COVID-19
Protecting EMS Healthcare Personnel

Alexander Isakov, MD, MPH
Professor of Emergency Medicine
Director, Section of Prehospital and Disaster Medicine
Emory University School of Medicine
No Conflicts to Report

National Ebola Training and Education Center

National Institute of Environmental Health Sciences-Worker Training Program

C19check.com
KEEPING YOU SAFE

Standard and Transmission Based Precautions
Identify, Isolate and Inform
Identify

Risk assessment:

What is the likelihood that this patient has COVID-19?

- Signs and symptoms
- Exposure history

EMD screening and field screening
COVID-19

• Signs and symptoms
  • Fever (43.8% -> 88.7%)
  • Cough (67.8%)
  • Sputum production (33.7%)
  • Shortness of breath (18.7%)
  • Headache (13.6%)
  • Sore throat (13.9)
  • Nausea and vomiting (5%)
  • Diarrhea (3.8%)

Guan et al. Clinical Characteristics of Coronavirus Disease 2019 in China, Feb 28, 2020 NEJM
Isolate

- 6-foot stand-off distance
- Mask the patient for source control
- Limit the number of HCW making patient contact to the minimum required to safely manage the patient
- Restrict contact with patient unless in appropriate PPE

*Standard + contact + airborne + eye protection*
Inform

- Inform other responders about need to implement infection prevention procedures
- Inform staff at receiving facility
- Inform supervisor/medical director/local public health agency, as directed by local protocol
EMS Biosafety Transport

• Environmental controls
  – Separate driver compartment from patient compartment
  – Air on high without recirc – exhaust fan on high

• Policies and procedures
  – Limit exposure of personnel
  – Keep driver compartment sterile – driver wear N95 respirator
  – No family members in ambulance except with minors – mask the family member
  – Mask the patient for source control
  – Modified clinical guidelines

• Safety equipment
  – PPE
  – Exhaust filters
Clinical Considerations

Provide quality patient care

Balance needs of patient with the safety of the care team and the public

- Limit aerosol producing procedures
  - Nebs, BVM, CPAP, BiPAP, suction, intubation, CPR
- Termination of resuscitation guidelines – no ROSC?
Mission Recovery

• Cleaning and disinfection of ambulance –
  – Wear appropriate PPE when cleaning and disinfecting the ambulance
  – Keep doors open, and ventilation systems turned on
  – Clean visibly soiled surfaces
  – Use EPA registered, hospital grade disinfectants
    • Examine claims against pathogens
    • Examine contact time

• Post-mission health awareness
  – Healthcare personnel should be alert for fever or respiratory symptoms for one incubation cycle

• What about testing?
OPTIMIZE PPE SUPPLY

• **N-95 respirator**
  – Extended Use and Limited Reuse (5 times)
  – Alternative respirators
  – Aerosol producing procedures

• **Eye protection**
  – Goggles, face shield
  – Disinfection and reuse

• **Gown conservation**
  – Laundered gowns
  – Reserve for close contact
  – Reserve for aerosol producing procedures

*Limit number of providers making contact*
Resources

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Interim Guidance for Emergency Medical Services (EMS) Systems and 911 Public Safety Answering Points (PSAPs) for 2019-nCoV in the United States

ASPRTRACIE.HHS/GOV

NETEC eLearning Center
courses.netec.org

EMS Biosafety Transport Courses
Awareness, Operator and Technician