

COVID-19: Criteria for Discharging Patients from Inpatient Care

A Rapid Guidance Summary from the
Penn Medicine Center for Evidence-based Practice



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Key questions answered in this summary

- Under what circumstances can a hospital inpatient with COVID-19 infection be discharged to home or to a continuing care facility?
- How should contingencies such as a shortage of acute care beds affect these criteria? Criteria for whether or not to admit a patient presenting with respiratory symptoms are outside the scope of this report. Criteria for discontinuing home isolation for discharged patients are outside the scope of this report.

Summary of major recommendations

- Ideally, patients will not be discharged until they are shown to be free of infection.
- When healthcare systems are under strain, patients may need to be discharged to home or another setting before they are free of infection.
- Guidelines do not cite evidence-based criteria for identifying COVID-19 patients who can and cannot be discharged.
- Medical institutions have started to offer guidance on criteria for considering a patient safe to discharge. A general summary of this guidance includes:
 - Supplemental oxygen requirement should be decreasing or eliminated.
 - There should be no more than 3% decline in O2 saturation between rest and walking.
 - Symptoms including fever and dyspnea should be improving but do not need to be fully resolved.
 - A negative test for COVID-19 infection is not required for discharge.
- A discharge plan should be in place for each patient, taking availability of resources and social support for ongoing isolation at place of residence.
- Creative discharge solutions may also be necessary when resources and health system capacities are limited.

Professional society and public health agency guidelines on discharge criteria

S o u r c e	Recommendations
A C E P Ap ril 14	Normal vital signs (HR < 120, RR < 20, SBP > 100), no lab abnormalities, negative chest x-ray, negative lung ultrasound (lab testing and imaging may not be needed in mild cases), ambulating pulse oximetry does not fall more than 3 percentage points below resting pulse oximetry. Patient may be sent home with a pulse oximeter and instructed to perform a daily walking test and return to the hospital if the ambulatory measurement falls more than 3 percentage points before the resting level. <i>CEP NOTE: Criteria are based on expert opinion and practice in a hospital in Italy.</i>
I D S A Ap ril 13	No guidance relating to discharge criteria.

<p>A TS</p> <p>A pr il 3</p>	<p>No guidance relating to discharge criteria.</p>
<p>A C CP</p> <p>A pr il 3</p>	<p>No guidance relating to discharge criteria. ACCP notes that of the patients who recover, a significant number of patients will still have radiological abnormalities (ground-glass opacities on CT) at time of discharge.</p>
<p>E C DC</p> <p>A pr il 8</p>	<p><u>If testing and hospitalization capacity allows</u>: two negative RT-PCR tests at least 24 hours apart and at least 8 days after onset of symptoms.</p> <p><u>If testing capacity limited</u>: patients can be discharged based on clinical criteria, per evaluation of the treating physician. <u>Specific criteria for defining such cases are not provided</u>. The discharged patient should self-isolate at home or in a safe place for at least 3 days after resolution of fever and at least 8 days since onset of symptoms for mild cases, 14 days since onset of symptoms in severe cases. Follow-up visits or monitoring via telephone or other means can be considered. These patients should be prioritized for testing.</p> <p>If the patient is discharged to a closed population environment such as a long-term care facility, the patient should be placed in a single room until 8 days have passed since onset of symptoms, fever has been resolved for at least 3 days, and other clinical symptoms are resolved.</p>
<p>C DC</p> <p>A pr il 3</p>	<p>Patients who have clinically recovered and are able to discharge from the hospital but who have not been cleared from their Transmission-Based Precautions may continue isolation at their place of residence until cleared.</p> <p><u>Specific criteria for defining clinical recovery are not provided</u>.</p>
<p>N HS</p> <p>M ar c h 19</p>	<p>All patients on general wards (with or without COVID-19) are to be reviewed twice per day to ascertain whether any of the following criteria are met. If none are met, discharge must be considered.</p> <ul style="list-style-type: none"> • In ICU • Requiring oxygen therapy • Requiring IV fluids • NEWS2 score > 3 • Diminished consciousness • Last hours of life • Requiring IV medication more than twice per day • Functional impairment that cannot be managed in home or community care • Undergone lower limb surgery within 48 hours or thoracic/abdominal/pelvic surgery within 72 hours • Undergone invasive procedure within 24 hours and with risk of acute life-threatening deterioration <p><i>CEP NOTE: This guidance is issued by NHS as a means to implement new mandatory system orders to discharge patients as soon as clinically appropriate and free up beds.</i></p>
<p>W HO</p> <p>M ar c h 13</p>	<p>For hospital discharge in a clinically recovered patient two negative tests, at least 24 hours apart, is recommended.</p>

Discharge criteria used at hospitals

<p>H o s p i t a l</p>	<p>Criteria</p>
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U P HS A p ril 14	<p>There are no clear guidelines on when it is safe to discharge a patient with COVID-19.</p> <p>Patients may be considered for discharge when they are: hemodynamically stable, fever is improving (do not need to be afebrile), other symptoms are improving, oxygen requirement is declining or resolved, they have capacity to perform basic ADLs, or ambulate in room, or are at baseline functional status.</p> <p>Communication with expert consultants may be indicated to determine if a high-risk patient (e.g. immunosuppressed, transplant, HIV+, pregnant patient) requires specific post-discharge care</p>
M GH A p ril 14	<p>There are no set criteria for discharge readiness. In general, patients who have maintained O2 saturation on room air for 48 hours, maintaining ambulatory O2 saturation, and have improving respiratory symptoms and stable labs are likely ready for discharge. Patients can be discharged with a pending COVID test if they are clinically improving (with the exception of patients being discharged to a congregate setting or patients who are particularly high risk). In general, patients do not need to stay in house to complete entire courses of COVID meds (such as hydroxychloroquine). If a patient is on a trajectory of continued clinical improvement, discharge can be considered even if the patient continues to have intermittent fevers or some residual dyspnea. In some cases, patients can be sent home on supplementary O2 if they are otherwise on a trajectory of clinical improvement and have close post- discharge follow-up.</p>

Brig ham Apri l 12	<p>Consider discharge for patients' who meet the following clinical criteria:</p> <ul style="list-style-type: none"> • Resolution of fever >48 hours without antipyretics • Improvement in illness signs and symptoms (cough, shortness of breath, and oxygen requirement) Ensure patient has necessary resources and social support to maintain home isolation: <p>See full text of protocol for detailed checklist.</p> <p>NOTE: CMS has waived the "3 midnights rule" – patients no longer need to stay x3 midnights to qualify for SNF admission</p>
UC SF Apri l 6	<p>For geriatric patients, create a discharge plan starting on the first day.</p> <p>Creative discharge solutions may also be necessary when resources and health system capacities are limited. Clinicians caring for COVID-19 patients should communicate with experts as appropriate (e.g. Infectious Disease)</p> <p>prior to discharge to obtain a firm understanding of the patient's clinical course and clinical stability for discharge.</p> <p>Expert input may be necessary to determine if and when a patient is at risk for clinical deterioration.</p> <p>As early as possible (i.e. once COVID-19 testing is definitively positive), clinicians should communicate closely with Infectious Disease and/or Infection Control experts to clarify the latest laboratory/virologic test criteria and methods that are warranted for both patient discharge and after discharge. In general, local health department will direct and guide COVID-specific lab testing.</p> <p>Specifically, the local health department should seek to communicate the following with the team planning hospital discharge: whether test positivity is warranted prior to discharge (depending on the patient's unique clinical factors and post-discharge destination); the interval and frequency of post-discharge testing; and testing criteria that may be required for home quarantine (and its cessation).</p> <p>Clinicians and hospital case management should seek expert input (e.g. Infectious Disease, Pulmonary) if necessary to obtain a realistic expectation of the patient's projected clinical trajectory and recovery after hospital discharge.</p> <p>Clinicians must provide explicit guidance and return precautions for the evaluation of concerning symptoms after discharge, specifically fever and /or symptoms of respiratory illness. Clinicians should also explicitly clarify who COVID-19 patients must contact for questions or concerning symptoms after discharge (local departments of public health are typically responsible for coordination and management of post-discharge care).</p> <p>Clinicians should utilize prepared communication tools to help COVID-19 patients and their families with anticipatory guidance after discharge. It is strongly suggested that this education occur as early as possible in the patient's hospital course and not merely immediately prior to the time discharge.</p> <p><u>See full guidance for additional considerations regarding home health needs and their effect on discharge planning.</u></p>
Yale Apri l 3	<p>No fever for at least 48 hours prior to discharge, off antipyretics.</p> <p>Stable oxygen saturation for at least 48 hours, no more than 2 l/m continuous oxygen, or if patient was previously on oxygen, within 1-2 l/m of baseline rate and not more than 5 l/l absolute.</p> <p>Stable or improving inflammatory markers (CRP, absolute lymphocyte count are priorities; Other markers like Ferritin may lag). Values do NOT need to have normalized prior to discharge.</p> <p>Other relevant clinical variables improved</p> <p>Patient understands home care and self-isolation instructions, has access to prompt follow-up care.</p>

Guidance sources

ACEP–American College of Emergency Physicians IDSA–Infectious Disease Society of America ATS–American Thoracic Society

ACCP– American College of Chest Physicians ECDC–European Centers for Disease Control and Prevention CDC–Centers for Disease Control and Prevention NHS–National Health Service (UK)

WHO–World Health Organization

Version history

March 31: Initial report.

April 15: New guidance from ACEP, IDSA, ATS, ACCP added, older and uninformative sources deleted. Guidance from MGH updated, new guidance from Brigham and Yale added. New summary points reflecting the new guidance.

Definition of terms

Guideline: Guidance developed by a professional society or government agency, intended for use at multiple hospitals.

Policy: Guidance developed at a hospital for use at that hospital. It may be based on guidelines or on expert opinion.

About this report

A Rapid Guidance Summary is a focused synopsis of recommendations from selected guideline issuers and health care systems, intended to provide guidance to Penn Medicine providers and administrators during times when latest guidance is urgently needed. It is not based on a complete systematic review of the evidence. Please see the CEP web site for further details on the methods for developing these reports.

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