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## **AMPSAA'S COVID-19 GUIDANCE: PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR ALL HEALTHCARE WORKERS**

SARS-CoV 2 (COVID-19) is a novel coronavirus that is spreading like wildfire, devastating communities across the globe, affecting over 200 nations and leaving almost no community untouched. (1) Respiratory droplets, aerosol and fomite are all potential modes of infection.(2,3) Asymptomatic people are a source of transmission. (4-6) As the academic debate continues regarding the adequacy of current recommended personal protective equipment, front-line physicians and other healthcare providers are acting to protect our patients and our nation now. Unfortunately, many healthcare providers have been asked to jeopardize our own health and have put ourselves, our families and our communities at risk due to the lack of proper resources to access even the minimum personal protective equipment. Members of AMPSAA urge national, local, and institutional leadership to ensure the safety of our nation by providing healthcare workers with the MAXIMUM protection.

Herein, AMPSAA offers COVID-19 Care PPE Guidelines compiled of the best practices regarding personal protective equipment with the health of our patients and each other as the top priority, erring on the side of more protection than what is currently implemented by many US institutions. AMPSAA COVID-19 Care PPE Guidelines is based on those of the World Health Organization (WHO), the US Center for Disease Control and Prevention (CDC) and the Ministries of Health from China, Taiwan, Singapore, and South Korea.(7-10, 11, 12) Although the WHO is considered the global leader of infectious disease outbreaks, WHO guidelines consistently remain less protective than the practices of Asian countries that have been successful in containing SARS-CoV 2. (7-10, 11) The emerging scientific evidence and the real-life experiences support practices that offer more protection, and AMPSAA endorses policies that err on the side of caution when guidelines do not concur.

We encourage each community to frequently reevaluate their current healthcare institutional policies on PPE. We urge the Joint Commission to enforce work-place safety standards. We implore all leaders to be proactive, aggressive and err on the side of caution to protect healthcare workers. Each healthcare worker needs to practice vigilance in infection control to protect him- or herself and not be a vector of disease at work or home. We humbly call on all institutional leadership to acquire necessary PPEs for their staff and allow healthcare workers the freedom to choose more protection than what current policies recommend. In light of the rising cost and global shortage of PPE supplies, healthcare workers who can access their own new, clean and equivalent PPE, should be encouraged to use it. This will reduce stress, increase morale and save institutional supplies of PPE.

AMPSAA's physicians, surgeons and dentists believe staying well and treating our patients are both top priorities and should not be conflicting goals. We have always worked with the risk of transmissible infectious diseases including other viral, bacterial, fungal, parasitic and prion diseases. Working amidst SARS-CoV 2 is different as its infectivity, transmissibility, symptoms,



and risk of death are rapidly changing daily and the recommendations on PPE set forth by federal, state, local, and healthcare institutions continue to evolve. Therefore, we know yesterday's policies may not be preventing colleagues from contracting, spreading and dying from SARS-CoV 2. We do not know exactly where the breakdown in protection is occurring. However, time is crucial and decisive actions need to be taken now. Without maximum PPE against SARS-CoV 2, healthcare providers are putting our lives on the line as we help our patients. Therefore maximum PPE is necessary to preserve our right to life.

AMPSAA's ethical and moral decision is to advocate for at least the BEST standards of PPE for all healthcare workers. We urge our healthcare institutions and governments to prioritize the protection of our healthcare workforce and to ceaselessly-pursue and implement policies and directives that will allow sufficient PPE for everyone involved in COVID-19 care today. Best practice recommendations should not be compromised due to self-imposed constraints and future economic concerns. No price should be placed on the lives of our citizens.

We hope our supply shortages will be speedily replenished by the partnerships created by the US government, private manufacturers and foreign governments. As physicians, surgeons and dentists, we will continue to dedicate our lives to our patients. Despite the shortage of PPE, there is no shortage in ingenuity, creativity, dedication, care and love in the medical community as we collectively and honorably serve our fellow citizens in this global pandemic. When we overcome all the challenges to this COVID-19 pandemic and reflect on our actions during this time of crisis, we hope to be proud of all that we have done to combat this unimaginable healthcare challenge that has shaken us all to the core.



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## AMPSAA COVID-19 CARE PERSONAL PROTECTIVE EQUIPMENT GUIDELINES FOR HEALTHCARE WORKERS

1. Respiratory Protection
  - a. N95
  - b. PAPR (Powered Air Purifying Respirator)
  - c. Surgical Masks
2. Eye Protection
  - a. Goggles
  - b. Face Shields
3. Isolation Gowns
  - a. Coveralls
4. Head Protection
  - a. Caps
  - b. Face Shields
5. Gloves
6. Hand Hygiene
7. Social Distancing at the Workplace

### 1. RESPIRATORY PROTECTION

#### a. N95 Masks

- i. SARS-CoV 2 is known to potentially linger in air and become transmissible via aerosolization. (13,14)
- ii. We recommend the use of a medical grade NIOSH certified N95 mask when working with confirmed or high risk COVID-19 patients or when working in a high risk area such as an urgent care or emergency room in which there may be a high prevalence of COVID-19 patients. (7,15)
- iii. We understand this is controversial in some western countries and is under academic debate.
- iv. However, we believe forceful coughing or sneezing can potentially aerosolize SARS-CoV 2. (13)
- v. Asian countries who have successfully contained SARS-CoV 2 and use this N95 mask policy include Taiwan, China, South Korea, and Singapore. (7-10)
- vi. We recommend the use of a medical grade NIOSH certified N95 when performing any procedures that require close face to face contact and/or may generate aerosols. (1,7-14)
- vii. This includes intubation, suctioning, bronchoscopy, resuscitation, esophagogastroduodenoscopy (EGD), colonoscopies and body cavity surgeries . (1,7-14)



- viii. Oral cavity procedures and noninvasive positive pressure respirators are also high risk. (1, 7-14)
- ix. Entering a ventilated patient's room is considered high risk.
- x. Masks should cover the nose and the mouth at all times and the wire piece should comfortably conform to the nasal bridge. (11,12-14,17)
  - 1. There should be no gaps between your face and the mask.
  - 2. Masks should never be dangled under the chin, or the side of the ear or pulled under the nose or manipulated once it is properly placed to cover the nose and mouth.
    - a. Doing so will increase the potential of contaminating the users face, hands, and or environment.
  - 3. Masks should never be drawn or written on as this may damage the protective material via trauma or moisture.
  - 4. Any mask that is visibly soiled or wet needs to be changed.
  - 5. Avoid touching masks while in use and clean your hands immediately afterwards.
  - 6. We do not advocate re-using a mask once it is removed.
  - 7. However, we do advocate using one mask for an extended duration as long as the mask is not compromised in its integrity and the user does not touch the mask in any way until it is ready to be disposed of. (11,12,17,18)
- xi. Please be aware that beards and mustaches prevent adequate seals when wearing N95 masks.
  - 1. Therefore if possible, AMPSAA recommends against having a beard or mustache if it prevents an adequate protective seal of the N95 mask.
- xii. In addition, AMPSAA does not recommend reusing any mask.
  - 1. The theoretical transmission of self-contamination when taking off, pulling down, and then reusing any used mask is concerning. (14)
  - 2. Before SARS-CoV2, re-using disposable masks was not the standard of care.
  - 3. We advocate however the extended duration of the use of one mask. (11,12,17,18)
  - 4. Therefore the workflow of individuals may need to be redesigned so that exposed healthcare workers have "clean assistants" or "runners". This way healthcare workers with personal protective equipment can stay in the "dirty zone" and those not in gear can bring clean supplies and medicines to preserve PPE. (19)



**b. Powered Air Purifying Respirators (PAPR)**

- i. PAPRs can be used in addition to N95 or it can replace N95. (11,12)
  - 1. Caution should be used when wearing any used mask within the PAPR as the air current can potentially be spreading germs on the outside of the old mask within a workers face in the PAPR. (14)

**c. Surgical Masks**

- i. We recommend that all healthcare facility personnel wear at the minimum a surgical mask or equivalent while at any area in the healthcare institution except for high risk SARS-CoV 2 areas. N95 masks should be worn in high risk areas. (7-10, 13,14)
- ii. The foremost purpose of the surgical mask is to keep everyone's germs to themselves and to reduce nosocomial transmission from staff-to-patients and staff-to-staff. (9)
- iii. Surgical masks should cover the nose and the mouth at all times and the wire piece should comfortably conform to the nasal bridge. (11-14,17,18)
  - 1. There should be no gaps between your face and the mask.
  - 2. Masks should never be dangled under the chin, or the side of the ear or pulled under the nose or manipulated once it is properly placed to cover the nose and mouth.
  - 3. Doing so will increase the potential of contaminating the users face, hands, and or environment.
  - 4. Masks should never be drawn or written on as this may damage the protective material via trauma or moisture.
  - 5. Any mask that is visibly soiled or wet needs to be changed.
  - 6. Avoid touching masks while in use and clean your hands immediately afterwards.
  - 7. We do not advocate re-using a mask once it is removed.
  - 8. However, we do advocate using one mask for an extended duration as long as the mask is not compromised in its integrity and the user does not touch the mask in any way until it is ready to be disposed of. (11,12,17,18)
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## **2. EYE PROTECTION**

- a. It has been documented that SARS-CoV 2 can cause conjunctivitis and viral particles are present in ocular secretions. (20)
- b. It is absolutely vital that healthcare workers avoid rubbing their eyes and protect their eyes while at work. (3)
- c. Ideally all contact lens users should cease using contacts at work and change to corrective glasses. (3)
- d. In addition, goggles and a disposable face shield should be worn for added protection when in close proximity to suspected or confirmed COVID 19 patients. (3, 7-15)
  - i. Face shields can prevent the exposure of the face from viral particles which can unexpectedly be projected during a routine exam such as coughing or emesis. Any re-usable equipment should be thoroughly cleaned including straps and cushion material such as foam.
  - ii. The inability to clean those surfaces can potentially be a source of nosocomial transmission, especially if these items are being shared between healthcare workers.

## **3. ISOLATION GOWNS**

- a. SARS-CoV 2 is highly contagious and the best protection is a coverall that provides 360-degree protection of the whole body from the head, back, torso, arms, legs and feet. (7-10)
- b. The material needs to be equivalent to or exceed ASTM 1671 standards to prevent blood or body fluid leakage through the coverall. (21)
- c. Ideally seams should be taped.
- d. We recommend protected coveralls to be provided to any healthcare worker who is handling or in close proximity to any bodily fluid that can be spilled or aerosolized (respiratory secretions, saliva, blood, cavity secretions, urine, feces) from patients who have or are suspected to have SARS-CoV 2. (7-10)

## **4. HEAD PROTECTION**

- a. We encourage all healthcare workers to wear a disposable hair cap or coverall cap.



- i. SARS-CoV 2 is known to survive on a variety of surfaces from hours to days including stainless steel, plastic, and cardboard. (3,4,7-15)
  - ii. SARS-CoV 2 is known to remain suspended in air for hours. (13,14)
- b. Healthcare workers should understand hair is a possible vector of transmission for SARS-CoV 2.
- c. Touching your hair with contaminated hands or letting your hair dangle unprotected in a contaminated room can contaminate your hair. For your safety, AMPSAA recommends all healthcare workers to use common sense judgement to cover up, pin up or tie up their hair and shave facial hair, especially when working in a high risk area.
  - i. Avoid touching your hair during work.
  - ii. In addition, beards and mustaches prevent adequate seals when wearing N95 masks.
- d. Faceshield
  - i. Please refer to Eye Protection Section

## **5. GLOVES**

- a. Proper hand hygiene should be performed before wearing gloves. (7-12)
- b. All healthcare workers should wear gloves before touching any patient or handling items that are within the rooms of positive or suspected COVID-19 patients.
- c. Double gloving should be considered.
- d. Wearing gloves cannot substitute for proper hand hygiene.

## **6. HAND HYGIENE**

- a. Handwashing is of utmost importance for any individual regardless of profession to prevent acquisition or transmission of infectious diseases, especially SARS-CoV 2. (7-12)
- b. Frequent handwashing for at least 20 seconds with soap and water is the best practice to prevent nosocomial transmission of SARS-CoV 2. (7-12)
- c. Alcohol based hand sanitizers of at least 60% through 90% can also be effective against SARS-CoV 2 if hands are not visibly soiled, however soap and water is preferred. (7-12)
- d. Handwashing should be observed before and after entering into patient rooms, touching patients or their belongings.
- e. Hand washing should be performed before putting on PPE, after eating and after contacting any common surfaces such as door knobs, keyboards, pens and counters.

## **7. SOCIAL DISTANCING**



- a. Keeping at least 6 feet from your colleagues at work is important to prevent nosocomial transmission, especially if masks are not worn by everyone at the healthcare institution. (7-12)
  - i. Staff lounges often are not conducive to social distances practices, especially if staff are eating at the same time in close proximity. (10)
- b. We understand this is not always achievable. Therefore universal masks for all is a practical solution to mitigate nosocomial spread.
- c. Interviews with stable patients should be done at least 6 feet away from the patient's head and preferably out of a patient's room whenever possible.
- d. Telemedicine should be encouraged to minimize exposure to personnel.
- e. Minimize traffic in high risk areas. (7-10)
  - i. Non-essential personnel, such as food service and hospital volunteers, should not enter high risk areas.

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