NEWS

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UPDATE: The Use of Personal Protective Equipment by Anesthesia Professionals during the COVID-19 Pandemic

Joint Position Statement

The American Society of Anesthesiologists (ASA), Anesthesia Patient Safety Foundation (APSF), American Academy of Anesthesiologist Assistants (AAAA) and American Association of Nurse Anesthetists (AANA) believe that the safety of anesthesia professionals is of utmost importance in developing policies related to personal protective equipment (PPE). Due to close patient contact and the need for airway instrumentation, anesthesia professionals are at increased risk of exposure and infection for all diagnostic, therapeutic, and surgical procedures during this rapidly escalating COVID pandemic in the U.S.

Growing experience has shown that there can be a 5-day or longer incubation time between exposure to the COVID virus and development of symptoms and that there are individuals who are COVID-positive who are either asymptomatic or who have minimal symptoms. Laboratory testing for coronavirus is not universally and promptly available. As a result, identification of who is COVID positive or negative with certainty is not possible in the setting of clinical care. Therefore, we recommend as optimal practice that all anesthesia professionals should utilize PPE appropriate for aerosol-generating procedures for all patients when working near the airway.

Ideally, anesthesia professionals should use properly fitted N95 masks or powered air purifying

respirators (PAPRs). For those who are not N95 fit-tested, have facial hair, or fail N95 fit-testing, PAPRs should be used if possible. Surgical face masks protect against COVID-19 droplet transmission but do not protect against aerosolized small particles. The CDC has developed a detailed table (reference 2) that describes surgical facemask, N95 mask, and PAPR use, based upon distance from a patient with suspected or known COVID-19 and the use of source control (i.e., masking of symptomatic patients).

Issuance of N95 masks or availability of PAPRs for all clinical anesthesia personnel should be a priority. If a facility has existing or projected shortages of N95 masks or PAPRs, however, temporary mitigation plans based on current CDC recommendations should be enacted. These plans should include facility and case-by-case reviews of the potential of patients and procedures to generate aerosolized particles, as well as assessments of respiratory pathogen characteristics (e.g., routes of transmission, community spread, prevalence of disease in the region, infection attack rate, and severity of illness) and local conditions (e.g., number of disposable N95 mask available, current respirator usage rate, and success of other PPE conservation strategies). Healthcare facilities may wish to implement extended use and/or limited reuse practices before shortages are observed so that adequate supplies are available during times of peak need and demand. Extended use and/or limited reuse of N95 masks should follow CDC (reference 4) and institutional guidelines.

All components of appropriate PPE should be carefully addressed. For aerosol-generating procedures this includes eye protection (goggles or a disposable face shield that covers the front and sides of the face), a gown, and gloves, in addition to airway protection with N95 masks or PAPRs (reference 1). Effective hand hygiene before putting on and after removing PPE, including gloves, is very important. Procedures for proper donning and doffing, disposal of contaminated PPE, and cleaning of contaminated reusable PPE and anesthesia equipment should be established following CDC and institutional recommendations.

The CDC recommends a combination of approaches to conserve supplies while safeguarding health care workers and when there are existing or projected shortages of N95 masks:

- Implement engineering and administrative controls to minimize the number of individuals who need to use respiratory protection.
- Where feasible, use alternatives to N95 masks (e.g., other classes of filtering face piece masks, face piece air purifying respirators, and PAPRs). For more details on these respirators, see CDC's " A Guide to Air-Purifying Respirators ."
- Implement practices allowing extended use and/or limited reuse of N95 masks.
- Prioritize the use of N95 masks for those personnel at highest risk of COVID-19 exposure and/or those anesthesia professionals in high risk categories (e.g., those with prior health conditions, older age).
- Masks approved by the National Institute for Occupational Safety and Health (NIOSH) typically used in the construction and manufacturing industries but not currently meeting the

Food and Drug Administration's (FDA's) requirements may be effective in protecting health care personnel from airborne exposure, including COVID-19.

References

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4. Centers for Disease Control and Prevention (CDC). Recommended Guidance for Extended Use and Limited Reuse of N95 Filtering Facepiece Respirators in Healthcare Settings. Updated March 28, 2018. Accessed March 22, 2020.
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