Required	Completed	Joy Riantawan, PA
		03/04/2020	Perform Whole Blood Glucose, POC	Completed	Julia Iyasere, MD
		03/04/2020	Perform Whole Blood Glucose, POC	Completed	Julia Iyasere, MD
		03/04/2020	Perform Whole Blood Glucose, POC	Completed	Julia Iyasere, MD
		03/04/2020	Perform Whole Blood Glucose, POC	Completed	Julia Iyasere, MD
		03/03/2020	GLUCOSE WHOLE BLOOD METER POC	Final result	Harry Chang, MD
		03/03/2020	GLUCOSE WHOLE BLOOD METER POC	Final result	Harry Chang, MD
		03/03/2020	Nursing Communication	Discontinued	Roxane C Lightbody, PA
		03/03/2020	Nursing Communication	Discontinued	Harry Chang, MD
		03/03/2020	GLUCOSE WHOLE BLOOD METER POC	Final result	Harry Chang, MD
		03/03/2020	Initiate Droplet Isolation	Completed	Roxane C Lightbody, PA
		03/03/2020	Initiate Contact Isolation	Completed	Roxane C Lightbody, PA
		03/03/2020	Initiate Airborne Isolation	Completed	Roxane C Lightbody, PA
		03/03/2020	Transfer patient to new unit	Completed	Roxane C Lightbody, PA
		03/03/2020	Initiate Droplet Isolation	Completed	Roxane C Lightbody, PA
		03/03/2020	Initiate Contact Isolation	Completed	Roxane C Lightbody, PA
		03/03/2020	Initiate Airborne Isolation	Completed	Roxane C Lightbody, PA

NewYork-Presbyterian/Columbia University Irving Medical Center  
**ED Leadership Round Minutes**  
**March 2020**

PRESENT: Robin Ferrer, RN; Jenna Meyer, RN; Courtney Vose, RN; Ashley Caceres, RN; Marisol Galvez, RN; Sherwyn Lumaque, RN; Max Rivera  
Unit Assistant  
DATE: March 11, 2020

TOPIC	DISCUSSION	FOLLOW-UP
<p><b>CUIMC ED Leadership Rounds</b></p>	<p>Courtney Vose, RN rounded in ED to engage with direct care team. Asked how they are feeling and if they had the PPE needed to be safe? Thanked them for their tireless efforts during this crisis. Informed them more agency RNs were on the way soon to help.</p> <p>Courtney observed Marisol Galvez, RN donning PPE prior to going into patient care area. Noted Marisol putting on required PPE for airborne, contact and droplet isolation precautions as required by NYPH Infection Prevention and Control team. Thanked Marisol for the care she provides.</p> <p>Courtney observed Sherwyn Lumaque, RN doffing PPE for airborne, contact and droplet precautions upon exiting patient care area. Noted he was following evidence-based guidelines. Thanked Sherwyn for his dedication to our patients during this challenging and ever changing time.</p> <p>Courtney discussed importance of following the new NYPH standards for PPE while treating COVID-19 patients. Referred to need for gown, N95 mask, surgical mask (to conserve N95 mask), protective eye shield or goggles and gloves. Ashley Caceres, RN noted this new EBP is based on evidence from the CDC and NYP Infection Prevention.</p>	<p>Assure team is following new EBP NYP guidelines for PPE while caring for COVID-19 patients</p> <p>Thanks to all ED team members for caring for our patients throughout this crisis.</p> <p>Keep going. Resources on the way to help with staffing.</p>