

COVID-19 Resurgence and Seasonal Influenza 2020 – 2021 Playbook

Prepared by a working group of the
Northwestern Memorial Hospital Antimicrobial
Pharmacy and Therapeutics Subcommittee

Last updated November 5, 2020

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This working group was created at the request of Teresa Zembower and Mike Postelnick, NMH Antimicrobial Pharmacy and Therapeutics Subcommittee chairs.

Patient Population Recommendations for ILI and CLI Testing and Treatment During 2020 – 2021 Influenza Season *Updated August 21, 2020*

Population	Meets ILI ^a and/or CLI ^b Case Definition	Risk Factors for Complications ^c Yes/No	Flu Vaccine Yes/No	Test(s) Yes/No	Treatments	Comments
Inpatient or ED Admission	No	NA	NA	COVID testing on admission	NA	Maintain COVID screening for asymptomatic patients on admission
	Yes	No	Document	Respiratory pathogen panel (RPP) + COVID; consider d-dimer, CRP, ferritin, CXR	<ul style="list-style-type: none"> • Empiric Tamiflu* • See COVID-19 treatment pathway • Consider CAP/VAP treatment as indicated • Reassess when test results available 	
	Yes	Yes	Document	RPP + COVID; consider d-dimer, CRP, ferritin, CXR	<ul style="list-style-type: none"> • Empiric Tamiflu* • See COVID-19 treatment pathway • Consider CAP/VAP treatment as indicated • Reassess when test results available 	
Ambulatory or ED Discharge	No	No	Document	None	NA	Consider COVID-19 testing in asymptomatic patients who have had a recent exposure (i.e., those that meet the Persons Under Investigation [PUI] definition)
	Yes	No	Document	1. Flu + COVID (rapid tests acceptable) or 2. COVID testing only if > 48 hours from symptom onset	Empiric Tamiflu* if w/in 48 hours of symptom onset	Testing after 48 hours from symptom onset is at the discretion of the treating clinician
	Yes	Yes	Document	1. Influenza A/B, RSV A/B plus COVID	Empiric Tamiflu* if w/in 48 hours of symptom onset or severe, complicated or progressive illness	
Pre-op or pre-procedure	No	No	Document	COVID testing only	NA	

*In one RCT, baloxavir had greater efficacy than oseltamivir in adolescents and adults with influenza B infection.

^a ILI Case definition of: fever 100°F or greater (oral or equivalent), and cough and/or sore throat is used by CDC U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet): [cdc.gov/vaccines/pubs/surv-manual/chpt06-influenza.html#:~:text=U.S.%20outpatient%20Influenza%2DLike%20Illness%20Surveillance%20Network&text=For%20this%20system%2C%20ILI%20is,known%20cause%20other%20than%20influenza.](https://www.cdc.gov/vaccines/pubs/surv-manual/chpt06-influenza.html#:~:text=U.S.%20outpatient%20Influenza%2DLike%20Illness%20Surveillance%20Network&text=For%20this%20system%2C%20ILI%20is,known%20cause%20other%20than%20influenza.)

^bCLI case definitions: Fever and cough or shortness of breath or difficulty breathing: [cdc.gov/coronavirus/2019-ncov/covid-data/covidview/purpose-methods.html](https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/purpose-methods.html) or see Appendix A.

^cRisk factors for ILI or CLI complications: See Appendix B and C, respectively.

Appendix A: Coronavirus Disease 2019 (COVID-19) 2020 Interim Case Definition, Approved April 5, 2020

cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-definition/2020/

Clinical criteria

At least two of the following symptoms: fever (measured or subjective), chills, rigors, myalgia, headache, sore throat, new olfactory and taste disorder(s)

OR

At least one of the following symptoms: cough, shortness of breath, or difficulty breathing

OR

Severe respiratory illness with at least one of the following:

- Clinical or radiographic evidence of pneumonia, **OR**
- Acute respiratory distress syndrome (ARDS).

AND

No alternative more likely diagnosis

Laboratory criteria

Laboratory evidence using a method approved or authorized by the U.S. Food and Drug Administration (FDA) or designated authority:

Confirmatory laboratory evidence:

- Detection of severe acute respiratory syndrome coronavirus 2 ribonucleic acid (SARS-CoV-2 RNA) in a clinical specimen using a molecular amplification detection test

Presumptive laboratory evidence:

- Detection of specific antigen in a clinical specimen
- Detection of specific antibody in serum, plasma or whole blood indicative of a new or recent infection*

**Serologic methods for diagnosis are currently being defined.*

Epidemiologic linkage

One or more of the following exposures in the 14 days before onset of symptoms:

- Close contact** with a confirmed or probable case of COVID-19 disease; **OR**
- Close contact** with a person with:
 - Clinically compatible illness **AND**
 - Linkage to a confirmed case of COVID-19 disease
- Travel to or residence in an area with sustained, ongoing community transmission of SARS-CoV-2
- Member of a risk cohort as defined by public health authorities during an outbreak

***Close contact is defined as being within 6 feet for at least a period of 10 minutes to 30 minutes or more depending upon the exposure. In healthcare settings, this may be defined as exposures of greater than a few minutes or more. Data are insufficient to precisely define the duration of exposure that constitutes prolonged exposure and thus a close contact.*

Appendix B: Risk Factors for Complications of Influenza

[cdc.gov/flu/highrisk/index.htm](https://www.cdc.gov/flu/highrisk/index.htm)

Following is a list of all the health and age factors that are known to increase a person's risk of getting serious complications from flu:

- Asthma
- Neurologic and neurodevelopment conditions
- Blood disorders (such as sickle cell disease)
- Chronic lung disease (such as chronic obstructive pulmonary disease [COPD] and cystic fibrosis)
- Endocrine disorders (such as diabetes mellitus)
- Heart disease (such as congenital heart disease, congestive heart failure and coronary artery disease)
- Kidney diseases
- Liver disorders
- Metabolic disorders (such as inherited metabolic disorders and mitochondrial disorders)
- People who are obese with a body mass index [BMI] of 40 or higher
- People younger than 19 years on long-term aspirin- or salicylate-containing medications
- People with a weakened immune system due to disease (such as people with HIV or AIDS, transplant, or some cancers such as leukemia) or medications (such as those receiving chemotherapy or radiation treatment for cancer, or persons with chronic conditions requiring chronic corticosteroids or other drugs that suppress the immune system)

Other people at high risk from the flu:

- Adults 65 years and older
- Children younger than 2 years¹
- Pregnant women and women up to 2 weeks after the end of pregnancy
- American Indians and Alaska Natives
- People who live in nursing homes and other long-term care facilities

¹ Although all children younger than 5 years are considered at high risk for serious flu complications, the highest risk is for those younger than 2 years, with the highest hospitalization and death rates among infants younger than 6 months.

Appendix C: Risk Factors for Complications of COVID-19

[cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html](https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html)

People of any age with **certain underlying medical conditions** are at increased risk for severe illness from COVID-19.

People of any age with the following conditions **are at increased risk** of severe illness from COVID-19:

- Cancer
- Chronic kidney disease
- COPD (chronic obstructive pulmonary disease)
- Immunocompromised state (weakened immune system) from solid organ transplant
- Obesity (body mass index [BMI] of 30 or higher)
- Serious heart conditions, such as heart failure, coronary artery disease or cardiomyopathies
- Sickle cell disease
- Type 2 diabetes mellitus

COVID-19 is a new disease. Currently there are limited data and information about the impact of underlying medical conditions and whether they increase the risk for severe illness from COVID-19. Based on what we know at this time, people with the following conditions **might be at an increased risk** for severe illness from COVID-19:

- Asthma (moderate to severe)
- Cerebrovascular disease (affects blood vessels and blood supply to the brain)
- Cystic fibrosis
- Hypertension or high blood pressure
- Immunocompromised state (weakened immune system) from blood or bone marrow transplant, immune deficiencies, HIV, use of corticosteroids, or use of other immune-weakening medicines
- Neurologic conditions, such as dementia
- Liver disease
- Pregnancy
- Pulmonary fibrosis (having damaged or scarred lung tissues)
- Smoking
- Thalassemia (a type of blood disorder)
- Type 1 diabetes mellitus

NM Evidence Review for COVID-19 Inpatient Treatment Options

The following document is available based on limited evidence and will be updated regularly as appropriate. If using these resources, please understand this information will continue to change as the COVID-19 pandemic evolves in Chicago and across the United States.

Evidence review document:

asp.nm.org/covidtherapies.html

COVID-19 Clinical Pathway

Northwestern Medicine clinical treatment pathways are decision support documents to guide providers through ordering initial laboratory tests and making determinations about clinical trial enrollment, and outline currently available empiric therapies for inpatients admitted with COVID-19.

COVID-19 Clinical Pathway:

asp.nm.org/covidpathway.html

COVID-19 Clinical Trials

Northwestern University active clinical trials:

feinberg.northwestern.edu/sites/covid-19/covid-19-clinical-trials.html

Remdesivir Eligibility Criteria

Remdesivir was approved by the U.S. Food and Drug Administration (FDA) on October 22, 2020 for use in adult and pediatric patients 12 years of age and older and weighing at least 40 kg for the treatment of COVID-19 requiring hospitalization. The Northwestern Memorial Hospital Pharmacy and Therapeutics Committee approved the following criteria-for-use (must meet all):

1. Hospitalized patients with suspected or laboratory-confirmed COVID-19
2. ALT < 10X upper limit of normal
3. Meets one or more of the following:
 - a. Hypoxemic ($SpO_2 \leq 94\%$ on room air or requiring supplemental oxygen)
 - b. Immunosuppressed meeting any of the following definitions:
 - i. ≥ 20 mg/day prednisone or equivalent for at least two weeks OR
 - ii. Organ transplant receiving immunosuppressive medications OR
 - iii. Patients with cancer receiving chemotherapy or those with a hematologic malignancy
 - c. ID consult recommendation to initiate remdesivir

Use caution in patients with creatinine clearance < 30 ml/min, weigh risks against benefits

Remdesivir Resources:

Remdesivir Patient Education Sheet – Northwestern Medicine

https://asp.nm.org/uploads/9/0/7/8/90789983/nm_remdesivir_patient_education_sheet.pdf

Remdesivir FDA EUA Fact Sheet for Health Care Providers:

<https://www.fda.gov/media/137566/download>

Remdesivir FDA EUA Fact Sheet for Patients and Parents/Caregivers:

<https://www.fda.gov/media/137565/download>

COVID Convalescent Plasma (Investigational)

As of November 2nd, 2020, COVID Convalescent Plasma (CCP) is orderable in Epic by clinicians throughout the system for their qualifying patients. As CCP is an investigational product, the FDA requires that the patient or their representative be educated on the risk and benefits and sign a consent specifically for this product, the [Consent for COVID Convalescent Plasma Transfusion](#). The consent should be scanned into Epic Media Manager prior to placing the product order.

The order can be accessed by searching Convalescent Plasma in the Blood Administration order sets. A type and screen is required on all patients to determine blood type. Date of diagnosis must be entered at time of product order. The recommended dose of CCP is 1 unit for patients weighing 100 kilograms or less, and 2 units for patients greater than 100 kilograms.

COVID Convalescent Plasma eligibility criteria:

Insufficient data are available to establish appropriate criteria for use at this time. Healthcare providers caring for patients with COVID-19 should evaluate the appropriateness of convalescent plasma and discuss the risks and benefits with the patient.

COVID Convalescent Plasma Resources:

Convalescent Plasma Investigational Consent Form – Northwestern Medicine

https://asp.nm.org/uploads/9/0/7/8/90789983/6239_consent_investigational_covid_19_plasma_10-20.pdf

COVID-19/Influenza Drug Therapy Shortage Contingency Plans

The table below contains therapies used to treat COVID-19, influenza and/or bacterial pneumonia. Each of the medications listed in the first column is tracked on the medication therapy supply dashboard. In the event of a shortage of these medications, additional alternative therapies (column 2) will be added to the medication therapy dashboard and will be purchased proactively to ensure adequate supply for routine patient care across Northwestern Medicine.

Therapies to Treat COVID-19, Influenza, Bacterial Pneumonia	Therapeutic Alternatives in the Event of a Shortage ¹
Baloxavir	Oseltamivir, peramivir
Dexamethasone	Methylprednisolone, prednisone, hydrocortisone
Oseltamivir	Baloxavir, peramivir
Peramivir	Oseltamivir, baloxavir
Remdesivir	None <i>Consider: trial enrollment, dexamethasone, convalescent plasma</i>
Azithromycin	Levofloxacin, doxycycline
Ceftriaxone	Levofloxacin, cefepime, piperacillin-tazobactam, amoxicillin-clavulaunate (PO), cefuroxime (PO)
Piperacillin-tazobactam	Levofloxacin, cefepime, meropenem, ceftriaxone, ceftazidime
Vancomycin	Linezolid

¹Alternative therapies are not listed in order of priority. In the event of a shortage, a decision will be made by the working group for the appropriate alternative(s) to target first.

2020 – 2021 Influenza Vaccination Recommendations

During influenza season, Northwestern Medicine encourages outpatient clinic patients to receive their influenza vaccine at the clinic or their local pharmacy. Northwestern Medicine inpatients are offered the annual influenza vaccine if they have not yet received one this season.

If your patient is not sure about getting the influenza vaccine

The following influenza vaccine messages **resonate with adults**, including those with vaccine hesitancy, according to CDC research:

- Flu vaccine will help you protect yourself and prevent flu for your loved ones this winter.
- Flu vaccine will help you protect yourself and those around you, including healthcare workers and first responders.
- Flu vaccine will help you protect yourself and your community, including those with chronic health conditions.

Inform your patients that you, the NM physicians, nurses, PCTs, clerks, transporters and cleaning personnel receive the flu shot every year, including this one.

Your patients may need to know that **they or their loved ones or co-workers** are at increased risk of severe influenza (hospitalization and/or death), including the following:

- Children ages 6 months to 5 years
- Adults 50 years and older
- Nursing home residents
- Those with COPD, asthma, kidney disease, liver disease, diabetes mellitus, cancers, blood disorders
- Those who are pregnant
- Those with severe obesity
- American Indians and Alaska Natives

Additional resources

CDC's Advisory Committee on Immunization Practices (ACIP) provides this summary for healthcare providers for this influenza season:

[cdc.gov/flu/professionals/acip/summary/summary-recommendations.htm](https://www.cdc.gov/flu/professionals/acip/summary/summary-recommendations.htm)