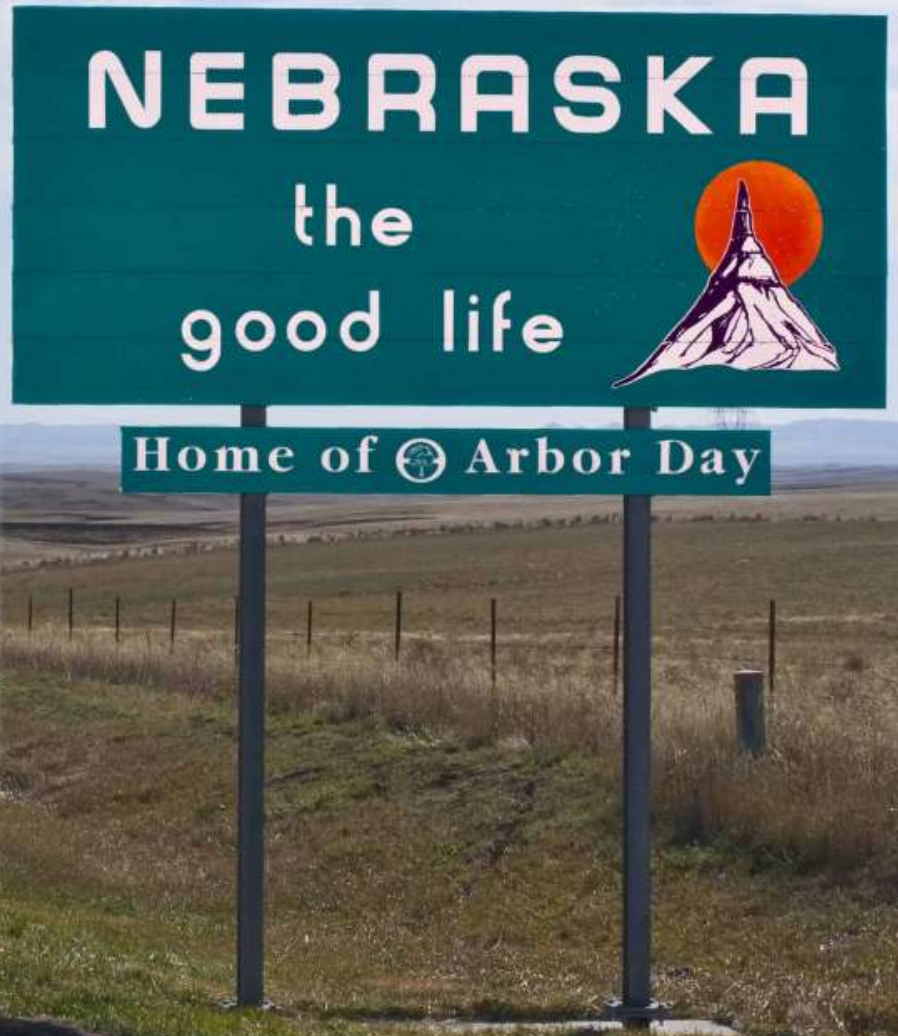
COVID-19: New Standards to Protect EMS

The journey back to the things we love…

Objectives:

- Review the history and epidemiology of COVID-19.
- Examine the most recent changes in patient care and treatment for individuals with suspected COVID-19 infection.
- Discuss the use of MDI inhalers to reduce transmission risk and avoid intubation.
- Review protocols
- Review resources available to EMS.



What is COVID-19?

- A viral respiratory illness. There is no current vaccine to protect against it and things like antibiotics will not treat the virus.
- Coronavirus isn't new, it was discovered in animals about two decades ago. Humans get other strains of coronavirus often, but COVID-19 is a new strain that our immune system has never faced before.
- The outbreak:
  - Death rate is at about 6.9% (166,794 deaths out of 2,432,092 cases worldwide as of 4/16/2020)
  - US death rate is at about 5.3% (40,702 deaths out of 761,991 cases as of 4/16/2020)
  - Nebraska death rate is at about 1.9% (28 deaths out of 1,474 cases as of 4/20/2020)
  - Nebraska Map of Cases
    - https://nebraska.maps.arcgis.com/apps/opsdashboard/index.html#/4213f719a45647bc873ffb58783ffef3
  - World and US Map of Cases
    - https://coronavirus.jhu.edu/map.html

Protecting Yourself

- Time / Number: Keep your duration and number of responders with the patient to a minimum.
- Distance: Attempt to maintain a 6 ft distance from the patient.
- Shielding: Early proper PPE is a MUST!

http://dhhs.ne.gov/OEHS%20Program%20Documents/EMS%20Guidelines%20for%20PPE.pdf

Who are we concerned about?

- CDC Guidelines:
  - Fever greater than 100.4°F
  - Cough (productive or non-productive)
  - Flu-like symptoms
  - Anyone in direct contact with a confirmed COVID-19 patient

WE COME FIRST!!

- Take your temperature often
- Any fever, cough, upper respiratory illness signs or symptoms
  - Report up your chain of command and DON'T respond to calls or report to work
- If at any point during a shift you start to show these signs and symptoms, ensure you have a surgical mask on and report it up your chain of command

Proper PPE

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EMS Guidelines for Personal Protective Equipment (PPE) Use in Response to COVID-19 Calls for Service

See the Figure below for recommended PPE to be worn by EMS personnel that will be in contact with a suspected or confirmed COVID-19 patient.

Remember

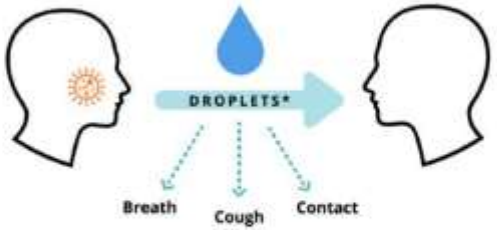
- PPE must be donned correctly before entering the patient area.
- PPE must remain in place and be worn correctly for the duration of work in potentially contaminated areas. PPE should not be adjusted (e.g., retying gown, adjusting respirator/facemask) during patient care.
- PPE must be removed slowly and deliberately in a sequence that prevents self-contamination. A step-by-step process should be developed and used during training and patient care.

Eye Protection: Goggles or Face Shield that fully covers front and sides of face
Prescription eyeglasses are NOT considered adequate eye protection
Used to protect eyes from COVID-19 containing droplets

Mask: N95* or surgical mask
Used to protect you from breathing in COVID-19 containing droplets

Isolation Gown: One that fully covers from neck to knees and arms to wrist
Used to protect clothes and skin surface from COVID-19 containing droplets

Gloves: Disposable Nitrile
Used to protect skin surface from COVID-19 containing droplets

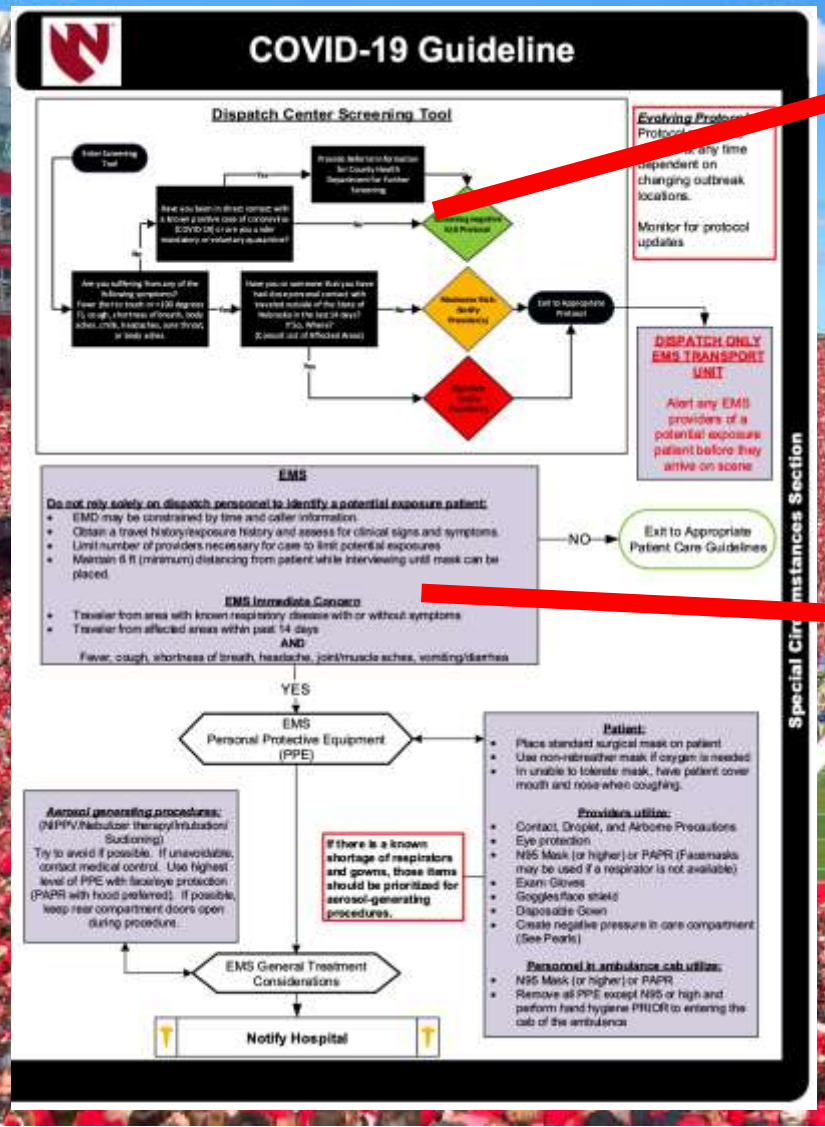


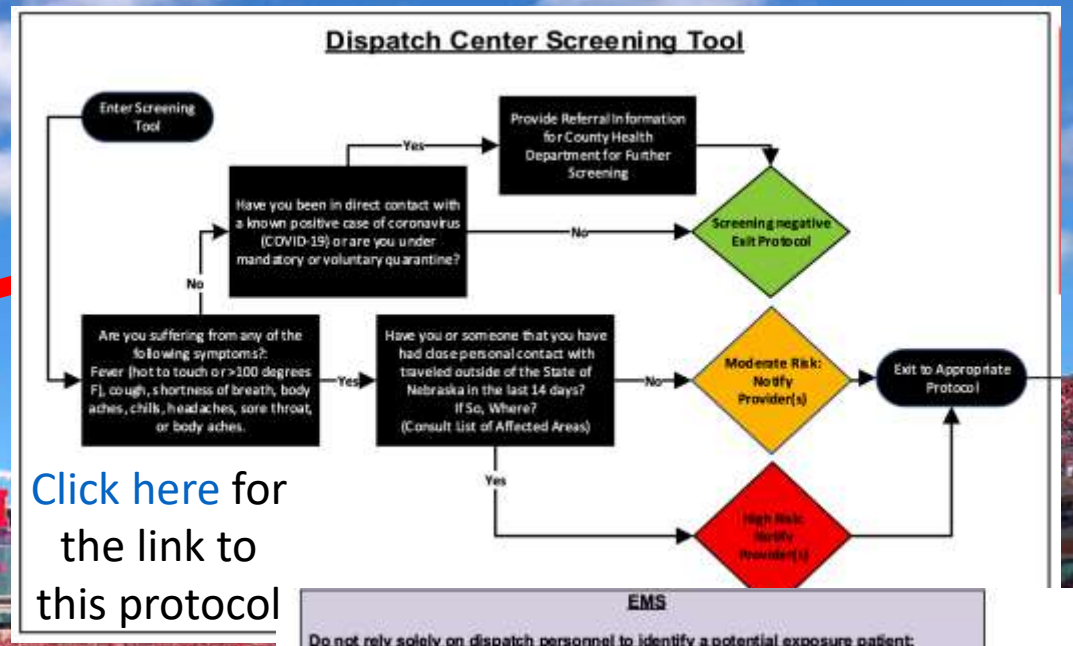
COVID-19 is spread from someone's breath, cough, direct contact or touching an infected surface. If the virus gets into a mucous membrane, located in your eyes, nose and mouth, infection may occur. All PPE equipment shown is essential to keep you safe.

EMS should limit personnel exposure to possible COVID-19 patients by limiting the number of providers that respond or have direct contact with the patient.

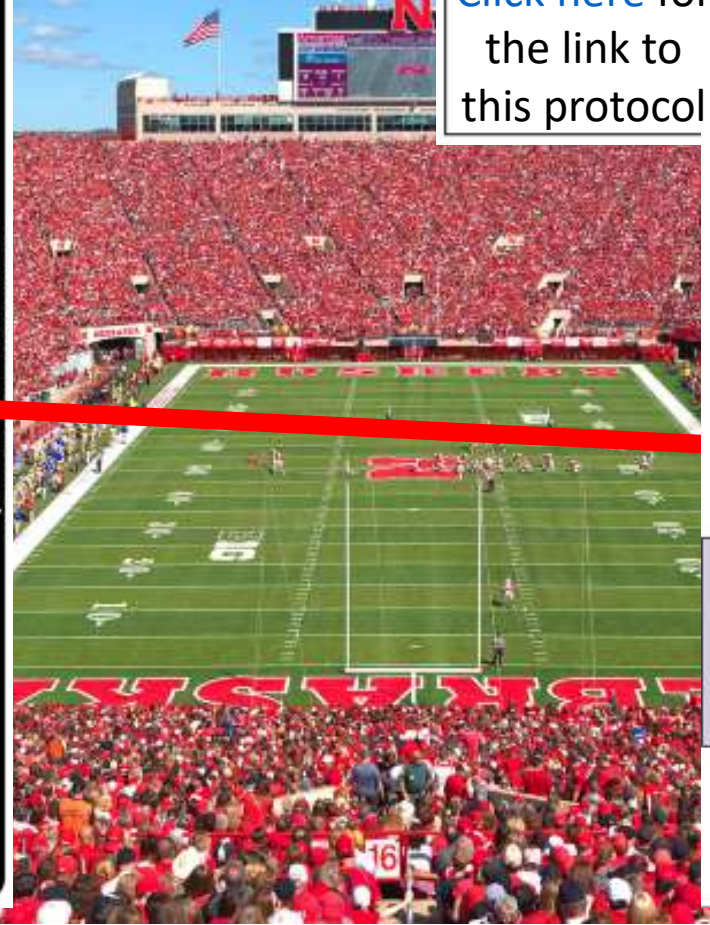
Click here for the link to this guide

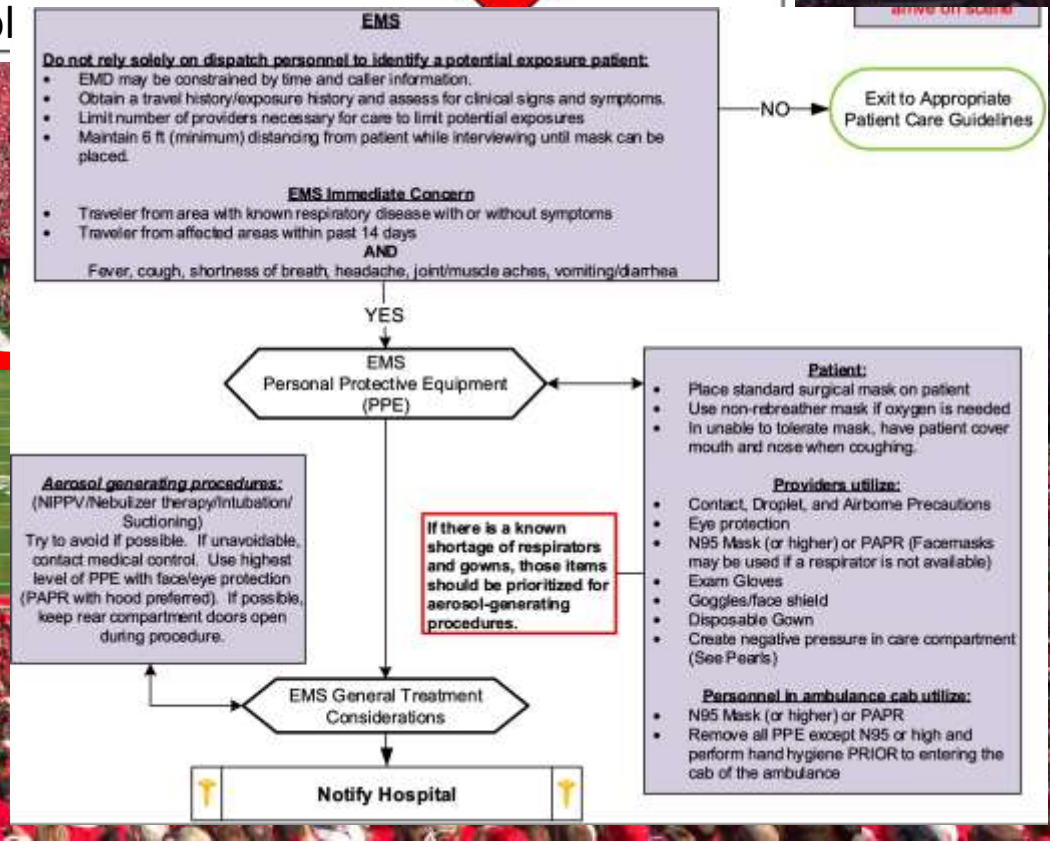
High Consequence Pathogen Protocol



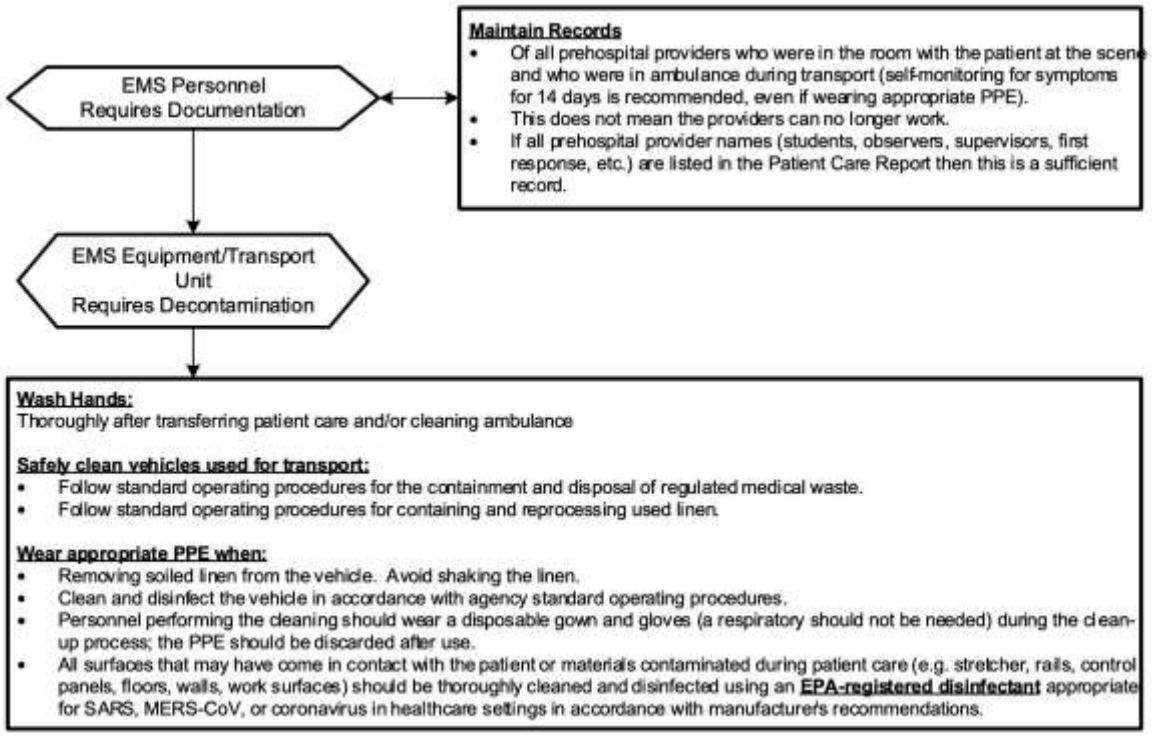


Click here for the link to this protocol





High Consequence Pathogen Protocol Continued

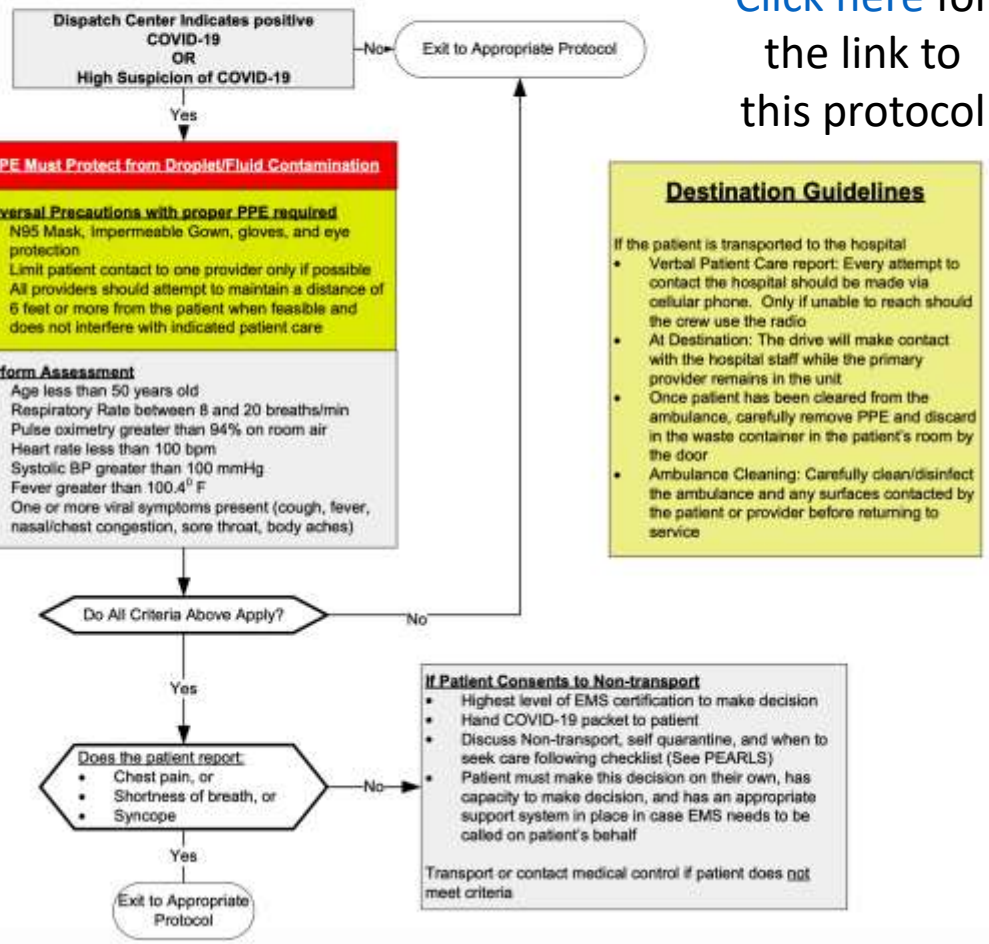


Pearls

- Transport
  - **Limit transport of the patient only** (No family or others unless absolutely necessary, have family ride in cab and apply PPE)
  - Occupants in cab of vehicle all should wear N95 Mask (or higher) or PAPR.
  - Limit number of providers in vehicle required to provide patient care in order to limit exposures
  - Ensure use of all PPE for crew and passengers when aerosol generating procedures utilized
- Negative pressure in care compartment
  - Door or window available to separate driver and care compartment space:
    - Close door/window between driver and care compartment and operate rear exhaust fan on full/high.
  - No door or window available to separate driver and care compartment space:
    - Open outside air vent in driver's compartment and set rear exhaust fan to full/high.
  - Set vehicle ventilation system to non-recirculating to bring in maximum outside air.
  - Use recirculating HEPA ventilation system, if equipped.
- Airborne precautions:
  - Standard PPE with fit-tested N95 mask (or PAPR respirator) and utilization of a disposable gown, single pair of gloves, and face shield/goggles.
    - Level appropriate for COVID-19, Aspergillus, Tuberculosis, Measles (rubeola), Chickenpox (varicella-zoster), smallpox, influenza, Rhinovirus, Norovirus, and Rotavirus.
- Contact precautions:
  - Standard PPE with utilization of a gown, change of gloves after every patient contact, and strict hand washing precautions.
    - This level is utilized with GI complaints, blood or body fluids, C-diff, scabies, wound and skin infections, MRSA, Clostridium difficile is not inactivated by alcohol-based cleaners. Washing with soap and water is indicated
- Droplet precautions:
  - Standard PPE plus a standard surgical mask for providers who accompany patients in the treatment compartment and a surgical mask or NRB O2 mask for the patient.
    - This level is utilized when Influenza, Meningitis, Mumps, Streptococcal pharyngitis, Pertussis, Adenovirus, Rhinovirus, SARS, and undiagnosed rashes.
- All-hazards precautions:
  - Standard PPE plus airborne precautions plus contact precautions.
    - This level is utilized during the initial phases of an outbreak when the etiology of the infection is unknown or when the causative agent is found to be highly contagious (e.g. SARS, MERS-CoV, COVID-19).
- COVID-19 (Novel Coronavirus):
  - **For most current criteria to guide evaluations of patients under investigation:**
  - http://www.cdc.gov/coronavirus/2019-nCoV/clinical-criteria.html

Non-Transport Protocol

History	Signs and Symptoms	Differential
• Flu-like Symptoms	• Fever greater than 100.4 F • Rhinorrhea, nasal congestion • Productive Cough • Chills • Weakness/flu-like symptoms • Body aches	• Pneumonia • Viral URI • Bronchitis • COVID-19 • Influenza



Click here for the link to this protocol

EMS Checklist: Safe to leave at home?
The patient is stable enough to receive care at home.
The patient meets all inclusion criteria in the protocol.
Appropriate caregivers are available at home.
Recommended: There is a separate bedroom where the patient can recover without sharing immediate space with others.
Resources for access to food, phone, and other necessities are available.
The patient and other household members have access to appropriate, recommended personal protective equipment (at a minimum, gloves and facemask) and are capable of adhering to precautions recommended as part of home care or isolation (e.g., respiratory hygiene and cough etiquette, hand hygiene).

Source: Centers for Disease Control and Prevention. Interim Guidance for Implementing Home Care of People Not Requiring Hospitalization for Coronavirus Disease 2019 (COVID-19). Updated on February 12, 2020. Access at https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-home-care.html?

PEARLs:

- Recommended Exam: Mental status, skin, HEENT, heart, lungs, and neurological.
- Extremes of age are more prone to heat emergencies (the very young or elderly).
- Common signs and symptoms of COVID-19: Fever; cough, sore throat/body aches, fatigue, shortness of breath/difficulty in "catching my breath". Rhinorrhea (runny/stuffy nose) is uncommon for COVID-19, but may be present or usually found with other viral or bacterial upper respiratory infections.
- Non-transport requirement. The patient is fully alert and oriented to his or her normal baseline and not intoxicated, to your knowledge.
- There are no obvious indications that this patient is experiencing an exacerbation of a chronic illness, such as COPD, CHF, asthma, etc.
- If the patient's temperature remains greater than 100.4°F and NSDAIDs or acetaminophen have been used within the last 6 hours, transport should be highly encouraged.
- The patient must be able to contact 911 if needed again: functional phone, an adult who will be with the patient for most of the time, a LifeAlert type system, or other appropriate means of communication.
- COVID-19 is considered as a droplet-precaution viral disease. However, droplets may be aerosolized by coughing, sneezing, or nebulized medication use (home nebulizer) and remain in the air for several hours. Use an N95 mask on yourself when making patient contact. If the patient is transported, apply a surgical mask to the patient to protect others. Do NOT use an N95 mask on these patients.

So what if the patient needs transport?

Be cautious of aerosolization during patient care. For patients with a suspected respiratory viral infection:

- NO nebulized medications, NO CPAP for these patients.
- Instead, use albuterol MDIs (Metered Dose Inhaler) to decrease risk of aerosolization.
- Watch this video to build a closed MDI system for your protection.
- Talk to your PMD to find the best method to protect yourself while still treating your patients
- The goal is to prevent intubation.

Risk Classification

- Use this table to determine risk of exposure

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DEPT. OF HEALTH AND HUMAN SERVICES

Pete Ricketts, Governor

Epidemiologic Risk Classification for Asymptomatic Healthcare Personnel Following Exposure to Patients with COVID-19 or their Secretions/Excretions in a Healthcare Setting, and their Associated Monitoring and Work Restriction Recommendations

HCP=healthcare personnel; PPE=personal protective equipment

Epidemiologic risk factors	Exposure category	Recommended Monitoring for COVID-19 *(until 14 days after last potential exposure)*	Work Restrictions for Asymptomatic HCP
Prolonged close contact with a COVID-19 patient who was wearing a facemask (i.e., source control)			
HCP PPE: None	Medium	Active	Exclude from work for 14 days after last exposure
HCP PPE: Not wearing a facemask or respirator	Medium	Active	Exclude from work for 14 days after last exposure
HCP PPE: Not wearing eye protection	Low	Self with delegated supervision	None
HCP PPE: Not wearing gown or gloves[a]	Low	Self with delegated supervision	None
HCP PPE: Wearing all recommended PPE (except wearing a facemask instead of a respirator)	Low	Self with delegated supervision	None
Prolonged close contact with a COVID-19 patient who was not wearing a facemask (i.e., no source control)			
HCP PPE: None	High	Active	Exclude from work for 14 days after last exposure
HCP PPE: Not wearing a facemask or respirator	High	Active	Exclude from work for 14 days after last exposure
HCP PPE: Not wearing eye protection[b]	Medium	Active	Exclude from work for 14 days after last exposure
HCP PPE: Not wearing gown or gloves[a,b]	Low	Self with delegated supervision	None
HCP PPE: Wearing all recommended PPE (except wearing a facemask instead of a respirator)[b]	Low	Self with delegated supervision	None

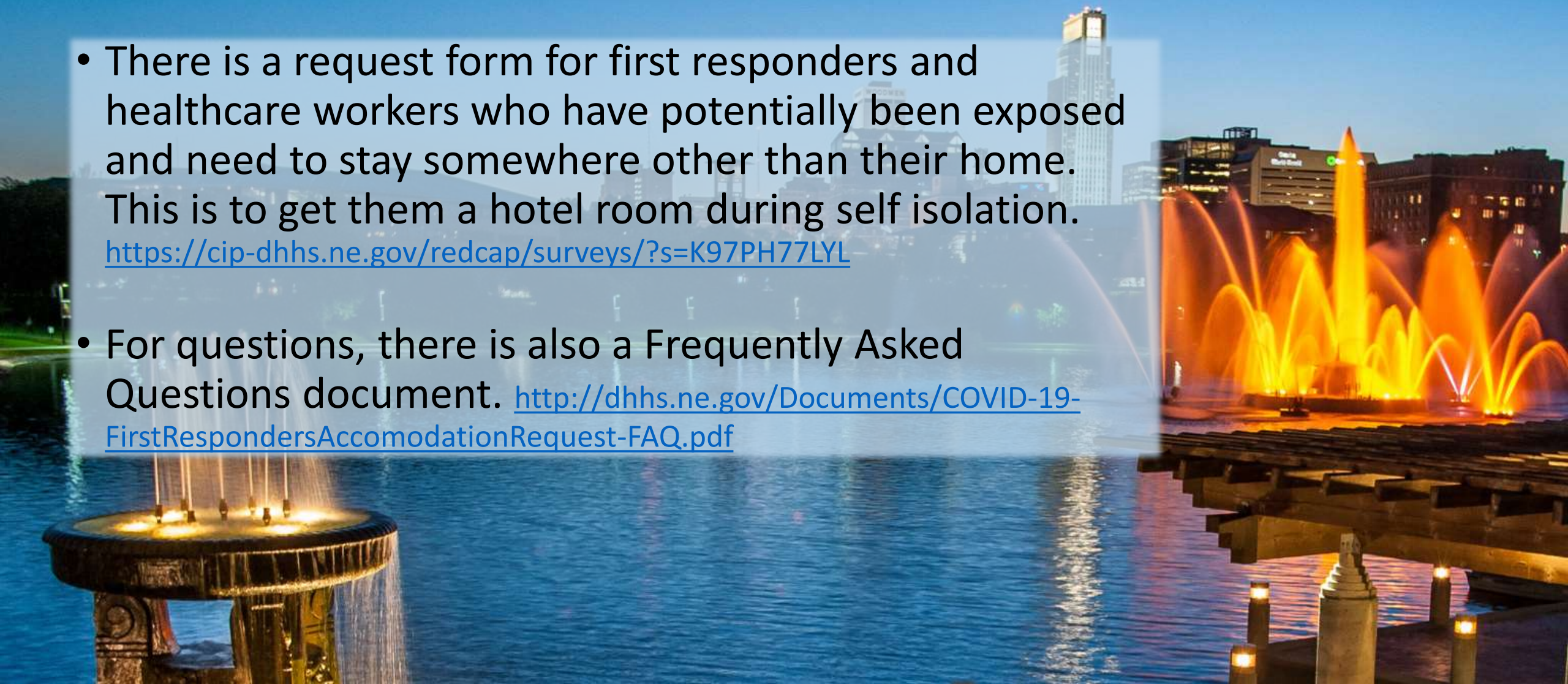
[a]The risk category for these rows would be elevated by one level if HCP had extensive body contact with the patients (e.g., rolling the patient).

[b]The risk category for these rows would be elevated by one level if HCP performed or were present for a procedure likely to generate higher concentrations of respiratory secretions or aerosols (e.g., cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction). For example, HCP who were wearing a gown, gloves, eye protection and a facemask (instead of a respirator) during an aerosol-generating procedure would be considered to have a medium-risk exposure.

Remember

- Not every patient has COVID-19.
- This education and these changes in practice only apply to patients with suspected COVID-19.
- For your other patients, follow your protocols.

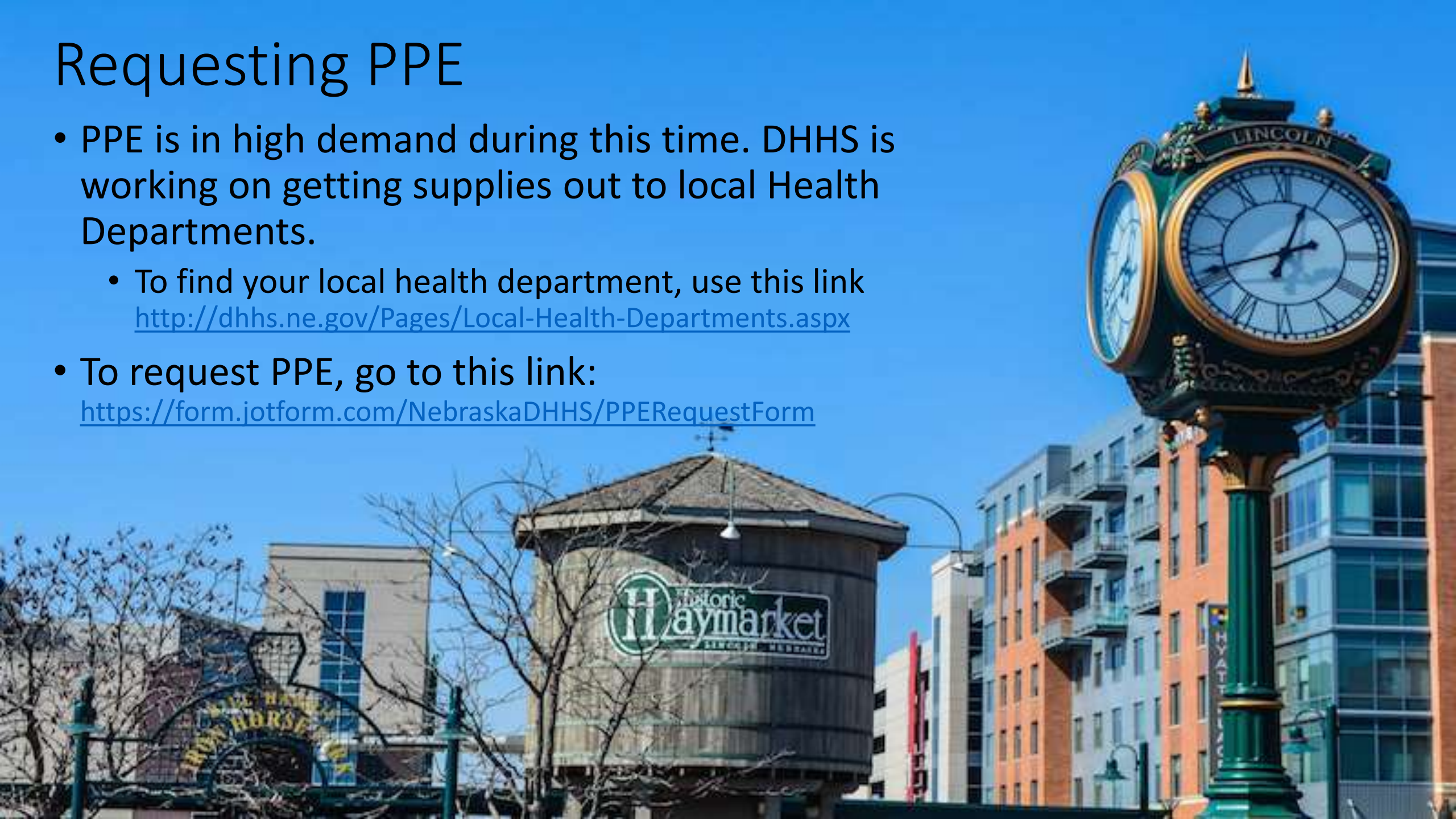
First Responder Accommodation



- There is a request form for first responders and healthcare workers who have potentially been exposed and need to stay somewhere other than their home. This is to get them a hotel room during self isolation. https://cip-dhhs.ne.gov/redcap/surveys/?s=K97PH77LYL
- For questions, there is also a Frequently Asked Questions document. http://dhhs.ne.gov/Documents/COVID-19-FirstRespondersAccomodationRequest-FAQ.pdf

Requesting PPE

- PPE is in high demand during this time. DHHS is working on getting supplies out to local Health Departments.
  - To find your local health department, use this link http://dhhs.ne.gov/Pages/Local-Health-Departments.aspx
- To request PPE, go to this link: https://form.jotform.com/NebraskaDHHS/PPERequestForm

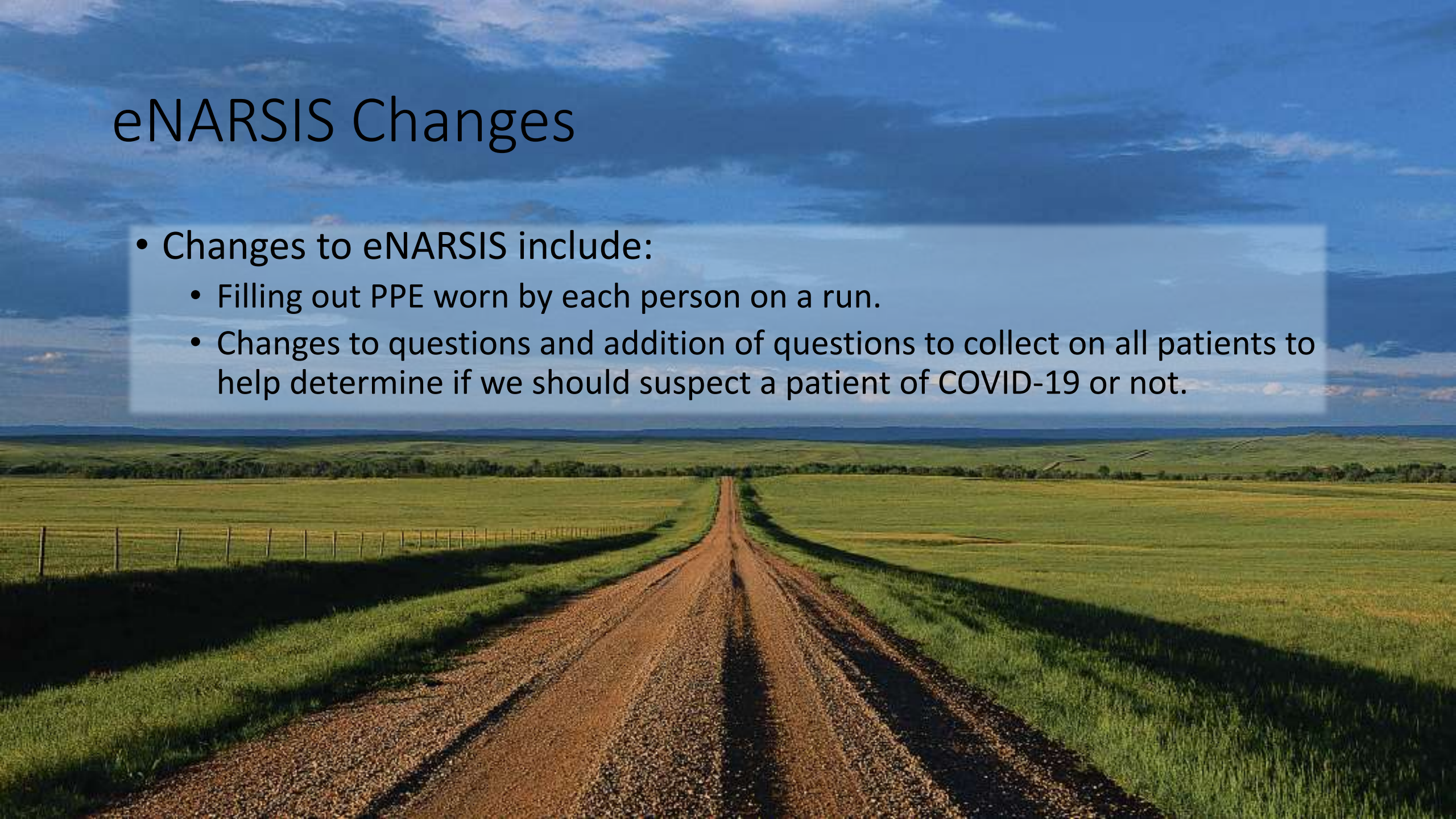


Priority Testing

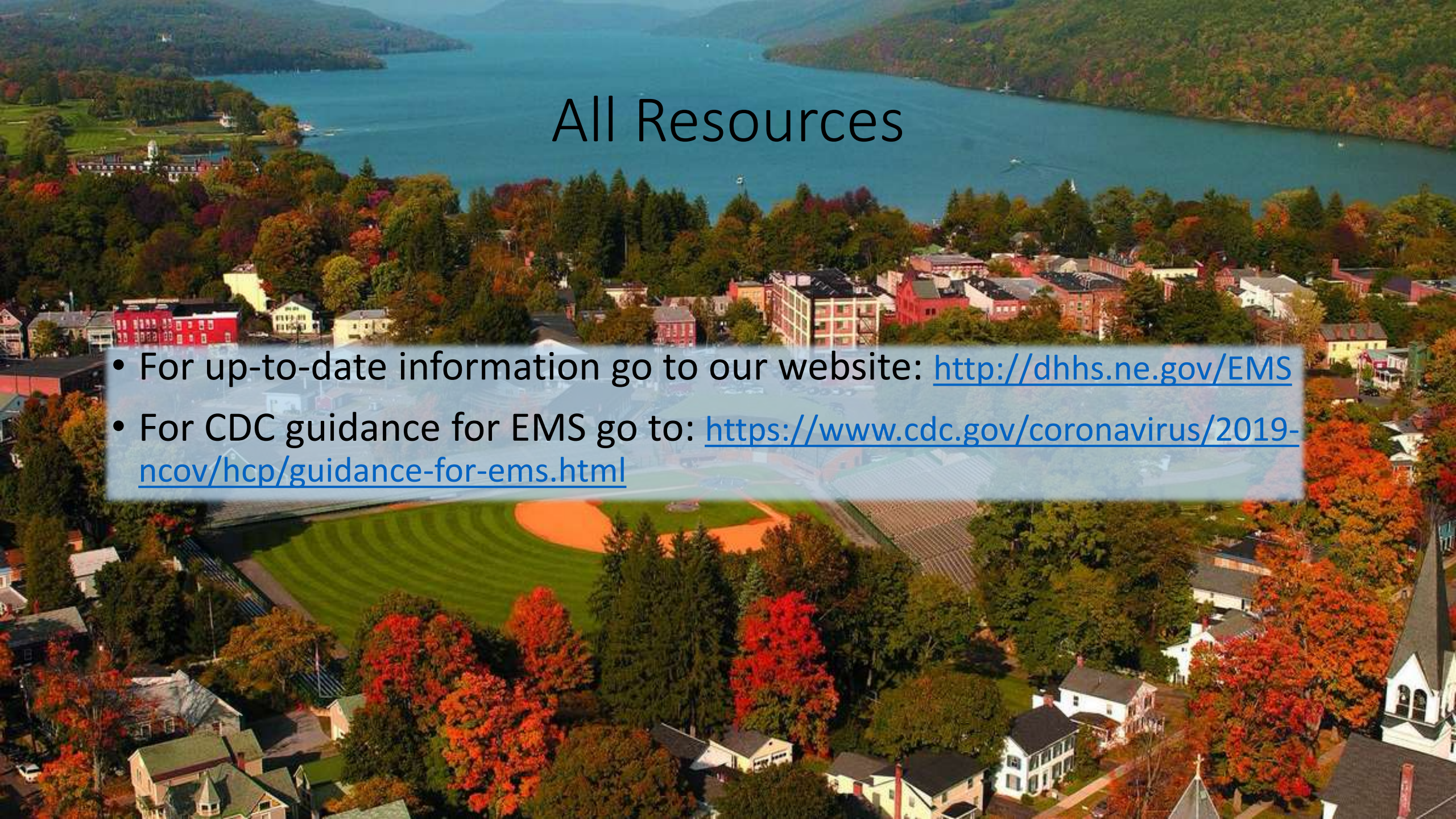
- First responders have priority testing through the Nebraska Public Health Lab for a clinical or rule-out diagnosis of COVID-19. In order to expedite this we are asking for your help:
  - Please UPDATE your EMS Service Roster in eNARSIS Elite immediately. We are asking for this because these rosters include licensed and non-licensed staff from your service.
  - EMS Services who use third party vendors to import into eNARSIS should ensure their staffing list is also updated in eNARSIS as required by regulation. If you have questions on this contact DHHS.eNARSIShelp@Nebraska.gov

eNARSIS Changes

- Changes to eNARSIS include:
  - Filling out PPE worn by each person on a run.
  - Changes to questions and addition of questions to collect on all patients to help determine if we should suspect a patient of COVID-19 or not.

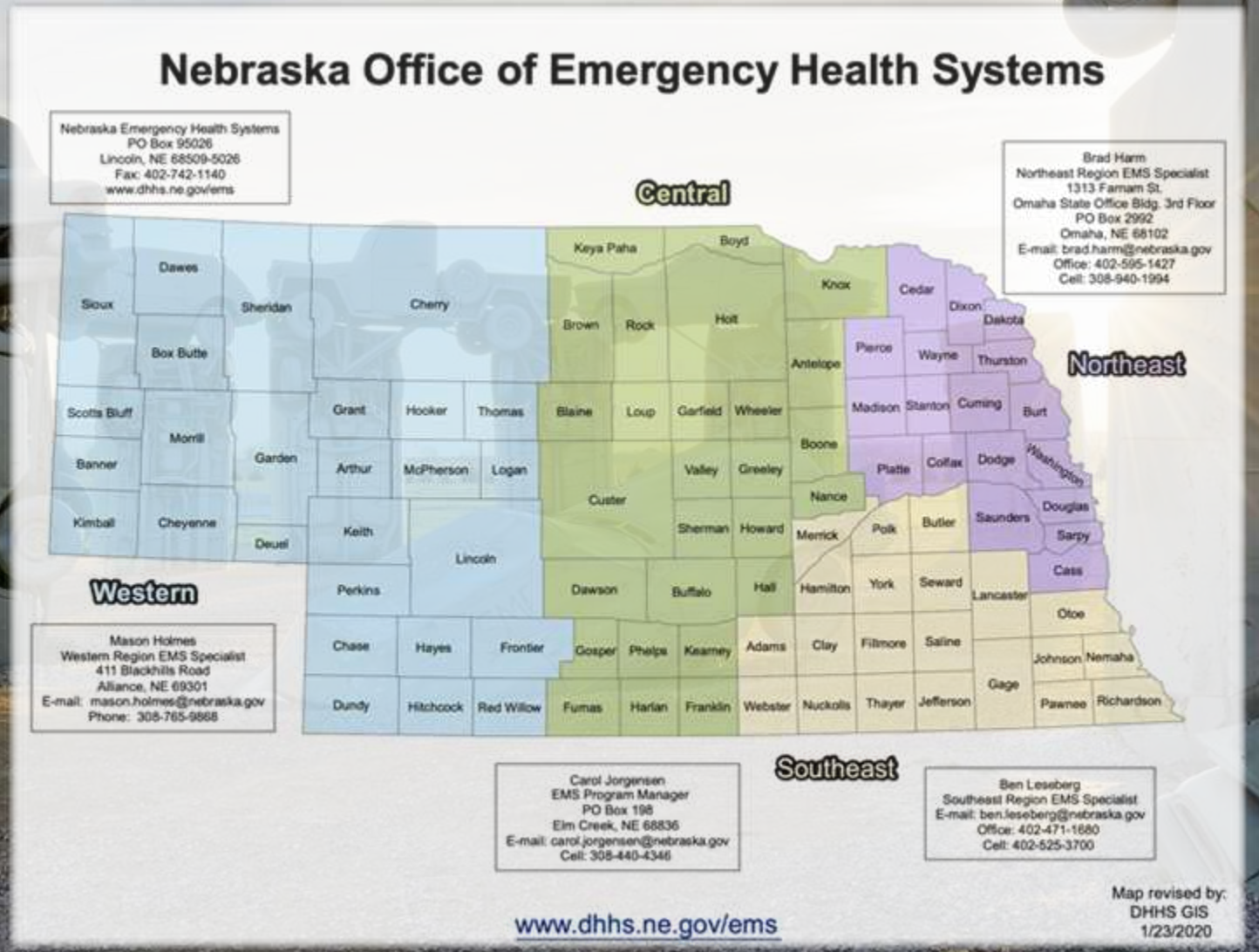


All Resources



- For up-to-date information go to our website: http://dhhs.ne.gov/EMS
- For CDC guidance for EMS go to: https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-for-ems.html

Contact your EMS Specialist



We will make it through this time together.
We will return to doing the things we love
and going to the places we enjoy!
Stay safe!