HICPAC Isolation Precautions Guideline Workgroup Call
September 26, 2024, 2:00 pm ET

Participants
Workgroup: Mike Lin, Sharon Wright, William Bennett, Elaine Dekker, Judith Guzman-Cottrill, Robert Harrison, Morgan Katz, Anu Malani, Melissa McDiarmid, Erica Shenoy, Connie Steed, Jane Thomason, Julie Trivedi, Deborah Yokoe
CDC: Mike Bell, Sydnee Byrd, Marie de Perio, Alex Kallen, David Kuhar, Kenneth Mead, Devon Okasako-Schmucker, Melissa Schaefer, Erin Stone, David Weissman, Laura Wells

Agenda
- Attendance and conflicts of interest disclosure
- Clinical Studies focused on Mask and Respirator Use for Seasonal Viral Respiratory Infections
- Next steps

Discussion Summary
- No new conflicts of interest were disclosed.

<u>Clinical Studies focused on Mask and Respirator Use for Seasonal Viral Respiratory Infections</u>
- Dr. Lin led a discussion of four key clinical studies from the systematic review presented to HICPAC at the November 2023 public meeting.
  - He acknowledged the challenges in implementing these studies and commended the investigators and subjects for their efforts.
  - He also added that the workgroup (WG) has partially discussed these studies within the context of CDC Questions 1 and 2, so the goal of this meeting was to review and discuss these studies more thoroughly.
  - Dr. Lin pointed out that these randomized control studies provide evidence concerning the outcome of seasonal, laboratory-confirmed viral respiratory infections.
  - The group reviewed the original question for the systematic review: "For healthcare personnel caring for patients with respiratory infections, what is the effectiveness of medical/surgical masks compared with N95 respirators in preventing infection."
- The four studies discussed were:
  - Loeb M, et al. Surgical mask vs N95 respirator for preventing influenza among health care workers: a randomized trial. JAMA. 2009 Nov 4;302(17):1865-71.
  - MacIntyre C, et al. A cluster randomized clinical trial comparing fit-tested and non-fit-tested N95 respirators to medical masks to prevent respiratory virus infection in health care workers. Influenza Other Respir Viruses. 2011 May;5(3):170-9.
  - MacIntyre C, et al. A randomized clinical trial of three options for N95 respirators and medical masks in health workers. Am J Respir Crit Care Med. 2013 May 1;187(9):960-6.
  - Radonovich L, et al. N95 Respirators vs Medical Masks for Preventing Influenza Among Health Care Personnel: A Randomized Clinical Trial. JAMA. 2019 Sep 3;322(9):824-833.
- Dr. Lin reviewed the four studies' objectives, design, setting, participants, interventions, outcome measures, strengths and limitations, and conclusions.
  - He informed the group that the strengths and limitations reflect his opinion, but the conclusions are directly quoted from the authors.
- The WG was reminded to maintain a learning mindset.
- The WG discussed how these studies inform the WG's approach to CDC Questions 1 and 2:

  - Question 1: Should there be a category of Transmission-based Precautions that includes masks (instead of NIOSH Approved® N95® [or higher-level] respirators) for pathogens that spread by the air? Should N95 respirators be recommended for all pathogens that spread by the air?
  - Question 2: Can the workgroup clarify the criteria that would be used to determine which transmission by air category applies for a pathogen? For the category of Special Air Precautions, can you clarify if this category includes only new or emerging pathogens or if this category might also include other pathogens that are more established? Can you also clarify what constitutes a severe illness?
- WG members discussed whether studies have been conducted that compare healthcare personnel illness rates with community rates.
  - A WG member commented that these types of studies comparing healthcare personnel and community infection rates are ecological and not randomized control trials.
  - A WG member discussed that randomized controlled trials represent key clinical evidence for evaluating interventions such as wearing masks versus respirators; when an adequate number of subjects are randomized, both measured and unmeasured confounders are balanced between groups, and further adjustment for confounders is not indicated.
- Some WG members expressed methodological concerns that might affect the outcomes of these clinical studies, such as controlling for adherence, the potential for less adherence with respirators, and determining community versus workplace exposure.
  - A WG member spoke about how research conducted in other industries outside of healthcare shows that respirators effectively reduce worker exposure to other hazardous aerosols, such as lead and asbestos.
  - Another WG member added that the interpretation of these clinical studies and whether they provide sufficient scientific evidence on the efficacy of masks versus respirators in clinical settings differs among WG members, so determining the acceptable threshold of evidence will be crucial to moving forward.

<u>Next Steps</u>

- The discussion will continue at the next meeting, focusing on question two and addressing the methodological concerns raised.

The call adjourned at 3:02 pm with no additional comments or questions.
The next Workgroup call is scheduled for October 10, 2024, at 2 pm ET.

Michael Bell -S

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