Welcome to the Webcast!

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Nothing to disclose
Click on the link below to access this webcast recording and past COVID-19 webcast recordings.

This webcast is being recorded. The recording will be available in 24-48 hours at: covid19.sccm.org/webcast

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Click on the logos below to access each organization's homepage.

Click anywhere on the slide below to access COVID-19 Resources from the Centers for Disease Control and Prevention.
Audience Participation

Control Panel

Today’s Speakers

Alexander Isakov, MD, MPH, FACEP, FAEMS
Professor of Emergency Medicine
Director, Section of Prehospital and Disaster Medicine
Department of Emergency Medicine
Emory University School of Medicine
Atlanta, Georgia, USA
Nothing to disclose

Linda R. Greene, RN, MPS, CIC, FAPIC
Director Hospital Infection Prevention
UR Highland Hospital
Rochester, New York, USA
Nothing to disclose

John Lynch, MD, MPH, FIDSA
Associate Professor
University of Washington School of Medicine
Harborview Medical Center
Seattle, Washington, USA
Nothing to disclose
Polling Question

Regarding the COVID-19 vaccines available in the US:

A. I have completed the COVID-19 vaccines in the US.
B. I have begun the recommended vaccination regimen, but have not yet completed it.
C. I may get vaccinated, but I am not sure right now.
D. I will not get vaccinated.

Data Question

What important information needs to be relayed to the ICU when a critically ill patient with COVID is transported from the ED? What are the common communication failures?
<table>
<thead>
<tr>
<th>Background</th>
<th>Exposure. New positives? Details?</th>
</tr>
</thead>
</table>

**Assessment**
- Mental status
  - Alert, responsive, non-responsive
  - Severe: D2 needs nasal cannula, HFNC, Intubation
- Initial signs
  - Oxygenation
  - Severe: O2 needs nasal cannula, HFNC, etc.
  - Critical: Intubation
- Devices in place
  - IV, Central Line, Urinary catheter, etc.
- Skin
  - Rash? Color?
- Medications given
- Family and patient wishes
  - Family? Spokesperson? Do not intubate?

| ENHANCED PRECAUTIONS: N95 mask* (or equivalent), gloves, gown, eye protection; disposable stethoscope; airborne infection isolation room for aerosol-generating procedures |

<table>
<thead>
<tr>
<th>Diagnostic testing</th>
<th>Actions</th>
<th>Explanatory notes</th>
</tr>
</thead>
</table>
| Nasopharyngeal swab | • Perform SARS-CoV-2 (COVID-19) test  
• Test for influenza if prevalent in the community  
• Do NOT obtain viral cultures  
• Oropharyngeal swab is an alternative if nasopharyngeal swab is not available.  
• In intubated patients, tracheal aspirates and nonbronchoscopic alveolar lavage (*BAL*) are also acceptable.  
• Bronchoscopy is only performed for this indication when upper respiratory samples and *BAL* are negative. |
| Other microbiology | • Obtain the following:  
• Blood cultures  
• Sputum culture, if clinically indicated (avoid induced sputum)  
• Urinary antigen for Legionella, Pneumococcus, if clinically indicated  
• Neutropenia is uncommon while lymphopenia is common, resulting in a high ratio of neutrophils/lymphocytes.  
• Elevated LFTs are common.  
• Procalcitonin is often low early in illness.  
• Lymphopenia and elevation of LDH, ferritin, and C-reactive protein (CRP) are associated with disease progression and need for mechanical ventilation. |
| Basic laboratory testing | • Obtain the following:  
• CBC with differential counts  
• Urinalysis  
• Chemistry panel including LFTs  
• Troponin and BNP at baseline, and subsequently as indicated  
• Biomarkers at baseline and for serial monitoring: procalcitonin, ferritin, CRP, CPE, D-dimer, troponin, fibrinogen, LDH  
• Main role of POC ultrasound is to identify other causes of respiratory compromise (eg, pneumothorax, pleural effusion, pericardial effusion, bowel Kelly) or other contributions to hypotensive shock.  
• Characteristic findings on POC ultrasound in COVID-19 pneumonia are non-specific and include pleural thickening and 3 lines. |
| Imaging | • Obtain portable chest radiograph  
• POC ultrasound may provide additional information  
• CT only in patients with an indication that would change management  
• Characteristic findings on POC ultrasound in COVID-19 pneumonia are non-specific and include pleural thickening and 3 lines. |

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**Data Question**

What is the COVID risk among frontline healthcare workers? Does it change with intermittent reuse of PPE? Are there demographic disparities?
COVID-19 Risk among front-line HCW

Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study


Lancet Public Health 2020

- Prospective observational cohort study in the UK and US — general community and frontline HCW — March/April 2020
- Over 2.8 million enrolled (182K in the US)
- After adjusting for likelihood of accessing a test, risk of a positive test elevated 3-fold (aHR 3.4 (CI 3.37-3.43) in FHCW
- Inadequate PPE 5.91 (CI 4.53-7.71)
- PPE reuse (5.06 (CI 3.90-6.57) — reuse of PPE and inadequate access to PPE noted among minority HCW
- HCW is the UK were at higher risk of reporting a positive test

Data Question

How do we prevent harm, in this case, SARS-CoV-2 transmission?
Data Question

Management of hypoxic respiratory failure – what modalities are recommended, and which are associated with risk of transmission due to aerosol dispersion?
Discussion Question

What are specific actions and tools that we can use to eliminate/reduce infection risk?
Discussion Question

What are the greatest risks for SARS-CoV-2 infection of HCWs?

Data Question

How does patient boarding in the emergency department and emergency department crowding impact safe practice?
Question:

During your last shift, what percentage of bed (real beds not hallway spaces) were occupied by boarders (inpatients waiting for a bed) at the peak time. Calculate number of boarders/number of real beds.

<table>
<thead>
<tr>
<th>Response</th>
<th>No. of Responses</th>
<th>Percentage</th>
</tr>
</thead>
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<td>3</td>
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<tr>
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<tr>
<td>Over 100%</td>
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<td>1.1%</td>
</tr>
</tbody>
</table>

Grand Total 95

Discussion Question

What innovations have emergency departments implemented to mitigate risk for their personnel?
Data Question

The ED is transferring a patient to the ICU with a moderate-risk exposure 2 days ago. The patient is currently negative for COVID and has no respiratory symptoms. The patient is admitted for severe diabetic ketoacidosis. What precautions should be taken during transfer and in the ICU?

Exposure to COVID

![Chart showing post-quarantine transmission risk](chart.png)
Discussion Question

What device considerations should be in place before transfer?

Data Question

What role do prehospital termination of resuscitation guidelines play in mitigating risk of COVID-19 transmission?
**Discussion Question**

How does vaccination change the landscape for HCWs?
Polling Question

There are data to support the use of respirators vs masks for SARS-CoV, MERS-CoV and SARS-CoV-2.

A. True  
B. False

Case Study

A 70-year-old patient presents to the emergency department with vomiting and diarrhea. At triage he is not febrile but appears fatigued and dehydrated. The emergency department is full. Twenty percent of the beds are occupied by admitted patients boarding in the department awaiting a hospital bed assignment. Unable to place him in a room, staff place him in a hall stretcher together with other lower acuity patients for evaluation and management. He remains unable to tolerate oral fluids and laboratory evaluation identifies acute kidney injury. A rapid COVID test is obtained to facilitate his admission to the Observation Unit. The COVID test is positive. What does this case reveal about emergency department personnel safety and infection prevention?
Polling Question

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Additional Question & Answer

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Thank You!

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https://sccm.org/COVID19RapidResources/Home

Click the hyperlink below to access IDSA's COVID-19 Real-Time Learning Network

Click the hyperlink below to access ACEP's COVID-19 Resources

https://www.acep.org/corona/covid-19-Main/

COVID-19

COVID Data Visualizations

COVID-19 is a rapidly-evolving situation, so we will continue to update this page to ensure you have the latest information. Scroll down for clinical content, federal guidance, daily news updates, wellness resources and more.

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