

Clinical Practice Guideline:
Health First at Home (HFaH)

Covid 19

Target population: Adult/Geriatric

Clinical Description: Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Covid 19 is transmitted chiefly by contact with infectious material (such as respiratory droplets) or with objects or surfaces contaminated by the causative virus, and is characterized especially by fever, cough, and shortness of breath and may progress to pneumonia and respiratory failure.

Mild Illness: Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain, nausea, vomiting, diarrhea, loss of taste and smell) but who do not have shortness of breath, dyspnea, or abnormal chest imaging.

Moderate Illness: Individuals who show evidence of lower respiratory disease during clinical assessment or imaging and who have an oxygen saturation (SpO₂) ≥94% on room air at sea level.

Severe Illness: Individuals who have SpO₂ <94% on room air at sea level, a ratio of arterial partial pressure of oxygen to fraction of inspired oxygen (PaO₂/FiO₂) <300 mm Hg, respiratory frequency >30 breaths/min, or lung infiltrates >50%.

Critical Illness: Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction.

Therapeutic Management of Non-hospitalized Adults With COVID-19. NIH Covid 19 Treatment Guidelines. Last Updated: July 8, 2021.

1. Administrative Inclusion and Exclusion Criteria

a) Specific inclusion and exclusion criteria are described below for Health First at Home (HFaH):

Administrative Inclusion/Exclusion Criteria	
Patient must meet ALL three inclusion criteria to be considered for treatment in HFaH:	Patient meets ALL the following inclusion criteria:
Patient must live in the community and not in a nursing home or shelter.	Patient lives in defined HFaH geographic area
Patient must meet the age requirement for the HaH program.	Age 18 yrs. or greater
Patient must meet the insurance eligibility of the program.	Patient insurance- Medicare, Medicare Part A, Health First Health Plan

And does not meet ANY of the following EXCLUSION Criteria:	To remain eligible for Health First at Home (HFaH) treatment, the patient must not meet ANY of the exclusion criteria. The presence of any single administrative exclusion criteria means the patient should be treated in the traditional acute hospital setting.
Indigent Patient	Exclude if the patient does not have his or her own home or apartment with fixed address and cannot go to a fixed address for the 30 days of the program
Unsafe living arrangement – electricity, phone, internet	Exclude patient if the home lacks heating/ air conditioning system, electricity, or telephone, or is structurally unsound or unsafe (see safety questionnaire) unless they can move to a place with those resources.
Exclude if known active drug or alcohol abuse.	Drug Abuse/ETOH abuse/Methadone program
Mobility: BMAT level 1 or level 2 patients without around-the-clock home or health aide assistance or who cannot hire one immediately	Patients needing around the clock care need to have that already established or hire immediately. The HFaH program is unable to provide around the clock custodial care.

Clinical inclusion Criteria for Health First at Home (HFaH)	
Patient requires acute hospital admission for HFaH conditions such as: Pneumonia, Urinary Tract Infection, Cellulitis, Chronic Obstructive Pulmonary Disease exacerbation, Congestive Heart Failure exacerbation, Dehydration, Covid or other conditions that may be managed in the program.	Patient is assessed by a physician or AHP to require acute hospital admission for a HFaH acceptable illness. That is, if there were no HFaH program, the patient would be admitted to the hospital and not sent home from the ED, clinic, or physician office with outpatient treatment or outpatient treatment supplemented by usual home care services
Clinical Exclusion Criteria for Health First at Home (HFaH)	
And does not meet ANY of the exclusion criteria:	To remain eligible for HFaH treatment, the patient must not meet ANY of the exclusion criteria. The presence of any single administrative exclusion criteria means the patient should be treated in the traditional acute hospital setting.

EXCLUSION FOR ANY OF THE TARGETED DIAGNOSES:	
Hypoxemia with oxygen saturation < 90% or PaO ₂ < 60mmHg uncorrected with 4 liters per minute oxygen supplementation by nasal cannula	Exclude patient if the O ₂ saturation is less than 90% or PaO ₂ < 60 on arterial blood gas after initial treatment and cannot be corrected with oxygen delivered by nasal cannula at a rate of < 4 liters/minute.
Bronchodilator (nebulizer) treatments required every 4 hours or more frequently.	Exclude patient if patient requires nebulizer treatments at an interval of every 4 hours or more frequently.
Arterial blood gas measurements	Exclude patient if patient requires ongoing arterial blood gas measurements.
Acute illness requiring hospital admission independent of target diagnosis, except Congestive Heart Failure, Chronic Obstructive Pulmonary Disease, UTI, Cellulitis, Bronchitis, Hypertension, Hyperglycemia, Asthma, Deep Vein Thrombosis, and or Community Acquired Pneumonia, Covid.	Exclude patient if there is a concomitant acute illness that cannot be managed in the home (seizure/cerebrovascular accident-focal deficit). For example, a patient with CHF who also has gastrointestinal (GI) bleeding would be excluded because the patient would have been admitted for the GI bleed even if he or she didn't have CHF. However, a patient with CHF who also has one of the other conditions that can be treated in HFaH, such as COPD or CAP, may not be excluded.
Associated with ischemic chest pain or other symptoms strongly suggestive of ischemia of myocardial infarction (MI)	Exclude patient if he or she is experiencing angina or ischemic-type chest pain with EKG evidence of ischemia or chest pain suggestive of ischemia of significant duration without ischemic EKG changes. If patient has negative troponins in emergency room and the chest pain is then not thought to be ischemic, the patient may be treated in HFaH.
Severe Sepsis or Septic shock	Hypotension not restored (SBP > 90) by < 2-3 liters oral or intravenous replacement.
Hypotension: SPB <90 mm Hg (unless baseline)	Exclude patient if the systolic blood pressure is < 90 mm HG after treatment in the ED or clinic site and this blood pressure is not the patient's baseline blood pressure.
Dialysis-dependent patients	Exclude if patient goes out to a dialysis center and receives hemodialysis (i.e., home hemodialysis and peritoneal dialysis will be considered).
Expected terminal event	Exclude patient if it is planned or highly anticipated that he or she will die during his or her hospital stay unless the patient is receiving palliative care as part of the HFaH program
Marked altered mental status	Exclude patient if he or she exhibits a marked altered mental status, unless a member of the

	HFaH team suspects the cause is a treatable condition in the home
Severe immunosuppression (AIDS, neutropenia, organ transplant with immunosuppressive therapy, chemotherapy, gammopathy, cytotoxic drug use, multiple myeloma, lymphoma, WBC < 4)	Severe immunosuppression is NOT automatically excluded. All these cases will be discussed with the corresponding inpatient or outpatient transplant or oncology team.
Patient's only access is a central line	Patient must be treated with a peripheral, midline or port.
Discretionary judgement on the part of the medical provider	An otherwise eligible patient may be excluded for reasons not otherwise specified if the HFaH provider believes that patient would be at significant risk.
COVID 19 EXCLUSION in Health First at Home	
Able to ambulate while on oxygen and maintain O2 Sat >= 90% and respiratory rate <= 24 up to 4L NC	Exclude patient if unable to ambulate if O2 Sat < 90% and/or respiratory rate >24
Able to tolerate oral diet	Exclude patient if unable to tolerate oral diet
Evidence of concomitant illness that requires a diagnostic work-up or treatment that cannot be done at home	For example, cavitating lesion, cancer, or tuberculosis.

2. Admission to Health First at Home program

- a) Hours of operation for admission in the HFaH: **0800 to 2000**
 - a) Patients arriving to the ED after HFaH hours are placed in Observation status at the hospital overnight, receiving services needed. The patient is transitioned to HaH care the following morning if they meet inpatient and HFaH criteria.
- b) Pre-admissions activity – additional testing prior to admission
 - a) Sputum culture (optional)
 - b) Blood culture
 - c) CXR
 - d) CBC & BMP
- c) ED discharge and HFaH admission
 - a) Consent signed for admission to Health at Home program
 - b) Admission history & physical by MD completed in ED
 - c) RN visit scheduled with patient before they discharge
 - d) Confirm patient info- address/phone number, Primary Care Provider

- d) Admission Orders and Ancillary services
 - a) Consult Outpatient Pharmacy Clinic for admission medication reconciliation
 - b) Nutrition Assessment/ consult
 - c) PT/OT/ST/RT consult as needed
 - d) CM & LCSW
- e) HFaH Medical Supplies Delivery
 - a) DME (O2, Walker etc.)
 - b) Medication Delivery
- f) Transport
 - a) Private vehicle vs. Non-med stretcher transport – per provider clinical assessment
- g) Mobility – BMAT
 - a) **Level 1**- Dependent patient, unable to maintain seated balance, use total lift device
 - b) **Level 2**- Patient able to maintain seated balance and weight bear on one leg, use total lift or sit to stand device
 - c) **Level 3**- Patient requires assistive device for ambulation (walker, cane, crutches) may use non powered device
 - d) **Level 4** - Patient demonstrates steady gait, good balance, and safety awareness
- h) Vaccination status
 - a) Pneumococcal
 - b) Influenza
 - c) COVID-19
- i) Tobacco cessation
 - a) Education
 - b) Nicotine supplementation
- j) Alcohol use screening assessment (CAGE)
 - a) Provider to address as indicated

3. Isolation Precautions

- a) Self-isolate at home following the CDC guidelines:
 - a) Stay in a separate room from other household members, if possible
 - b) Use a separate bathroom, if possible
 - c) Avoid contact with other members of the household and pets
 - d) Don't share personal household items, like cups, towels, and utensils
 - e) Wear a mask when around other people
 - f) Able to bath, dress and feed self

<https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/isolation.html>

4. Health First at Home Visit Schedule

- a) HFaH is an acute-care event, patients continue to receive the same level of care as they would in a traditional hospital setting, including weekends and holidays.

Health First at Home Visit Schedule				
Time	Day of Admission	Home Visit Day #1	Subsequent Home Visits	Discharge Day
0800-1400	Admission by MD/ARNP/PA in the ED, patient sent home	MD/ARNP/PA/RN	MD/ARNP/PA/RN	MD/ARNP
1400-2000	RN	RN	RN	
Additional visits based on clinical assessment				
<ul style="list-style-type: none"> • RN/Dietitian/RT/SW visit may be completed virtually • RN/ARNP/PA will escalate to MD when clinically appropriate • If patient calls with medical concern, MD will be available virtually to assess patient PRN 				

5. Remote Patient Monitoring (RPM) Criteria

- a) Patient monitored with Current Health Kit for continuous monitoring-
- b) Daily weights

6. Vital signs

- a) Document vital signs as per Medical Surgical guidelines- BP, HR, RR, Temp every 8 hours
- b) PRN vital signs- if alarm parameter notification or change in symptoms

7. Emergency notification

- a) HFaH phone line available for patients to call HaH care team 24/7, 365 day/year
- b) Current Health Tablet- “I need help” icon

8. Initial Nursing Admission Visit

- Full physical assessment
- Med Rec
- Vitals
- Past Med Hx
- Risk Assessment for Hospitalization
- Height/Weight
- Health Screening (PSA, Mammogram, colonoscopy, etc)
- Advance Directives
- Supportive Assistance- lives with?
- Functional Limitations- BKA etc
- Fire Safety Assessment for Home O2 patients
- Safety Measures (Fall precautions, slow position change etc)
- Cultural Assessment
- Sensory Assessment (Glasses, Glaucoma, Contacts, Hearing aids etc)

- O2 Assessment (6 min walk test)
- Pain Assessment
- Braden/Skin Assessment
- Diet Orders/Assessment
- Cognitive Assessment
- ADL's
- Fall Risk Assessment
- Mobility Assessment
- Dietary Assessment
- Vaccination Assessment
- Home Safety Assessment
- PCP Confirmation
- Education to include Incentive spirometry, Condition, and Medication, cleaning Bipap, Cpap etc, change out toothbrush
- Daily patient goals set with patient
- Medication administration
- Meal prep or other ADL needs addressed
- Education on appropriate isolation precautions- HFaH staff, patient and family

9. Subsequent Nursing Visits

- Full Physical Assessment
- Vitals Signs
- Medication administration if needed
- Goals/Education

10. Discharge from Health First at Home Program

- a) Discharge Criteria
 - a) Based on the patient's clinical improvement using the same criteria and guidelines for hospital inpatients.
- b) Discharge preparation
 - a) Discharge and care transition planning occurs throughout the admission
 - b) Patients should be informed of their transition to another level of care or full discharge from HFaH at least one day prior to discharge
 - c) Patients may elect to discharge themselves from HFaH at any time
- c) Discharge Visit
 - i) MD assessment day of DC
 - ii) Discharge medication reconciliation – pharmacy consult
 - a. Any necessary prescriptions given
 - iii) Follow-up appointment with the primary care provider scheduled within 3-5 days from days of discharge from the Health First at Home program
 - a. Follow-up diagnostic studies as clinically indicated
 - iv) HFaH provider communication to PCP and pertinent medical providers via email, Telemediq, or phone when possible.

- v) Formal DC Summary completed
- d) Post-Discharge
 - i) The Health First at Home team will be available for 30 days post discharge for any emergencies, health concerns, or other issues.
 - ii) Post-discharge phone call by AHP or RN within 48 hrs.
 - iii) 30-day “graduation” call by Social Worker (or RN if medically complex)

References:

- 1.) Mount Sinai Hospitalization at Home and Rehabilitation at Home, Implementation Manual, 2018.
- 2.) American Lung Association, Learn About Acute Bronchitis, <https://www.lung.org/lung-health-diseases/lung-disease-lookup/bronchitis/learn-about-bronchitis>. 2021.
- 3.) Adult Outpatients with Acute Cough Due to Suspected Pneumonia or Influenza, CHEST 2019; 155 (1): 155-167.
- 4.) Isolation Guidelines: <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/isolation.html>
- 5.) Therapeutic Management of Non-hospitalized Adults With COVID-19. NIH Covid 19 Treatment Guidelines Last updated: July 8, 2021