COVID-19: SURGE TRIAGE FOR SUSPECTED INFLUENZA-LIKE ILLNESS

A Rapid Guidance Summary from the Penn Medicine Center for Evidence-based Practice
Last updated March 29, 2020, 2:00 pm All links rechecked March 28 unless otherwise noted.

Key questions answered in this summary

- What options are available to help hospitals manage triage of patients with suspected COVID-19 infection?
- How should patients be directed through triage when presenting at an emergency department or walk-in clinic for suspected COVID-19 infection?

Summary of major recommendations

Recommendation	Rating
Patients with suspected COVID-19 infection should be identified at the first point of contact with the health care system and triaged separately from other patients.	A
Consider providing a separate section of the emergency department for patients with suspected COVID-19 disease.	A
Use of tents and other temporary facilities is an appropriate means of providing separated triage capacity.	A
Establish alternatives to face-to-face triage such as telephone triage.	A
Consider a system where arriving patients wait in their car and are notified by telephone or other means when it is their turn to be seen.	B
Prioritize patients at increased risk of complications (such as elderly patients and patients with chronic diseases) for initial triage and in-person evaluation.	A
Consider a chain of contaminated / possibly contaminated / clean zones with one-way flow of patients through the zones.	B

Key: A–consistently recommended in multiple guidelines, B–recommended in a single guideline, recommended only in hospital policy documents, or recommended weakly, C–guideline recommendations lacking or inconsistent.

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.

Guidelines on use of dedicated intake desks or other triage facilities

Source	Recommendations
CDC March 25	Identify a designated location, separate from other clinical triage and evaluation areas, (utilizing the principles of social distancing) for the admission of patients with possible COVID-19. If dedicated space is not available, provide a means for patients to wait in a personal vehicle or outside the facility (if medically appropriate) and be notified by phone or other remote methods when it is their turn to be evaluated. Consider establishing triage stations outside the facility to screen patients before they enter. Surge capacity plans should include strategies to use in emergency departments to mitigate surge and accommodate additional patients. Strategies such as alternate triage sites, use of telemedicine, and call centers may be considered to reduce surge on the facility. Install physical barriers (e.g., glass or plastic windows) at reception areas to limit close contact between triage personnel and potentially infectious patients.

ECDC March 17	Dedicate facilities or parts of facilities to manage known or suspected COVID-19 cases.
	Establish a separate location for laboratory testing.
	Separate suspected cases from other patients (e.g. placement in different waiting rooms, use of different toilets); this also covers areas that need to be reached for water/food supplies.
	Build new facilities such as tents and prefabricated buildings for additional space at acute care hospitals.
	Establish dedicated teams for receiving and managing non-COVID-19-related patients. This could, for example, be done by designating a dedicated medical and administrative team.
WHO March 13	New hospitals or temporary structures can serve to augment COVID-19 patient care or essential health services, depending on national strategy.
	Screen and triage at all points of access to the health system, including primary health centers, clinics, hospital emergency units, and ad hoc community settings.
	Suspect patients should be given a mask and directed to separate area. Keep at least 1 m distance between suspected patients.

Hospital policies for dedicated triage/intake stations

Hospital	Recommendation
Cleveland March 23	The hospital has a medical screening tent for possible COVID-19 cases. A pre-screening area outside the tent is used to direct patients with one or more COVID-19 signs and symptoms to the tent. Patients needing emergency care are then directed to either the regular ED triage area or an ED COVID-19 area. Please see Appendix 1 for copies of the triage algorithms.
UCSF March 27	The hospital has set up a dedicated respiratory screening center (RSC). All patients arriving in the lobby receive an initial screening there and those with any respiratory symptoms are sent to the RSC. Very detailed algorithms are provided on the UCSF web site (see link at left) and should be consulted. Non-RSC clinics are no longer able to evaluate and treat potential COVID-19 patients in non-RSC clinic exam rooms, due to the limited availability of PPE and testing materials..
Zhejiang March 23	Healthcare facilities set up a relatively independent fever clinic including an exclusive one-way passage at the entrance of the hospital with a visible sign.
	Set up a pre-examination and triage area to perform preliminary screening.
	The movement of people shall follow the principle of "three zones and two passages": a contaminated zone, a potentially contaminated zone and a clean zone provided and clearly demarcated, and two buffer zones between the contaminated zone and the potentially contaminated zone. Details of the buffer zones are not explained in the handbook, but they could be spaces for donning and doffing of PPE.
	An independent passage shall be equipped for contaminated items; set up a visual region for one-way delivery of items from an office area (potentially contaminated zone) to an isolation ward (contaminated zone);
	Appropriate procedures shall be standardized for medical personnel to put on and take off their protective equipment. Make flowcharts of different zones, provide full-length mirrors and observe the walking routes strictly.

Guidelines on triage prioritization

Source	Recommendations
CDC March 24	Prioritize those who are at highest risk of complications: • Patients in long-term care facilities with symptoms • Patients 65 years of age and older with symptoms • Patients with underlying conditions with symptoms • First responders with symptoms Depending on testing strategy and capacity, mild and moderate patients may not be tested, and advised to self-isolate either in cohorted community facilities or at home.

WHO March 13	Older patients and those with comorbidities, such as cardiovascular disease and diabetes mellitus, have increased risk of severe disease and mortality. They may present with mild symptoms but have high risk of deterioration and should be admitted to a designated unit for close monitoring. While the majority of people with COVID-19 have uncomplicated or mild illness (81%), some will develop severe illness requiring oxygen therapy (14%) and approximately 5% will require intensive care unit treatment. Of those critically ill, most will require mechanical ventilation. The most common diagnosis in severe COVID-19 patients is severe pneumonia.
ECDC March 17	Triage patients based on ventilation capacity.

Hospital policies for triage prioritization

Hospital	Recommendation
Cleveland March 23	If patient has COVID-19 signs or symptoms, or requests testing for COVID-19, expedite patient transfer to the emergency department if the patient has abnormal vital signs (pulse oximetry < 93%, heart rate ≥ 110, respiration ≥ 22, toxic appearing), is immunocompromised, or has concerning history or physical exam findings. Otherwise direct patient to screening tent. Test patients if they have two of the following: shortness of breath, symptoms of upper respiratory infection, clinical risk factors (age > 60 or under 36 months, immunosuppression, cancer, ESRD on dialysis, diabetes, hypertension, coronary artery disease, reduced ejection fraction, lung disease) Please see Appendix 1 for copies of the triage algorithms.
UCSF March 27	Expedite patient evaluation if patient has key symptoms (e.g. shortness of breath or wheezing) or if symptoms are worsening over time, or if patient has risk factors (age > 60, immunocompromised, pregnant, chronic lung disease, cirrhosis, cardiovascular disease, ESRD, diabetes, hypertension).

Guidelines on alternatives to in-person triage

Source	Recommendations
CDC March 25	Establish alternatives to face-to-face triage such as telephone triage system for prioritizing patients who require a medical evaluation.
Ontario March 19	Health care workers conducting screening should ideally be behind a barrier to protect from droplet/contact spread. A plexiglass barrier can protect reception health care workers from sneezing/coughing patients.

Hospital policies on alternatives to in-person triage

Source	Policy
UCSF March 27	System has set up a video acute care clinic and a COVID Hotline for remote triage by navigator and triage nurse.
Zhejiang March 23	Use internet chat application for online consultation with hospital caregivers.

NOTE: Several other hospitals have set up call centers for outpatients and persons experiencing COVID-19 symptoms to call.

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.
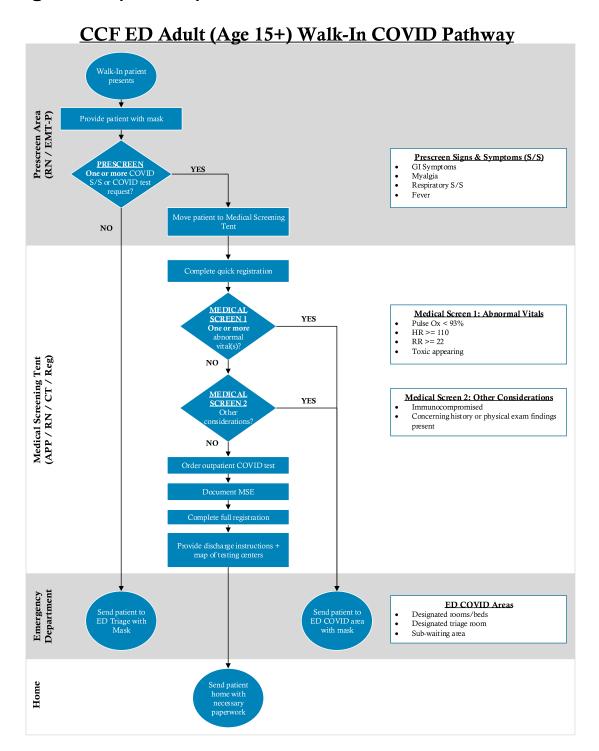
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Appendix 1A. Cleveland Clinic Emergency Department algorithm (walk-in)

CCF ED Adult (Age 15+) Walk-In COVID Pathway

Prescreen Area (RN / EMT-P)

Walk-In patient presents

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Provide patient with mask

↓

PRESCREEN One or more COVID S/S or COVID test request?

— YES → Move patient to Medical Screening Tent

— NO ↓

Prescreen Signs & Symptoms (S/S)
- GI Symptoms
- Myalgia
- Respiratory S/S
- Fever

Medical Screening Tent (APP / RN / CT / Reg)

Complete quick registration

↓

MEDICAL SCREEN 1 One or more abnormal vital(s)?

— YES →

— NO ↓

Medical Screen 1: Abnormal Vitals
- Pulse Ox < 93%
- HR >= 110
- RR >= 22
- Toxic appearing

MEDICAL SCREEN 2 Other considerations?

— YES →

— NO ↓

Medical Screen 2: Other Considerations
- Immunocompromised
- Concerning history or physical exam findings present

Order outpatient COVID test

↓

Document MSE

↓

Complete full registration

↓

Provide discharge instructions + map of testing centers

Emergency Department

Send patient to ED Triage with Mask

Send patient to ED COVID area with mask

ED COVID Areas
- Designated rooms/beds
- Designated triage room
- Sub-waiting area

Home

Send patient home with necessary paperwork

Appendix 1B. Cleveland Clinic Emergency Department algorithm (EMT)

Adult (Age 15+) EMS to CCF ED COVID Pathway

EMS Squad

Patient picked up by EMS

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Mask patient per EMS guidelines

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PRE-ARRIVAL PHONE SCREEN — One or more COVID S/S or COVID test request?

— YES → **MEDICAL SCREEN 1** One or more abnormal vital(s)?

— NO ↓

MEDICAL SCREEN 1 One or more abnormal vital(s)? — YES →

— NO ↓

MEDICAL SCREEN 2 Other considerations? — YES →

— NO ↓

Bring patient to the Medical Screening Tent

Pre-Arrival Screen Signs & Symptoms (S/S)
- GI Symptoms
- Myalgia
- Respiratory S/S
- Fever

Medical Screen 1: Abnormal Vitals
- Pulse Ox < 93%
- HR >= 110
- RR >= 22
- Toxic appearing

Medical Screen 2: Other Considerations
- Immunocompromised
- Concerning history or physical exam findings present

Medical Screening Tent (APP / RN / CT / Reg)

Complete quick registration

↓

MEDICAL SCREEN 1 One or more abnormal vital(s)? — YES →

— NO ↓

MEDICAL SCREEN 2 Other considerations? — YES →

— NO ↓

Order outpatient COVID test

↓

Document MSE

↓

Complete full registration

↓

Provide discharge instructions + map of testing centers

Medical Screen 1: Abnormal Vitals
- Pulse Ox < 93%
- HR >= 110
- RR >= 22
- Toxic appearing

Medical Screen 2: Other Considerations
- Immunocompromised
- Concerning history or physical exam findings present

Emergency Department

Send patient to ED Room with mask

Send patient to ED COVID area with mask

ED COVID Areas
- Designated rooms/beds
- Designated triage room
- Sub-waiting area

Home

Send patient home with necessary paperwork