SECTION 1. BACKGROUND

COVID-19 (COrona VIrus Disease) is a respiratory illness caused by the 2019 novel coronavirus, now known as SARS-CoV-2. Symptoms of COVID-19 range from mild to severe and can include fever, cough, shortness of breath, myalgia and fatigue. The virus spreads from person to person with the main mode of transmission through respiratory droplets by inhalation or deposition on mucosal membranes. Contact with contaminated fomites due to persistence of the virus on surfaces is also possible. Viral RNA has also been detected in the blood and fecal matter of infected patients, but these are not likely a major route of transmission. Under careful laboratory conditions of mechanical generation of aerosols and droplets, the environmental stability of SARS-CoV-2 is hours to days, depending on the surface and ambient conditions. These findings are consistent with the results observed in similar studies of environmental stability of SARS-CoV-1.

SECTION 2. COMPASSIONATE CARE AT THE END OF LIFE FOR PATIENTS WITH COVID-19

Advance Directives

Though the majority of patients with COVID-19 will have mild disease, about 20% (especially those who are over the age of 60 or have multiple medical co-morbidities) will require hospitalization, with 5% critical (i.e., requiring ICU level care at risk of death). Advance care planning and discussions about goals of care should occur early for at least 3 reasons. First, clinicians should always strive to avoid intensive life-sustaining treatments that are unwanted by patients. Second, avoiding nonbeneficial or unwanted high-intensity care is especially important in these times of stress on our health care systems to appropriately direct limited resources. Third, provision of nonbeneficial or unwanted high-intensity care may put other patients, family members, and health care workers at higher risk of transmission of SARS-CoV-2. Several guides for such discussions are available at the Center to Advance Palliative Care website (https://www.capc.org/toolkits/covid-19-response-resources/).

Patients should have the opportunity to do advance care planning prior to becoming ill, and should only be directed to hospitals if hospitalization is aligned with their preferences. Patients sick enough to be hospitalized who decline intensive life-sustaining efforts or who are not able to receive intensive care due to resource restrictions, or those who are deteriorating despite intensive efforts, should receive care focused on comfort and dignity, according to palliative care principles.

Palliative Care

Several such guides for managing pain, shortness of breath, cough, nausea, anxiety and other symptoms typical at end of life among COVID-19 patients are also available at the Center to Advance Palliative Care website (https://www.capc.org/toolkits/covid-19-response-resources/).

For patients at the end of life due to other medical conditions who acquire COVID-19, ideally these patients can be managed by palliative care services at home or at a hospice facility. Staff members who provide direct care to these patients may not be trained in appropriate personal protective equipment, and this should be immediately undertaken. Staff should adhere to the appropriate infection control precautions and use a surgical facemask or respirator (depending on patient care needs and whether aerosol generating procedures (e.g., nebulizers) are administered), gown, gloves, and eye protection.
Guidelines for Visiting COVID-19 Patients at the end of life

Facilities should restrict visitors for patients who have confirmed or suspected COVID-19 infection. However, when a person with COVID-19 has imminent death, facilities must have an equitable policy regarding visits by close family members, bereavement counselors, and clergy.

- Staff should make every attempt to explain the reasoning behind the restrictions and infection control measures. For example, “We support you and your family through this difficult time and are also committed to minimizing the spread of COVID-19 in this facility and the community. We hope to work together during these difficult times to provide your loved one safe care and comfort.”
  - VitalTalk has suggested language for communication (https://www.vitaltalk.org/guides/covid-19-communication-skills/)
- Consider alternative mechanisms for interactions such as video-call applications.
- If an in-person end of life (EOL) visit is required, the family should elect an essential member only (e.g., spouse or child).
- Any visitor should be screened for respiratory symptoms and fever prior to entering a nursing or health care facility.
  - An EOL visitor with fever and respiratory symptoms should not be permitted to visit even at end of life. If an EOL visitor was recently symptomatic but improved, visitation can be re-considered if visitor is:
    - Afebrile for 72 hours (without use of fever reducing medication) AND Respiratory symptoms have improved AND 7 days have passed since symptom onset.
- An EOL visitor should visit only the patient’s room (i.e., no other locations within the facility), and should practice strict social distancing when in contact with others
  - They should be instructed to perform frequent hand hygiene, and adhere to respiratory hygiene and cough etiquette measures while in the facility
  - Visitors should be instructed to avoid contact with surfaces as much as possible while in the facility and patient’s room
- Standard, droplet and contact precautions should be maintained. The visitor should be instructed on the appropriate use of the corresponding Personal Protective Equipment (PPE) including facemask, gown, gloves, and eye protection.
  - Those unable to adhere to infection control measures should not be permitted to visit.
  - Staff should supervise EOL visitors to help them correctly don and doff PPE
  - When in appropriate PPE, an EOL visitor may touch their loved one, such as hold hands; however, they should avoid contact with bodily fluids and close face-to-face contact
- Whether in person or through video call, VitalTalk has helpful language to facilitate saying goodbye: https://www.vitaltalk.org/guides/covid-19-communication-skills/

SECTION 3. SAFE HANDLING OF BODIES OF DECEASED PERSONS WITH SUSPECTED FOR CONFIRMED COVID-19

The NH Division of Public Health Services should be notified immediately upon the death of a person with confirmed or suspected COVID-19 by calling 603-271-4496 (after hours: 603-271-5300). Determination will be made as to whether or not testing for SARS-CoV-2 is indicated. If required, the DPHS will assist facilities to ship specimens appropriately, including during afterhours or on weekends/holidays.

Specific risks related to the handling of bodies of deceased individuals with suspected or confirmed COVID-19

Transmission of SARS-CoV-2 from handling of bodies has not been identified and risk is considered to be low; however, aerosol generating procedures are associated with high risk. Transmission can occur through:

- Direct contact with human remains and bodily fluids where the virus is present.
- Direct contact with contaminated fomites or surfaces.
- Droplets from the airways of the deceased.
Risk can be minimized by:

- Any persons who have direct contact with the decedent should wear appropriate PPE. This is to protect individuals from exposure to infected bodily fluids, contaminated surfaces, and contaminated objects.
- Avoid aerosol generating procedures; however, if such procedures are required, ensure appropriate use of PPE.
- Perform regular decontamination of surfaces and equipment

**Personal Protective Equipment (PPE) recommendations when handling bodies of deceased:**

- Wear nonsterile, nitrile gloves when handling potentially infectious materials.
  - If there is a risk of cuts, puncture wounds, or other injuries that break the skin, wear heavy-duty gloves over the nitrile gloves.
- Wear a clean, long-sleeved fluid-resistant or impermeable gown to protect skin and clothing.
- Use a face mask with a plastic face shield or face mask and goggles to protect the face, eyes, nose, and mouth from splashes of potentially infectious bodily fluids.
  - N95 or higher level respiratory only if aerosol generating procedure is anticipated such as using an oscillating saw, suctioning body fluids, etc.

**Special considerations**

**Last offices**
Last offices relate to care given to the deceased after death and before transportation. This may include removal of jewelry, dentures, bathing the deceased, covering of wound(s) or draining the bladder. These may vary based on cultural beliefs.

- Risk of transmission: from direct contact to infected bodily fluids, contaminated surfaces or fomites.
- PPE should be worn by any individuals who have direct contact with deceased.

**Community deaths**
Appropriate PPE should be provided to those who may manage dead bodies such as EMT, firefighters, police, healthcare workers, but also funeral home staff and medical examiners.

**Preparing for transport**
Staff responsible for wrapping bodies of deceased should wear appropriate PPE.

**Body bags**

- Ensure the body of the deceased is stored and transported in leak-proof body bag.
- The body bag of a confirmed COVID-19 patient should be clearly labeled “COVID-19”
- Disposal of the body bag should be managed like any other regulated medical waste.

**Transportation from site of death to body storage**

- Direct contact with remains or body fluids should be minimized.
- PPE is required for those who come in direct contact with a wrapped body.

**Storage and preparation of body prior to burial or cremation**

- Individuals should wear appropriate PPE when shrouding and preparing the body for viewing.
- Viewing of body for mourners can be performed; however, PPE needs to be worn if direct contact is anticipated.
- Staff need to ensure mourners are provided appropriate supervision when donning and doffing PPE.
- If adequate PPE is not available or staff not available to supervise, then restrict touching during viewing.
- Embalming can be performed with appropriate use of PPE.

**Cremation or burial**

- Cremation or burial can occur as usual.
Environmental cleaning

- Routine cleaning and disinfection procedures are appropriate for SARS-CoV-2 in healthcare settings, including those care areas in which aerosol-generating procedures are performed (e.g., using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product’s label).
- Refer to the EPA website for EPA-registered disinfectants that have qualified under EPA’s emerging viral pathogens program for use against SARS-CoV-2.

Waste management

- Medical waste (trash) coming from facilities treating COVID-2019 patients is no different than waste coming from facilities without COVID-19 patients.
- CDC’s guidance states that management of laundry, food service utensils, and medical waste should be performed in accordance with routine procedures. There is no evidence to suggest that facility waste needs additional disinfection.

More guidance about environmental infection control is available in section 7 of CDC’s Interim Infection Prevention and Control Recommendations for Patients with Confirmed COVID-19 or Persons Under Investigation for COVID-19 in Healthcare Settings.

Postmortem specimen collection and autopsy

- Specific guidance can be found on the CDC website at https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-postmortem-specimens.html

Institutional considerations

- Establish a preparedness plan on dealing with dead bodies of suspected or confirmed COVID-19 cases:
  - Access to adequately trained staff
  - Availability of adequate physical structures needed for storage
  - Availability of timely transportation and equipment needed
- Review surge capacity on how to manage dead bodies in case the current capacity to manage dead bodies is exceeded. This could be done through:
  - Targeting storage facilities; and,
  - Addressing organizational structures involved in memorial services, burials and cremations in order to minimize delays between time of death and burial/cremation.
- All key professional groups involved in handling of dead bodies should ensure a sufficient supply of and adequate training in the use of PPE

Guidance adapted from the following sources:

- European Centre for Disease Prevention and Control, Considerations related to the safe handling of bodies of deceased persons with suspected or confirmed COVID-19 https://www.ecdc.europa.eu/en/publications-data/considerations-related-safe-handling-bodies-deceased-persons-suspected-or