AIHA’s Recommendations on Updating CDC’s Guidance on the Aerosol Transmission of Infectious Diseases

Dear Director Cohen:

AIHA is the association for scientists and professionals committed to preserving and ensuring occupational and environmental health and safety (OEHS). Our members and OEHS experts around the world have been vocally advocating for public health agencies, including the Centers for Disease Control and Prevention (CDC), to fully recognize updated science on the aerosol transmission of infectious diseases in order to protect workers and public health. Recognizing this science is fundamental to shaping guidance and standards that prevent infectious disease transmission.

On April 18, 2024, the World Health Organization (WHO) released a new global technical consultation report\(^1\) which presents new terminology for pathogens that are transmitted through the air. The report was developed by consensus by experts from a wide range of disciplines including epidemiology, microbiology, clinical management, infection prevention and control, bioengineering, physics, air pollution, aerosol science, aerobiology, occupational medicine, and others in public health science.

The new WHO terminology and report are important for multiple reasons, including:

- Inhalation is explicitly recognized as an important route of transmission for infectious diseases that are transmitted through the air.

- Multiple factors are recognized as contributing to transmission risk, which is an important departure from the outdated focus on a distance of one to two meters as a determining factor in the transmission risk for pathogens like SARS-CoV-2/COVID-19.

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\(^1\) [https://cdn.who.int/media/docs/default-source/documents/emergencies/global-technical-consultation-report-on-proposed-terminology-for-pathogens-that-transmit-through-the-air.pdf?sfvrsn=de07eb5f_1&download=true](https://cdn.who.int/media/docs/default-source/documents/emergencies/global-technical-consultation-report-on-proposed-terminology-for-pathogens-that-transmit-through-the-air.pdf?sfvrsn=de07eb5f_1&download=true)
• The disproven droplet-airborne dichotomy is discarded, and an updated paradigm is described, which importantly acknowledges that there is no distinct size cut-off for particles that can travel through the air and transmit pathogens.

This updated terminology is critical to prevention. **Fully recognizing the science on inhalation transmission of infectious diseases is fundamental to crafting measures that effectively prevent transmission and protect health.** But, while the new WHO terminology represents significant progress in recognizing the most up-to-date science, the report does not deal with how the new terminology should shape protective measures. Application of the new terminology must be done in a transparent, science-based manner rooted in the precautionary principle by a wide range of experts, including public health experts, those who specialize in occupational health and safety, frontline healthcare workers, union representatives, and patients.

The CDC and its Healthcare Infection Control Practices Advisory Committee (HICPAC) are in the process of updating important infection control guidance for healthcare settings, the 2007 *Isolation Precautions* guidance. An important piece of updating this guidance is updating the science on the transmission of pathogens through the air/via inhalation and related terminology. In the WHO report, it is noted that the U.S. CDC, alongside three other public health agencies around the world, has committed to implementing the new WHO terminology.\(^2\) **CDC and HICPAC should examine the WHO report closely and ensure that HICPAC’s draft is updated to accurately reflect the science on the mechanisms by which pathogens transmit through the air.**

In applying the new WHO terminology, CDC and HICPAC must be transparent about the criteria, methods, and scientific evidence used for recommending precautions for specific pathogens and situations, including when to use airborne infection isolation rooms (AIIRs), respiratory protection and other personal protective equipment (PPE), and other measures, including ventilation and air cleaning strategies. CDC and HICPAC’s framework for applying precautions must be based on an exposure assessment that determines when, where, how, and at what range and mean quantitative level employees may be exposed and the subsequent quantitative or qualitative risk of transmission. Consideration must be given to factors that can make an individual healthcare worker or a member of their household more vulnerable to infection, severe disease, or death, such as age, immunocompromised status, treatments, or medications. The full range of impacts from infection must also be considered when determining precautions needed for different pathogens, including long-term impacts such as Long COVID and long-term impacts of influenza. It is not appropriate to limit the assessment of risks and impacts to hospitalizations and deaths or to assume that the availability of vaccines and treatments is sufficient to protect all people from infection and serious outcomes.

In developing recommendations for precautions, HICPAC and CDC should apply the lessons learned in successfully controlling the risks of inhalation hazards in workplaces across a wide range of hazards and industries. Even though the environments are different, basic principles of the hierarchy of controls apply in healthcare, including by limiting exposure to contaminants in the air through the use of engineering controls such as barriers and ventilation, by instituting administrative controls for isolating patients, by providing robust worker education and training, and by protecting workers with NIOSH-certified respirators and other PPE. Early identification and isolation of potentially or known infectious patients, visitors, and personnel continues to be a primary step in applying the hierarchy of controls in healthcare settings.

The WHO report is the result of a multi-year process engaging experts from a wide range of disciplines – a process that CDC and HICPAC should emulate. While CDC has added a small number of individuals with expertise in aerosol science and respiratory protection to HICPAC’s Isolation Precautions Workgroup, the Workgroup and HICPAC remain dominated by limited infection prevention and industry perspectives. It is essential that CDC and HICPAC fully engage the expertise of frontline healthcare workers, union representatives, patients, occupational safety and health professionals – specifically including but not limited to industrial hygienists, engineers, including those with expertise in ventilation design and operation, research scientists with expertise in aerosols and respiratory protection, and other experts in developing updated infection control guidance.

Conclusion and Next Steps
Thank you for your leadership of the CDC’s effort to update isolation precautions guidance for health care settings. This is a key step in improving pandemic preparedness. AIHA’s members have essential expertise, particularly in occupational health and safety, and stand ready to assist the CDC in developing science-based guidance that protects healthcare workers, patients, and public health. If you have any questions about AIHA’s recommendations or other matters, please contact me at mames@aiha.org or (703) 846-0730. Thank you for your time and consideration.

Sincerely,

Mark Ames
Chief Advocacy Officer
AIHA

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About AIHA
AIHA is the association for scientists and professionals committed to preserving and ensuring occupational and environmental health and safety in the workplace and community. Founded in 1939, we support our members with our expertise, networks, comprehensive education programs, and other products and services that help them maintain the highest professional and competency standards. More than half of AIHA’s nearly 8,500 members are Certified Industrial Hygienists, and many hold other professional designations. AIHA serves as a resource for those employed across the public and private sectors as well as to the communities in which they work. For more information, please visit www.aiha.org.