AMERICAN PUBLIC HEALTH ASSOCIATION
For science. For action. For health.

August 6, 2024

Mandy K. Cohen, MD, MPH
Director
Centers for Disease Control and Prevention
1600 Clifton Rd.
Atlanta, GA 30329

Dear Dr. Cohen:

On behalf of the American Public Health Association, I write to urge the Centers for Disease Control and Prevention to fully recognize updated science on aerosol transmission of infectious diseases to protect public health. This science is fundamental to shaping guidance and standards that prevent infectious disease transmission and is protective for workers, patients and the public.

On April 18, the World Health Organization released a new global technical consultation report that presents a new terminology for pathogens that transmit through the air.[1] 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- Multiple factors are recognized as contributing to transmission risk, which is an important departure from the outdated focus on a distance of one to two meters as a determining factor in transmission risk for pathogens like SARS-CoV-2/COVID-19.
- 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

[1] World Health Organization. "Global technical consultation report on proposed terminology for pathogens that transmit through the air." April 18, 2024. Available at https://www.who.int/publications/m/item/global-technical-consultation-report-on-proposed-terminology-for-pathogens-that-transmit-through-the-air.

public health experts including those who specialize in occupational health and safety, frontline health care workers, union representatives, and patients.

CDC and its Healthcare Infection Control Practices Advisory Committee are in the process of updating important infection control guidance for health care settings, the 2007 *Isolation Precautions* guidance.[2] An important piece of updating this guidance is updating the science on transmission of pathogens through the air/via inhalation and related terminology.[3,4] 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. 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, respiratory protection and other personal protective equipment, 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 level employees may be exposed and the subsequent risk of transmission. Consideration must be given to factors that can make an individual health care worker or a member of their household more vulnerable to infection, severe disease, or death such as age, immunocompromise 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 follow the same approach that has been successfully utilized to address and control 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 remain the same and apply in health care, and include: limiting exposure to contaminants in the air through use of engineering controls such as barriers and ventilation; instituting administrative controls for isolating patients; providing robust worker education and training; and by protecting workers with NIOSH-certified respirators and other PPE.

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. We are pleased that CDC has added individuals with expertise in aerosol science and respiratory protection to HICPAC's Isolation Precautions Workgroup and we encourage the agency to further engage other with other important constituencies including frontline health care workers, union representatives, patients, occupational safety and health professionals, engineers including those with expertise in ventilation design and

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[2] Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings https://www.cdc.gov/infection-control/hcp/isolation/isolation-precautions/index.html.

[3] C. C. Wang, K. A. Prather, J. Sznitman, J. L. Jimenez, S. S. Lakdawala, Z. Tufekci, L. C. Marr, Airborne transmission of respiratory viruses. *Science* **373**, eabd9149 (2021).

[4] Bourouiba L. Turbulent Gas Clouds and Respiratory Pathogen Emissions: Potential Implications for Reducing Transmission of COVID-19. *JAMA.* 2020;323(18):1837–1838. doi:10.1001/jama.2020.4756.

operation, research scientists with expertise in aerosols and respiratory protection, and other experts in developing updated infection control guidance.

Thank you for your attention to our recommendations. APHA's members have essential expertise, particularly in occupational health and safety, and stand ready to assist you and other CDC experts in developing science-based guidance that protects health care workers, patients and the public's health.

Sincerely,

Georges C. Benjamin, MD
Executive Director