

EDITORIAL

Disposing Dead Bodies during COVID-19 Pandemic: Points to be Remembered

The emergence of SARS-CoV-2, a novel human coronavirus, causing severe respiratory tract infections in humans, has become pandemic and raises a global health concern. Since the virus was first identified in December 2019, the numbers of deaths have been propagating exponentially, causing countries across the world, including Bangladesh, to increase emergency measures to combat the virus. Due to the fact that the COVID-19 pandemic does not discriminate its victims, it is of paramount importance to construct a plan for management of the dead for all suspected or confirmed COVID-19 cases, including the unidentified deceased. Therefore it is essential to have measures in place to contain the spread of infection while handling dead bodies. Different guidelines and protocols have been proposed based on the fact that the limited information we have acquired about this novel virus.

The Directorate of health services, Bangladesh has improvised procedures and guidelines for management of the dead within the existing regulations in order to achieve a balance between medicolegal requirements and the safety of personnel managing the bodies of the deceased with suspected or confirmed COVID-19 infection; at the site of death, during transport, during postmortem procedures, storage and preparation before and during burial or cremation as well as environmental cleaning and disinfection, involving various agencies in the country. Whenever possible, every opportunity and assistance must be given to families to mourn their loved ones, even in times of crisis or an outbreak, in order to ensure an appropriate level of dignity and respect.

COVID-19 is transmitted via droplets and fomites during close unprotected contact between an infector and infected. Airborne spread has not been reported for COVID-19 yet, however, it can be predicted if certain aerosol-generating procedures are conducted in health care facilities, including mortuaries during autopsies. Though still there is no evidence of being infected while handling dead body, the infection may be transmitted when persons are in contact with blood, body fluids or tissues of the corpses. Only lungs of dead COVID patients, if handled improperly during autopsy, can be infectious.

The Principles of handling the dead bodies should be comprised of:

- Ensuring safety and wellbeing of those involved in managing and handling the dead from COVID-19.
- Ensuring the proper and dignified management of all COVID-19 fatalities with respect for their families and communities.
- Ensuring the reliable documentation, identification and traceability of COVID-19 fatalities to prevent them from being missing persons.
- Ensuring the management of COVID-19 fatalities does not impede medico legal investigation where required by the authorities(e.g. suspicious deaths, deaths in custody)

Standard Precautions for Health Care Worker while handling dead bodies like hand hygiene, use of personal protective equipment (e.g. water resistant apron, gloves, masks, eyewear), safe handling of sharp instruments, disinfecting bag housing dead body; instruments and devices used on patient, disinfecting linen etc. Clean and disinfect environmental surfaces etc. should be practiced rigorously. All the staffs assigned to handle dead bodies in isolation area, mortuary, ambulance and those who works in burial ground/ crematorium should be trained in infection prevention control practices. Mortuary staff handling COVID dead body should observe standard precautions. The dead bodies should be stored in cold chambers maintained at approximately 4°C. Mortuary must be kept clean. Environmental surfaces, instruments and transport trolleys should be properly disinfected with 1% Hypochlorite solution.

During removal of body from isolation room or area, followings need to be ensured:

- Health worker attending dead body should perform hand hygiene; ensure proper use of PPE (water resistant apron, goggles, N95 mask, gloves).
- All tubes, drains and catheters on dead body should be removed.

- Any puncture holes or wounds (resulting from removal of catheter, drains, tubes, or otherwise) should be disinfected with 1% hypochlorite and dressed with impermeable material.
- Apply caution while handling sharps such as intravenous catheters and other sharp devices. They should be disposed into a sharps container.
- Plug oral, nasal orifices of dead body to prevent leakage of body fluids.
- If family of patient wishes to view body at time of removal from isolation room or area, they may be allowed to do so with application of standard precautions.
- Place dead body in leak-proof plastic body bag. Exterior of body bag can be decontaminated with 1% hypochlorite. Body bag can be wrapped with mortuary sheet or sheet provided by the family members.
- Body will be either handed over to relatives or taken to mortuary.
- All used/ soiled linen should be handled with standard precautions, put in bio-hazard bag and outer surface of bag disinfected with hypochlorite solution.
- Used equipment should be autoclaved or decontaminated with disinfectant solutions in accordance with established infection prevention control practices.
- All medical waste must be handled and disposed of in accordance with Bio-medical waste management rules.
- Health staff who handled body will remove personal protective equipment and will perform hand hygiene
- Provide counseling to family members and respect their sentiments.

During transportation, the bodies are to be secured in body bag, exterior of which is decontaminated poses no additional risk to staff transporting dead body. Personnel handling body may follow standard precautions (surgical mask, gloves). The vehicle used for transfer the bodies need to be decontaminated with 1% Sodium Hypochlorite.

The burial Ground/ crematorium staff should be sensitized that COVID-19 does not pose additional risk. But the staffs should practice standard precautions of hand hygiene, use of masks and gloves. Viewing of dead body by unzipping face end of body bag (by the staff using standard precautions) may be allowed, for relatives to see body for one last time. Religious rituals such as reading from religious scripts, sprinkling holy water and any other last rites that does not require touching of body can be allowed.

Bathing, hugging etc. of dead body should not be allowed. Funeral/ burial staff and family members should perform hand hygiene after burial/ cremation. Ash does not pose any risk and can be collected to perform last rites. Large gathering at burial ground/crematorium should be avoided as a social distancing measure as it is possible that close family contacts may be asymptomatic and/or shedding virus. After removing body, chamber door, handles and floor should be cleaned with sodium hypochlorite 1% solution. And embalming of dead body should not be encouraged.

Forensic disciplines contributes equally in the combat of COVID-19, integrating law and medicine and working closely with police, funeral directors and other related authorities in managing the dead. Issues with storage and decomposition, shortages of staff and appropriately equipped mortuaries and other crippled resources, can cause bodies to accumulate if they are not managed in a timely manner. Improvised procedures and guidelines for the management of large numbers of decedents have to be put in place to handle the increased volume of bodies. There is a need to integrate sufficient legal complexities into the social context as well as the consideration of the safety of personnel managing the dead during this unprecedented time. It is imperative to plan and take every necessary step during this pandemic for the management of the dead in the country as a basic human right

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