

Aerosol-Generating Procedures Decision Guide

The American Occupational Therapy Association (AOTA) recognizes that occupational therapy practitioners come into contact with Aerosol-Generating Procedures (AGPs) during occupational therapy interventions. For confirmed or suspected COVID-19–positive clients, refer to the World Health Organizations (WHO’s) guidelines for proper personal protective equipment (PPE) during occupational therapy ([WHO, 2020](#)). If COVID-19 is widespread in the community, surgical masks should be considered for ALL patients irrespective of COVID-19 status ([Department of Defense \[DOD\], 2020](#)). For guidance on preparing workplaces with recommendations surrounding safety and health standards, review Occupational Safety and Health Act ([Occupational Safety and Health Administration \[OSHA\], 2020](#)). We encourage practitioners to consult with their organization’s infectious disease experts regarding any questions and additional organizational policies/procedures. The aim of this document is to empower practitioners with considerations and resources that inform clinical decision making and improve safety during the COVID-19 pandemic.

Alongside this document, practitioners need to use their clinical judgment and consider:

- Incidence of COVID-19 cases in their area
- Complexities of the situation
- Needs of their patients
- Availability of any necessary supplies (PPE)

For clients who are not suspected to be COVID-19 positive, AOTA presents the following Three-Tiered Risk Classification scheme where occupations are classified as high, moderate, or low risk for AGPs. This classification scheme was developed by reviewing available studies and guidelines related to the risk of aerosol generation during occupations, and recommendations for appropriate protective strategies. We classified occupations as high risk if multiple available studies indicated greater risk of aerosol generation than other occupations, or if existing guidelines identified the occupation as high risk. In contrast, we classified occupations as low risk if there were few or no studies to suggest that performing these occupations results in the generation of aerosols. For some occupations, suggestions are presented for minimizing potential risks during performance.

This document was created with the underlying assumption that practitioners follow the Centers for Disease Control and Prevention (CDC) and WHO standard precautions with all clients, which include hand hygiene, masks for both the client and therapist, and additional PPE such as gloves when appropriate ([CDC, 2020b](#); [WHO, 2007](#)). Modifications to these standard precautions (e.g., working with clients for whom mask wearing is contraindicated) increases the risk of exposure to aerosols.

High-Risk Occupations

Suggested level of PPE ([WHO, 2020](#)):

- N95 (or higher) respirator
- Gown
- Eye Protection (goggles/face shield)
- Gloves



Feeding & Swallowing, including dysphagia care, swallowing assessments, and related preparatory activities (i.e., sensory & oral motor) result in the generation of aerosols with close proximity to a client and high risk of coughing ([CDC, 2020b](#); [American Speech-Language-Hearing Association, 2020](#)).

Hygiene & Grooming is performed in close proximity to an unmasked client, which increases instances of saliva splatter and client coughing, which results in particle transfer. Spread through aerosols can happen with low-speed hand-held dental brushes, water picks, and manual tooth brushing ([American Dental Association \[ADA\], 2020](#)).

Sleep Preparation using a CPAP or BiPAP machine will generate aerosols ([Heinzerling et al., 2020](#)). Situations where practitioners are in the same room as a client who is using a CPAP or BiPAP or are working with clients to clean these machines should be considered high risk.

- Practice donning/doffing CPAP or BiPAP with the machine off. This activity would still constitute a moderate risk to the practitioner as the client is not able to wear a mask.

Personal Device Care is performed in close proximity to clients and will generate aerosols. Tracheostomy care (including suctioning, sputum induction, and coughing assistance) is an aerosol-generating procedure ([American Academy of Otolaryngology, 2020](#)). Use of nebulizers and high-flow oxygen delivery (> 15L) and cleaning of these devices can generate aerosols ([Massachusetts General Hospital, 2020](#)).

Moderate-Risk Occupations

These occupations are not necessarily aerosol generating; however, control parameters relevant to context could affect the risk of performing these occupations.

Suggested level of PPE: CDC and WHO standard precautions

- Practice hand hygiene
- Masks should be worn by both the client and practitioner



Bathing/Showering are high-contact care activities where splashes and sprays are anticipated, and high-contact patient/client care activities provide opportunities for transfer of pathogens to the hands and clothing of the practitioner ([CDC, 2020a](#)).

- Wear a gown to reduce risk from splashes and sprays

Toileting is considered a high-contact care activity where splashes and sprays are anticipated and provide opportunities for transfer of pathogens to the hands and clothing of the practitioner ([CDC, 2020a](#)). Bio-aerosol transmission via toilet plumes is associated with flushing toilets and is a potential concern to health care practitioners ([McDermott et al., 2020](#)).

- Wear a gown to reduce risk from splashes and sprays
- If toilet has a lid, it should be lowered during flush to minimize toilet plumes

Functional & Community Mobility should be considered moderate risk activities, as long as standard precautions are utilized. There are no available studies that indicate that mobility activities promote generation of aerosols.

- Consider factors such as proximity, duration, and potential for mobilizing secretions during mobility activities ([American Physical Therapy Association, 2020](#)).
- Complete these activities in well-ventilated areas, including outdoors, when appropriate.

Exercise should be considered a moderate-risk activity, as long as standard precautions are utilized. There are no available studies that indicate that exercise promotes generation of aerosols.

- Consider factors such as proximity, duration, and potential for mobilizing secretions during exercise ([APTA, 2020](#)).
- Complete these activities in well-ventilated areas, including outdoors, when appropriate.

Low-Risk Occupations

Suggested level of PPE: CDC and WHO standard precautions

- Practice hand hygiene
- Masks should be worn by both the client and practitioner
- Gloves should be worn when appropriate



All occupations in the *Occupational Therapy Practice Framework: Domain and Process, 4th edition* ([AOTA, 2020](#)), other than those listed in the tables above, are classified as low risk for generating aerosols.

Resources

**Note: AOTA has compiled a list of additional resources that might assist practitioners with further clinical reasoning. We recognize the situation surrounding COVID-19 is rapidly evolving. Please utilize the resources below to obtain the most up-to-date information.*

American Occupational Therapy Association (AOTA) COVID-19 Decision Guides <https://www.aota.org/Practice/Health-Wellness/COVID19/decision-guides.aspx>

American Occupational Therapy Association (AOTA) Personal Protective Equipment <https://www.aota.org/Practice/Health-Wellness/COVID19/Personal-Protective-Equipment.aspx>

Assistant Secretary for Preparedness & Response (ASPR) <https://files.asprtracie.hhs.gov/documents/hasp-2020-ncov-v2.0.pdf>

Centers for Disease Control & Prevention (CDC) <https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html>

Centers for Medicare & Medicaid Services (CMS) memo to State Survey Directors that addresses the issue of AGPs <https://www.cms.gov/files/document/qso-20-20-allpdf.pdf>

Occupational Safety & Health Administration (OSHA) <https://www.osha.gov/Publications/OSHA3990.pdf>

World Health Organization (WHO) Clinical management of COVID-19 <https://www.who.int/publications/i/item/clinical-management-of-covid-19>

World Health Organization (WHO) Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed <https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-2020.4>

World Health Organization (WHO) Transmission of SARS-CoV-2: Implications for infection prevention precautions <https://www.who.int/publications/i/item/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>

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