DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion

Healthcare Infection Control Practices Advisory Committee

November 14-15, 2024

Atlanta, Georgia

Record of the Proceedings

Contents

Attendees

HICPAC Members
Lisa Baum, MA
Katherine (Kate) Ellingson, PhD
Laura Evans, MD, MSc
Colleen Kraft, MD, MSc
Jennie H. Kwon, DO, MSCI
Michael Lin, MD, MPH
Lela Luper, BSN, RN
Erica Shenoy, MD, PhD
Connie Steed, MSN, RN, CIC, FAPIC
David Jay Weber, MD, MPH
Sharon Wright, MD, MPH

***Ex Officio* Members**
CPT Scott Cooper, MMSc, PA-C, Centers for Medicare & Medicaid Services (CMS)
Kristen Dillon, MD FAAFP, Federal Office of Rural Health Policy (FORHP)
Leyi Lin, MD, Agency for Healthcare Research and Quality (AHRQ)
LCDR Scott Steffen, PhD, CQIA, CQI, Food and Drug Administration (FDA)
Shavonna White, DNP, RN, CIC, Indian Health Services (IHS)

Liaison Representatives
Hilary Babcock, MD, MPH, Society for Healthcare Epidemiology of America (SHEA)
Emily Bell, RN, APRN, PMHNP-BC, American Nurses Association (ANA)
Natalie Bruce, Public Health Agency of Canada (PHAC)
Kristina Bryant, MD (American Society of Nephrology (ASN)
Eve Cuny, MS, Organization for Safety, Asepsis and Prevention (OSAP)
Karen DeKay, MSN, RN, CNOR, CIC, Association of periOperative Registered Nurses (AORN)
Erin Epson, MD, Council of State and Territorial Epidemiologists (CSTE)
Chris Lombardozzi, America's Essential Hospitals (AEH)
Anurag Malani, MD, Infectious Disease Society of America (IDSA)
Lisa McGiffert, Patient Safety Action Network (PSAN)
Kristen Ehresmann Moyer, RN, MPH, Association of State and Territorial Health Officials (ASTHO)
Karen Ravin, MD, Pediatric Infectious Diseases Society (PIDS)
Mark Russi, MD, MPH, American College of Occupational and Environmental Medicine (ACOEM)
Benjamin Schwartz, MD, National Association of County and City Health Officials (NACCHO)
Justin Smyer, MBA, MPH, Association for Professionals in Infection Control and Epidemiology (APIC)
Tiffany Wiksten, BSN, APN, DNP, The Joint Commission (TJC)

CDC Representatives
Michael Bell, MD
Sydnee Byrd, MPA
Angela Driver, MA
Alexander J. Kallen, MD, MPH
David Kuhar, MD
Oliver M, MMT
Erin Stone, MPH, MA
Laura Wells, MS

Members of the Public
Naomi Bar-Yam, Co-Founder, World Health Network (WHN)
Yaneer Bar-Yam, PhD, Professor & President, New England Complex Systems Institute (NECSI); Co-Founder, World Health Network (WHN)
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Healthcare Infection Control Practices Advisory Committee (HICPAC)

November 14-15, 2024
Atlanta, Georgia

Minutes of the Meeting

The United States (US) Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) Division of Healthcare Quality Promotion (DHQP) convened a hybrid meeting of the Healthcare Infection Control Practices Advisory Committee (HICPAC) on November 14-15, 2024.

Thursday, November 14, 2024

Call to Order / Roll Call / Welcome & Announcements

Sydnee Byrd, MPA, Program Analyst
Division of Healthcare Quality Promotion
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

Alexander J. Kallen, MD, MPH
HICPAC Designated Federal Officer

Michael Lin, MD, MPH
HICPAC Co-Chair

Ms. Byrd officially called to order the first day of the November 2024 HICPAC meeting at 8:05 AM Eastern Time (ET), welcomed everyone, and called the roll. Meeting and voting quorum were established. HICPAC members disclosed the following conflicts of interest (COIs):

- Dr. Colleen Kraft serves on Scientific Advisory Boards for Vendanta Bioscience and Seres Therapeutics, and is a consultant for Rebiotix, Inc.
- Ms. Connie Steed is a consultant and educator for Global Life Technologies.
- Dr. Michael Lin receives research support in the form of contributed products from OpGen, LLC, and Sage Products, which is now a part of Stryker Corporation. He previously received an investigator-initiated grant from CareFusion Foundation, which is now part of BD.
- Dr. David Weber is a consultant on vaccines for Merck, GSK, and Pfizer

Ms. Byrd indicated that public comment was scheduled following the presentations. She explained public comments would be limited to 3 minutes each, and that commenters should state their names and organization for the record before speaking. She reminded everyone that the public comment period would not be a question and answer (Q&A) session.

Dr. Kallen welcomed everyone to the November 14-15, 2024 HICPAC meeting and introduced the following new members and liaisons:

Incoming HICPAC Members

- Lela Luper, BSN, RN, CIC, FAPIC is currently the Infection Prevention and Control (IPC) Manager at the Chickasaw Nation Department of Health (CNDH) in Ada, Oklahoma. For over 20 years, Ms. Luper has been an Infection Preventionist in the rural hospital and ambulatory care setting, providing her with the skills, critical thinking, and leadership abilities to promote infection prevention initiatives and patient safety. She has been Board Certified in IPC since 2004. Ms. Luper was an inaugural member of APIC's Fellow Class and a member of the APIC Oklahoma Chapter. She has served as the Treasurer and Chapter Legislative Representative and Member of the Service Committee, Branding Taskforce, Annual Conference Committee, Education Committee, and APIC Board of Directors. Her term on the APIC Nominating Awards Committee will end in December 2024. She also contributed to developing the *Novice Roadmap for the Infection Preventionist* in the Association for the Healthcare Environment (AHE) text. Ms. Luper currently serves as the Faculty for APIC Educational Courses. In 2004, she received the IHS Gary J. Gefroh Safety and Health Award, recognizing her significant contribution to improving Tribal health, healthcare safety, and infection control.

Incoming Ex Officio Members

- CPT Scott Cooper, MMSc, PA-C, CMS, is a United States Public Health Service (USPHS) Commissioned Corps Physician Assistant Officer assigned to CMS since 2003. CPT Cooper has been serving as the Director of the Division of Continuing & Acute Care Providers (DCACP) and Quality, Safety, and Oversight Group (QSOG) at CMS since June 2022. Before this role, CPT Cooper served in the Clinical Standards Group (CSG) for over 19 years where he was the Senior Technical Advisor and Hospital Lead. CPT Cooper gained extensive clinical experience over his 25 plus years as a Physician Assistant (PA), primarily in hospital-based medicine. He has deployed numerous times for national emergencies with the USPHS.

- Shavonna White, DNP, RN, CIC has worked for the IHS for 18 years. She started her career in September 2006 as a Pediatric Clinical Care Nurse in Chinle Comprehensive Health Care Facility (CCHCF) and has held various positions there since then. She has worked in infection control and prevention since 2014, earning her Board Certification in Infection Control in May 2018. Dr. White transitioned to IHS Headquarters as a Deputy Director of the Division of Nursing Services (DNS) in March 2024. She has a Bachelor of Science (BS) in Nursing from Arizona State University (ASU) and a Master of Science (MS) in Nursing with an emphasis in Leadership in Healthcare Systems from Grand Canyon University in Phoenix, Arizona. She received her Doctor of Nursing Practice (DNP) with an emphasis in Nurse Executive Organizational Leadership from the University of New Mexico (UNM).

- Kristen Dillon, MD, FAAFP is the Chief Medical Officer for the FORHP. In that role, she advises on clinical care and rural health in support of FORHP and HHS programs. Her areas of expertise include maternal health, substance use disorders (SUDs), health system design, clinical quality improvement, and building resilient trauma-informed teams and organizations. She is a family physician with 25 years of clinical experience in Colorado and Oregon. Her background in rural primary care includes clinic, nursing home, obstetrics, in-patient, and emergency department (ED) services. After transitioning her focus to policy and administrative work, Dr. Dillon has spent the past 8 years in leadership roles with the

Oregon Medicaid program, the US Congress, and State of Oregon's Coronavirus Disease (COVID) Response. She graduated with honors from medical school at the University of California, San Francisco (USFC) and from Dartmouth College with a double major in Chemistry and Asian Studies.

Dr. Lin greeted everyone and thanked them for attending in-person and online, extended a warm welcome to HICPAC's new Members and *Ex Officio* members, and commenced the agenda for the day.

Division of Healthcare Quality Promotion (DHQP) Update

Michael Bell, MD
Director, Division of Healthcare Quality Promotion
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

Dr. Bell welcomed everyone and expressed his gratitude on behalf of the DHQP for everyone's time, effort, and thought that they put into HICPAC. He emphasized that the value they all bring is hard to overstate. Having the breadth of perspective and real-life understanding that the HICPAC members carry with them is very important and valued input for the agency and the work of DHQP. He then provided a brief update from the perspective of the DHQP in terms of the arenas on which they are currently focused, which tie to the work that HICPAC is doing with DHQP.

Overall, DHQP is looking at a broad horizon that continues to expand and shift. A few examples of that are populations that DHQP is trying to embrace more actively, including rural health, Tribal health, and remote locations of care that have challenges that are very different from where much of the science around IPC and healthcare quality have been generated through the decades. Not everybody works in a tertiary urban academic center. Recognizing that and trying to understand where the gaps and solutions are that are practical, welcomed, and sustainable is part of the effort. The challenges with nursing homes, long-term care, and residential facilities were learned painfully through the COVID pandemic. The gradient of care locations is only going to increase. Understanding what needs to be done to care for those who live there and support the staff who provide the care is top of mind in terms of what DHQP is considering.

Pediatrics and maternal care represent groups for which the evidence base essentially does not exist. Thinking about what the pipeline needs to be in order to have that kind of evidence base in the coming years is about outreach to academic and researcher colleagues to determine the driver for growing information in these fields to then be able to make useful recommendations for how to manage a room full of drippy toddlers and their toys. In terms of where care is delivered, the dialysis setting continues to be extremely prone to misadventure. Home dialysis and home peritoneal dialysis represent areas that have unique challenges of their own. While these are helpful in terms of not bringing in patients and putting them side-by-side, the home location itself is difficult to predict, variable in the extreme, and potentially fraught with some challenges. Related to that is the ambulatory office care setting where to this day, there is a belief in the magical properties of the role of the white paper that is pulled over the bench and torn off while nothing else is wiped. Dr. Bell is sensitive to this twice a year when visiting his physician, and nothing seems to be changing. DHQP is thinking about what can be brought to bear there in terms of location of care.

Regarding technology, there has been growth in terms of cleaning technologies and disinfection sterilization processes for the past 10.5 years. While those are all good, environmental management writ large is going to continue to evolve and require some thought. The way things are done has been extremely outsourced, which is a challenge in and of itself. While there are fragilities with this, there also are some efficiencies. In terms of the dialysis example, there are 3 large dialysis organizations from which the DHQP can seek help that covers a massive swath of care. The same probably can be done with some of the outsourcing of environmental services work. There is a need to speak to the people doing that work in a way that is very different from speaking to academic colleagues and clinicians, given that they may not have lunch breaks, attend conferences, or go to Grand Rounds. Project Firstline, which is for all healthcare workers (HCW), was in October 2020 to address longstanding gaps in infection control knowledge and practice in US healthcare settings.

There is the snazzy bit of technology, artificial intelligence (AI), which everyone has been thinking about. DHQP is considering where the benefits of AI may lie within its work. There are many ways that DHQP could leverage these technologies, which he thinks are on the tipping point of becoming useable. Computer technology 35 years ago was interesting for nerdy computer people, but was not an actual useful tool. Now it is essentially a household appliance that people rely on for routine things. He sees this happening with AI technology, which is very exciting. However, it is somewhat sketchy since not enough is known about misinterpretation and where that could happen and the harms that could result. Understanding that analysis is an area in which DHQP is very focused.

The issue of the "integrated overall health system," while this is typically discussed as one big thing, is actually a mosaic of many different and not necessarily snug-fitting things. In terms of continuing to work on surveillance systems, data sharing, and so on, it is important to understand how best to knit that together into a functional whole that is effective, convenient, non-burdensome, and resilient. "Health systems resilience" has been bandied about a lot and is often talked about in terms of individual burnout, which is a huge issue and one that deserves some conversation. The fact that after 2 years of COVID, a lot of places that were doing great saw their bad outcomes increase because people were fatigued, patients were sicker, the types of care being provided were more challenging, and whatever other reasons. There is a desire to build a health system that is able to tolerate those types of scenarios without losing ground. Some places that slipped backward caught up again very quickly, so there is an interest in understanding the differences between the fast catch-ups versus the slow catch-ups. Finding elements that potentiate more rapid recovery is a part of resilience.

Discussion Points

HICPAC Members

- CMS has stopped gathering data on healthcare staff infection rates in nursing homes, which is invaluable data. This is the only worksite in any industry in the country where there are good data on what is happening in these dramatically diverse settings, where, and to whom. CMS was collecting these data for the first 9 months of 2024 and found almost 200,000 COVID infections among staff. The proposed data gathering from CMS beginning in January for healthcare facilities in January will not capture these data. Finding out more about what is occurring is the best way to implement effective infection controls. Eliminating what little data are available is not the answer.

- Dr. Bell said that while he would not answer for CMS since it is not his agency, he would flag that there are a lot of equities at stake here. During the Public Health Emergency (PHE), there was an ability for the government to insist on more. When the PHE was declared over, the industry that supported this work said it was more than needed to be done and they no longer wanted to do it. No doubt, CMS had to balance those inputs. He agreed that these data are valuable, though insufficient. There is a tendency to point at healthcare data in the absence of any other occupational infection data. He honestly could not say whether healthcare personnel (HCP) are at more risk than teachers in primary education or people working in public pharmacies like CVS. The reality is that there is almost no information about occupational acquisition of infection except in healthcare. Not only would it be helpful to have more information about what is happening in healthcare to healthcare staff, but also the entire American workforce needs to be assessed in terms of what is happening in order to understand relative risk, because some of this also maps to the community. When the community exposure risk is removed, how much is left for occupation? Until that is known, it is all speculative and it is hard to have a meaningful conversation. He agreed that the data are important and would love to see it span more occupational categories.

Ex Officio and Liaison Representatives

- There were no additional comments or questions from HICPAC's *Ex Officio* or Liaison Representatives.

Isolation Precautions Guideline Workgroup Update & Discussion

Michael Lin, MD, MPH and Sharon Wright, MD, MPH
Co-Chairs, Isolation Precautions Guideline WG

Background

Dr. Wright reminded everyone that the findings and conclusions being shared during this session were draft, had not been formally disseminated by the CDC, and should not be construed to represent any agency determination or policy. None of the WG members reported financial or intellectual interests related to the topics in this guideline update except for the following:

- ❑ Consultant to companies that produce respirators
- ❑ Research support received in the form of contributed products from OpGen and Sage Products (now part of Stryker Corporation)
- ❑ Infection Prevention consultant and lecturer
- ❑ Liaisons to the HICPAC committee for:
  - SHEA, but on this WG serves as a subject matter expert (SME) and does not represent the views of SHEA
  - ACOEM, but on this WG, serves as a SME and does not represent the views of ACOEM

In November 2023, HICPAC approved the Part 1 draft update to the *2007 Isolation Precautions Guideline* to send to CDC in preparation for public comment period. In January 2024, HICPAC received 4 questions from CDC related to the "Transmission by Air" section of the 2023 draft guideline. Dr. Wright explained that portions of this 2-day meeting would be dedicated to a detailed discussion of the questions and WG discussion. HICPAC will select final responses to the questions, particularly where differing opinions were put forward by the WG. Following the

discussion, the response letter from HICPAC to CDC will be drafted and voted on during Day 2. Answers to the 4 CDC questions will provide a framework for the WG to make updates to the 2023 draft, if needed, for presentation during a future HICPAC meeting. With that in mind, this session included: 1) detailed discussion of the background in terms of WG goals, prior work, and memberships; 2) an introduction to the CDC's 4 questions regarding context and scope and roles and responsibilities; and 3) a summary of WG thoughts on the CDC's 4 questions with HICPAC discussion in the order of Question 3, 4, and then Questions 2 and 1 together. Of note, the WG found that they were able to make more progress as a group in their discussions by addressing the questions in this order.

In terms of background, the WG's goal is creation of an update to the *2007 Isolation Precautions Guideline*. The draft guideline is intended to replace corresponding content in the 2007 Guideline that is currently online. The goal is to have clearer and more concise language and formatting. The recommendations largely address infection prevention strategies that frontline HCP may implement at the point of care. The guideline is intended to be applicable to all healthcare settings. As Dr. Bell pointed out earlier, it is important to ensure that this document is applicable to all places where healthcare may occur. Instead of having separate documents for pediatrics, dialysis, et cetera, the goal is to incorporate guidance, as much as possible, in one guideline. As a reminder, Parts I–IV of the 2007 Guideline were combined into a single Part 1 in the 2024 Guideline. Part 1 is pathogen-agnostic. Appendix A of the 2007 Guideline eventually will be replaced by Part 2 of the 2024 Guideline, which will be pathogen-specific and represents future HICPAC work.
With regard to the timeline of work on updates to the 2007 Isolation Precautions guideline, the first WG meeting occurred in 2022. For the ensuing almost 2 years, the WG met about every 2 weeks to have discussions and provided 7 previous presentations to HICPAC on progress. In November 2023, the 2023 Isolation Precautions Guideline Draft (referred to for the remainder of the presentation as the 2023 Draft) was discussed, voted on, and approved by HICPAC to submit to CDC for review. In January 2024, the CDC sent back a letter to HICPAC with 4 questions for clarification. Since November 2023, 7 new WG members were added. This expanded WG began to meet every 1 to 2 weeks leading up to today's HICPAC meeting. WG areas of expertise include: Infection Prevention, Healthcare Epidemiology, Employee Occupational Health, Aerosol Science, Industrial Hygiene, and Long-Term Care/Post-Acute Care. The WG has a total of 17 members. There have been 20 meetings since February 29, 2024. External experts from the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) have been invited to specific meetings to help answer questions that arose during WG discussions. These are the current Isolation Precautions WG participants:

<u>Isolation Precautions Guideline WG Members</u>
Michael Lin (Co-Chair), Sharon Wright (Co-Chair), Hilary Babcock, William Bennett, Lisa Brosseau, Elaine Dekker, Judith Guzman-Cottrill, Robert Harrison, Morgan Katz, Anurag Malani, Melissa McDiarmid, Mark Russi, Erica Shenoy, Connie Steed, Jane Thomason, Julie Trivedi, and Deborah Yokoe

<u>CDC Support</u>
WG DFO: Mike Bell; CDC/DHQP/NIOSH Technical Staff: Marie de Perio, Alex Kallen, David Kuhar, Kenneth Mead, Devon Okasako-Schmucker, Melissa Schaefer, Christine So, Erin Stone, and David Weissman; plus pathogen-specific SMEs; CDC/DHQP Support Staff: Sydnee Byrd (Contractor) and Laura Wells (Contractor)

<u>Other Participants</u>

Experts from OSHA, NIOSH, and external organizations

Moving on to the 4 CDC questions, Dr. Wright provided an excerpt from the CDC blog that was posted immediately after HICPAC received the letter containing the questions. The blog adds some context to the 4 questions provided to HICPAC:

> *Based on the significant interest in the draft recommendations, CDC is taking a proactive step of communicating back to HICPAC some initial questions and comments on which we would like additional consideration before submitting the guideline into the Federal Register for public comment. In addition, CDC is working to expand the scope of technical backgrounds of participants on the HICPAC Isolation Guideline Workgroup and eventually among the committee members through established processes in accordance with the Federal Advisory Committee Act (FACA) regulations and guidance. The expanded workgroup and the HICPAC with the newly appointed members will review and discuss these additional considerations and guideline at the next HICPAC meeting, which is open to the public.*[1]

[1] Excerpt from the CDC Safe Healthcare Blog, 1/23/24 "A CDC Update on Part One Draft update to the Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings" Daniel Jernigan, MD, MPH, Director, NCEZID, and John Howard MD, MPH, JD, LLM, MBA, Director, NIOSH

This table outlines the roles and responsibilities related to answering additional questions from the CDC:

Isolation Precautions WG	HICPAC
Create a forum for in-depth discussion of experts on these topics.	Evaluate possible responses to CDC questions informed by WG discussions.
WGs are responsible for collecting, analyzing, and preparing information for presentation, discussion, deliberation, and vote by the HICPAC parent committee in an open public forum.	Provide clarifications on details of Transmission by Air recommendations to CDC leadership via vote on a response letter to the 4 questions.
WGs are non-voting entities and do not directly advise the agency (CDC).	Responses to 4 questions will guide the WG in any needed edits to the 2023 Isolation Precautions Guideline draft.

The following are the 4 questions posed by CDC to HICPAC:

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 air? Should N95 respirators be recommended for all pathogens that spread by air?

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?

3. Is the current guideline language sufficient to allow for voluntary use of a NIOSH-approved® N95 (or higher-level) respirator? Should the document include a recommendation about healthcare organizations allowing voluntary use?

4. Should there be a recommendation for use of source control in healthcare settings that is broader than current draft recommendations? Should source control be recommended at all times in healthcare facilities?

To provide some context, Dr. Wright shared how the WG worked together. It was not a small task to add new members and build the trust needed to have honest, authentic conversations. One way that the WG accomplished this was by creating a shared list of interests upon which all members could agree, with the final list as follows:

- ❑ Final list of shared interests to consider include those that:
  - Protect patients and healthcare personnel from infection that is transmitted via infectious particles in the air
  - Are evidence-based, incorporating science and adapting as science evolves. In the absence of evidence-based research, utilizes expert opinion and evidence from best practices
  - Incorporate risk stratification by pathogen
  - Are feasible and sustainable
  - Balance benefits and harms in relation to both patients and healthcare personnel

- ❑ Interests that would not be considered:
  - Costs (e.g., interventions, PPE)
  - Environmental impact

Drs. Wright and Lin then moved into the specific questions, with discussion periods following each.

The 4 CDC Questions

Question 3

a) Is the current guideline language sufficient to allow for voluntary use of a NIOSH-approved® N95 (or higher-level) respirator?

b) Should the document include a recommendation about healthcare organizations allowing voluntary use?

Beginning with Question 3, Dr. Wright pointed out that the comment on voluntary use currently is located in the narrative and is not a formal recommendation. The WG thinks that this question seeks to determine whether this should be a formal recommendation or should remain in the narrative.

Voluntary Use
Current draft, Air Narrative

Additional Considerations:

- While not required for Routine Air Precautions, HCP may choose to voluntarily wear a NIOSH-approved N95® (or higher level) respirator. Federal regulations specify employers' responsibilities when voluntary use of respirators is allowed in workplaces.

This is the existing regulation related to voluntary use of respirators in the OSHA Respiratory Standard, 1910.134(c):[2]

> 1910.134(c)(2)
> Where respirator use is not required:
>
> 1910.134(c)(2)(i)
> An employer may provide respirators at the request of employees or permit employees to use their own respirators, if the employer determines that such respirator use will not in itself create a hazard. If the employer determines that any voluntary respirator use is permissible, the employer shall provide the respirator users with the information contained in appendix D to this section ("Information for Employees Using Respirators When Not Required Under the Standard"); and
>
> 1910.134(c)(2)(ii)
> In addition, the employer must establish and implement those elements of a written respiratory protection program necessary to ensure that any employee using a respirator voluntarily is medically able to use that respirator, and that the respirator is cleaned, stored and maintained so that its use does not present a health hazard to the user. Exception: Employers are not required to include in a written respiratory protection

[2] https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134

program those employees whole only use of respirators involves the voluntary use of filtering facepieces (dust masks).
1910.134(c)(3)
The employer shall designate a program administrator who is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness.

The Isolation Precautions WG heard an opinion from an OSHA leadership representative on voluntary use of respirators, including a discussion of the above standard. As originally developed, the OSHA Respiratory Standard 1910.134(c) was intended for nuisance dust. It was not intended to address workplace exposures with a significant risk of transmission of infectious diseases and leaves voluntary use at the discretion of the employer and not the worker. The WG discussed reasons to consider a formal recommendation on voluntary use rather than keeping it in the narrative. Dr. Wright summarized some of the WG's discussion; it is important to note that these were opinions expressed by some but not all WG members:

- In terms of the advantages of doing so, OSHA's Respiratory Protection Program Standard (29 CFR 1910.134) does not guarantee employees voluntary use of a respirator, as it is an employer determination. A recommendation would outline requirements around voluntary use. This would permit HCP some autonomy beyond guideline recommendations in making decisions about respirators versus masks, incorporating individual risk assessment and risk tolerance.

- Regarding disadvantages, adding a recommendation for voluntary use of respirators would be confusing to staff about what is necessary to prevent transmission of infection. OSHA originated the concept of "voluntary use" through Standard 1910.134 and thus should remain the primary source for an expanded standard regarding voluntary use in the context of infection prevention.

Dr. Wright pointed out that throughout the presentation, Option A would represent the most common response expressed by individual WG members and Option B would represent other opinions expressed. For Question 3, the WG focused on the second part of the question because they found the issues to all be rolled into that portion and suggested the following options with regard to voluntary use:

Option A
Yes, the guideline should include a recommendation about healthcare organizations allowing voluntary use. The current guideline language may not be sufficient to allow for voluntary use of a NIOSH-approved® N95 (or higher level) respirator.

Option B
No, a specific recommendation is not needed. The current guideline language is sufficient to allow voluntary use of a NIOSH-approved® N95 (or higher level) respirator.

She explained that HICPAC would not be voting or discussing a recommendation at this time. Instead, she shared the following to provide an example of potential draft recommendation language if HICPAC selected Option A as a response to Question 3:

> *Employers should develop a program for safe voluntary use of NIOSH approved® N95 (or higher level) respirators by HCP, when respirator use is not otherwise required.*

Discussion Points: Question #3

For this discussion, HICPAC members, ex officios, and liaison representatives raised the following questions, observations, and suggestions/recommendations:

- A HICPAC member spoke in support of Option A because it would strengthen the language around "voluntary use." People who work in an environment where there is a high risk of exposure to airborne infections, who also live with someone who is at high risk for severe disease, should have the right to increase their own protection. The healthcare environment is highly dynamic, and it is not always possible to predict what people may be exposed to. It often is nurses who perform assessments to determine whether someone is likely to have an airborne infectious disease, and they cannot turn back time once they realize they are at risk from assessing a patient. They should have the right to protect themselves in any environment where exposure risk is unknown based on not only their own risk tolerance, but also based on the fact that HCP need to be able to work and be protected from the wide range of hazards related to infectious disease to which they may be exposed. In terms of the argument that this would be confusing, that frankly is condescending to the knowledge base and understanding of most HCP. Not allowing HCP to take steps to protect themselves well, even if they believe their employer is not fully protecting them, is unimaginable.

- A HICPAC member pointed out that the purpose of the Isolation Guideline is to describe what is required to keep HCP, patients, and visitors safe based on the evidence or expert opinion when there is no evidence. By veering off into recommending use of personal protective equipment (PPE) when it is not required for those purposes under standard or Transmission-Based Precautions opens a door to something that is actually contradictory to the actual Isolation Guidelines. The way OSHA has described it is very clear and gives directions to healthcare facilities as to what is required for them. This should be left as-is in terms of deferring to OSHA, which is clearly in OSHA's Respiratory Protection Program Standard 1910.134(c)(2)(ii) that describes what is required of employers. Regarding the term "confusion," HCP typically make choices based on the signs posted in a patient's room that tells them what they need to do regarding PPE. That is all embedded in the guideline as part of Standard and Transmission-Based Precautions.

- However, another HICPAC member pointed out that Standard Precautions do not cover aerosol or airborne exposure risks. This is not known until an assessment is done, and still may not be known because some people are asymptomatic, or HCP may be exposed before they know that there is a risk. There are some differences in an industrial workplace and healthcare in the respect that there tends to be a lot of measurement of hazards, and it tends to be easier in the industrial workplace, so it is known whether there is a toxin in the workplace, how much of it, when, and what the exposure level is. The healthcare setting does not have this. Voluntary use under OSHA's standard is for when there is no health hazard. It was based on exposure to nuance dust, which is not known to cause health risks. In healthcare, it is not always known how much exposure can cause infection because there are so many variables.

- Dr. Wright pointed out that Transmission-Based Precautions in the 2023 draft has a section on Empiric and Syndromic Surveillance indicating that when entering the room of a patient who is suspected to have an infection, PPE should be used appropriately.

- To clarify the scope of whether “voluntary use” needs to be included in a recommendation, a HICPAC member asked about whether “voluntary use” would be recommended as part of Routine Air precautions and if that would include HCP voluntary use of an N95 respirator for any patient care interaction when they so choose, or if it would apply only when a patient is being cared for under routine air precautions.

- Dr. Wright indicated that the WG spent a lot of time trying to parse out what the CDC meant by the specific questions for which they were requesting clarification. Some of it regards how HICPAC interprets it, which varied among the WG members. It potentially could apply to any situation in which a respirator is not required. A big portion of that would be “not required under Transmission-Based Precautions,” but it could go beyond that. The question was somewhat vague, perhaps on purpose so the WG and HICPAC would think about all of the potential situations. If the decision is made to include it in a recommendation, they could be as specific as the committee chooses and the scope of that. More explanation could be included in the narrative as well.

- A HICPAC member commented that it is an unfortunate reality that a huge number of patients are not in contained spaces, such as a patient room. Frequently, patients are in beds in hallways for days at a time due to overcrowding. There are many environments in which patients do not have a room because they are in an ambulatory care setting for diagnostic testing, treatment, infusion, and a wide range of other services. EDs have patients in waiting rooms and hallways. HCP often do not have the luxury of choosing to wear a respirator when entering a patient space. Patients may be assessed, but visitors are not screened. There is risk of exposure during influenza season when COVID rates are higher and when respiratory syncytial virus (RSV) rates are higher. There have been numerous reports over the years of wide swaths of HCP being exposed to active tuberculosis (TB) because it was not determined that a patient had TB until after they exposed a large number of people. HCP and other workers should have the right to protect themselves with N95s to protect themselves and their family members even if the management and decision-makers at their facility have not considered there to be a risk.

- A HICPAC member expressed discomfort with creating a “should” recommendation for something that is voluntary. The member provided some good examples of what happens in reality in an effort to deliver care, which are followed by making other decisions once information is known. The reality is that workers often will make their own decisions regardless of what an employer says or does not say about wearing additional respiratory protection. As a society and general public, it has become very common to see someone wearing some sort of respiratory protection based on their own personal beliefs or needs about risks they may encounter. People have become accustomed to that, so creating a “should” recommendation for something that is voluntary and that is already covered by OSHA does not make sense.

- A HICPAC member who has worked with long-term care facilities (LTCF) in a state that does not have a lot of resources commented that oftentimes, employers struggle to keep up with and understand guidance. Adopting Option A would give individual HCP the discretion to assess their own risk and is an important consideration. However, some of the language is still not sufficiently clear and concise. That is one of the overriding issues of this revision for employers. If Option A is selected, referring readers to a complicated OSHA statement that is not meant for infectious disease would require more clarification about this being meant for the individual HCP versus being a blanket policy for everyone.

- Referring to the example recommendation, Dr. Lin pointed out that the “should” part is directed toward employers in this context and does not mean that the HCP should do something.

- A HICPAC member noted that “risk assessment” should be clearly defined. Some people mean a risk assessment of the situation in front of them, such as the potential for splash or spray, a patient reporting a cough and weight loss for 3 weeks and come from a TB-endemic area, et cetera. That is a risk assessment about how a HCP is interacting with a patient. That is different from making a personal risk assessment that could change over the course of a day, a week, or whatever is going on in one’s household and is not what infection control is truly about. However, both were being discussed so it would be helpful to better clarify this.

- Another HICPAC member agreed that these are 2 different types of risks. Required use of respiratory protection tends to regard the risk of exposure in the workplace. Voluntary use can consider risk of exposure based on the kind of assessment and the risk if someone becomes exposed and infected based on one’s own personal health and perhaps the health of people one lives with. It does not make sense to ignore that in the HICPAC guideline.

- The HRSA liaison acknowledged understanding of the competing values around HCP autonomy and taking steps that they feel could preserve their own health, which will vary depending upon their situations. In terms of health workforce burnout, erring on the side of allowing employers to voluntarily use a higher level of PPE than required probably outweighs any confusion around having people wearing different types of equipment in different settings. Thinking about small and rural hospitals, the message should be prioritized that employers should allow their staff to voluntarily use a higher level of protection. Anything CDC and others could do in terms of model programs, policies, and templates would be beneficial. In a small hospital, this is the type of recommendation that will land on the Director of Nursing who is responsible for infection control. Anything that can be done to prioritize the message that staff must be allowed to take steps that they feel are necessary for their health and minimize the burden on the employer would be beneficial. Perhaps the term “adopt” would be better.

- In terms of some of the discussion that occurred in the WG and why this sample recommendation was made, Dr. Wright shared that they all felt that it would be important in following OSHA that it is the responsibility of the employer to develop a program for safe voluntary use. If someone chooses to wear an N95 who has not been fit-tested but is entering a clinical space, there are requirements. Even if it is not required for the care of the patient, the HCP still needs to know how to do a seal check and that the N95 actually fits them. The WG did not want to put responsibility solely on Infection Prevention. Usually, a Safety Officer is also involved, which sometimes is the same person in small hospitals but not always. That discussion was about putting the “should” on the employer because they also are the ones who should provide the PPE and make sure that there is a safe program to do this. Details could go in the narrative if HICPAC does make a recommendation.

- An AEH liaison expressed surprise because typically, nursing homes, small and large level 1 trauma centers, and other facilities never would have thought of restricting additional use.

- Dr. Wright said she thought that was true for many facilities, but it came up in the WG that this has been experienced. Even if these were anecdotes, the WG wanted to discuss it and was possibly why the CDC raised this question.

- A liaison from The Joint Commission (TJC) expressed that TJC looks at guidelines from the angle of the end-user, whether that is the person responsible for developing policies and procedures based on translating guidelines into actual practices and the frontline users. This is a hot topic for which people are seeking answers. The first question regards whether it belongs in the guideline, which is important to address. Making sure that it is addressed in the right document is probably equally as important. Another consideration is that if HICPAC chooses to leave it in this document, including it in the language in the beginning without formally addressing it in the guideline creates a space for ambiguity and lack of clarity for people to understand what actual guidance could be. There are people who work in infection control at large academic medical centers versus those who work in small ambulatory locations who may not have the same education or training to be able to determine from a vague reference in the guideline what the direction should be—even if it is to address whether it is a recommendation, remains unresolved, or is up to the organization to evaluate and make a determination based on safety for their staff and patients.

- Dr. Wright clarified that this was not mentioned in the beginning. It was under “Additional Considerations” in the “Transmission by Air” section.

- Dr. Bell invited people to share their thoughts about what the risk perception that leads to an individual wanting to protect themselves appropriately implies for patients in a facility. It is one thing to talk about occupational safety, but this is a situation in which patients share the same workspace as the worker. He asked what the dotted line would be from this utilization to the patient reality.

- A HICPAC member pointed out that this was the same argument that was used prior to implementation of the Bloodborne Pathogen Standard in terms of what patients would think. For example, would a patient perceive that an HCP wearing gloves thinks they are dirty. Over time, it was no longer perceived that way. In this case, that argument should not be taken into consideration. People are actually being denied the right to voluntarily wear respirators. Regarding the comment from the TJC liaison, HICPAC would not be voting on the language during this meeting but could talk about how it should be worded appropriately to decrease ambiguity when that time comes.

- Dr. Bell clarified that in terms of HIV, the patient already has their own blood, and other patients are not entering to touch that blood. With respiratory protection, there is a shared air environment that everyone is breathing. These are completely different.

- A HICPAC member agreed that clarity is important for the purpose and scope of an isolation guideline and truly is about what is required to prevent transmission of infection. While this is about respiratory protection, following the logic of those who support a recommendation that the employer allow for PPE when not indicated by standard or transmission-based precautions or syndromic response, if someone feels they need to wear 2 pairs of gloves, gowns, or other forms of PPE, does that live within a guidance like this? This relates to

HICPAC moving into a space of recommending PPE when it is not actually required for the purposes of the guideline.

- Dr. Lin said it was worth mentioning that this recommendation would be focused on transmission by air, but the idea of employers creating a safe program will address some of the issues raised in terms of protection. The point that this has to be done in a safe manner is the intent of this effort.

- To address Dr. Bell's question, a HICPAC member noted that as an HCP who was responsible for 18 healthcare organizations across the continuum of types of facilities, when HCP were wearing masks and N95s all of the time, it did have impact on the patients. Sometimes, patients do not understand what the HCP is saying. At least during that timeframe, it was recognized that patients had to understand why HCP were wearing the protection. It was expected because they were dealing with a scary emerging pathogen. If HCP are going in and out of rooms, some wearing protections and others not, it causes confusion for patients. It is important to acknowledge that and respect the fact that it does have some impact on patients and causes confusion for patients and families.

Question 4

a) Should there be a recommendation for use of source control in healthcare settings that is broader than current draft recommendations?

b) Should source control be recommended at all times in healthcare facilities?

Moving to Question 4, Dr. Wright indicated that the way the WG framed Question 4 was that it was all about source control. The CDC definition of "source control" is as follows:

> *Source control refers to use of respirators or well-fitting facemasks to cover a person's mouth and nose to prevent spread of respiratory secretions when they are breathing, talking, sneezing, or coughing. Masks and respirators also offer varying levels of protection to the wearer.*[3]

The definition of the term "mask" used for this discussion was the mask definition used in the 2023 Guideline Draft:

> *Masks include surgical masks, face masks (sometimes referred to as procedure masks), and enhanced barrier face coverings that are approved for use in healthcare.*[4]

The approaches to source control in the 2023 Draft represent an expansion to include asymptomatic individuals. Historically, the use of masks for source control focused on symptomatic individuals (e.g., respiratory hygiene, cough etiquette). The use of masks for individuals with symptoms suggestive of respiratory infection to reduce the risk of transmission are addressed elsewhere (e.g., in CDC's Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings, Section, 5e), as are control measures other than masking (e.g., hierarchy of controls).[5] In the 2023 Guideline Draft, source control additionally refers to the use of a mask for asymptomatic individuals whose respiratory infection status is unknown. The following is what is in the *2023 Draft, Section C, Transmission by Air with a focus on highlighted portions*:

[3] https://www.cdc.gov/infection-control/hcp/viral-respiratory-prevention/index.html
[4] https://www.cdc.gov/niosh/topics/publicppe/barrier-face-coverings.html
[5] https://www.cdc.gov/infection-control/hcp/core-practices/index.html

Recommendations:

1. During periods of higher levels of community respiratory virus transmission, facilities should consider implementing one of the following approaches to source control:
    a. HCP use source control when interacting with patients (e.g., on entry to the patient's room or bedspace). (Expert Opinion)
    b. All individuals (e.g., patients, visitors, and HCP) use source control upon entry to the facility or a clinical area. (Standard Practice)
        i. In most circumstances, it is not necessary for a patient to use source control when in their room; it could be considered when care is being provided. (Expert Opinion)

2. At any level of community respiratory virus transmission, consider implementing source control measures targeted toward higher risk areas (e.g., emergency departments, urgent care) or units (e.g., bone marrow transplant units) based on a facility risk assessment. (Standard Practice)

Narrative:

Individuals breathing, speaking, coughing, or sneezing generate aerosols of respiratory secretions that can contain infectious organisms. The use of a mask or respirator by an infectious individual can reduce the amount of secretions released into the environment (source control) and thus reduce exposure of people in a shared space to respiratory pathogens.

Source control, included as part of respiratory hygiene and cough etiquette in CDC's Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings (https://www.cdc.gov/infectioncontrol/guidelines/core-practices/index.html), historically focused on use of masks by symptomatic patients (e.g., in waiting areas). Source control is now recognized to be applicable to asymptomatic individuals as well, since a portion of such individuals may be asymptomatically or pre-symptomatically infected with pathogens such as respiratory viruses.

While in their own room, patients would not be expected to use source control unless interacting with HCP

For both Questions 4a & 4b, Dr. Wright shared the key points from the WG discussions on applications of source control. These are some of the individual opinions but are not necessarily uniform across the entire WG.

- Some comments that supported the 2023 Draft were that source control use should be recommended based on risk assessment. This could include factors such as local epidemiology and risk of pathogen transmission. During periods of lower transmission risk, it is unclear whether source control benefits outweigh downsides (e.g., fatigue, impairment of communication). Requiring all individuals (patients, visitors, staff) entering a healthcare facility to wear source control year-round is not sustainable or practical.
- Comments supporting broader application were that use of source control in all situations and/or at all times may compensate for inconsistent use of other interventions, such as screening of patients (e.g., for symptoms, exposures). Source control protects staff and patients from individuals with pre-symptomatic or asymptomatic respiratory illnesses, which can happen at any time of year. The term "should consider" is not strong enough when describing the situations. Use "should" to imply that facilities must choose one option.

Beginning with Question 4a, “Should there be a recommendation for use of source control in healthcare settings that is broader than current draft recommendations?” the following options were proposed:

Option A
No, a recommendation for the use of source control in healthcare settings that is broader than the current draft recommendations is not necessary.

Option B
Yes, a recommendation for the use of source control in healthcare settings should be broader than the current draft recommendations.

For Question 4b, “Should source control be recommended at all times in healthcare facilities?” the following options were proposed:

Option A
No, HICPAC recommends that source control decisions be determined by local risk of pathogen transmission and epidemiology, rather than at all times.

Option B
Yes, source control should be recommended at all times in healthcare facilities.

Dr. Wright reminded everyone that while the WG did not solicit a consensus opinion, individual responses to the questions were collected. As a reminder, throughout the presentation during this meeting, Option A would represent the most common response expressed by individual WG members.

Discussion Points: Question #4

For this discussion, HICPAC members, ex officios, and liaison representatives raised the following questions, observations, and suggestions/recommendations:

- A HICPAC member recalled that in the previous discussions about the draft recommendations from 2023, more context about the discussion around the “should consider implementing” issue would be helpful in terms of whether it is intended to be a weak recommendation or an optional recommendation for facilities.

- Dr. Wright indicated that in the 2023 Draft discussions for the initial formulation of the WG over the first 2 years and during HICPAC when this was brought forward, the feeling was that there may be other strategies besides the 2 that are listed in the first part of the recommendation based on the facility type that they might think about implementing. They did not want to be restrictive in forcing facilities to choose one of these, but that facilities should consider doing something and that they should consider one of these options. As a reminder, “standard practice” means that it is already in other CDC or other guidance documents that exist versus meaning that it is a standard practice throughout the country. 1.a was based on expert opinion and done in many facilities in the US but was not a standard, they did not want to say that a facility “must” pick one of these. It was more of a recommendation to assess and choose something. In the WG, the specifics of that was that the “should consider” meant that some facilities might not and that “consider” should be removed. She reminded everyone that they were not wordsmithing during this meeting and

that this was just for background, but instead were considering the CDC questions about whether the recommendation should be broader than what was put forward in the 2023 Draft. The WG would then develop some language that would be brought back to HICPAC.

- A HICPAC member pointed out that patients are not always in a room and screening can take a while, particularly screening in EDs. Often, there are long waits even for initial screening and triage. These areas are often very crowded with patients and the visitors accompanying them. Chemo infusion waiting areas are often packed with patients who are at very high risk of morbidity and mortality who almost always have visitors with them who are not screened. HICPAC has received many comments from the public from people at high risk for morbidity and mortality who have been infected in healthcare settings and/or who fear going for healthcare due to the risk of exposure. HICPAC needs to pay attention to these comments that having been coming in for several years and continue to come it. While HICPAC was not wordsmithing during this meeting, it is important to remember that "should consider" language is unlikely to be followed. Perhaps staff, visitors, and patients should utilize source control. While source control is not 100% effective, it is effective and often works well. It would be beneficial to discuss the nuances of exactly where and when that expansion would happen. The 2023 Draft recommendation #2 stating "At any level of community respiratory virus transmission, consider implementing source control measures targeted toward higher risk areas (e.g., emergency departments, urgent care) or units (e.g., bone marrow transplant units) based on a facility risk assessment" would not necessarily address this because there may be significant differences of opinion about what is considered a "high risk area." Because of staffing issues, HCP constantly move from one type of unit to another. Agency staff are also coming in and out, so stronger language than #2 would be better. Until recently, there are data from nurses that have identified high rates of transmission within facilities. There is no question that it is happening. The question regards how to safely protect patients and staff. Broader requirements are needed for source control.

- Dr. Lin pointed out that it would be helpful, based on the current language, if members interested in supporting Option B would suggest specific changes since there are so many components.

- Regarding recommendation #1 stating that "during periods of higher levels of community respiratory virus transmission, facilities should consider implementing one of the following approaches to source control . . ." a HICPAC member pointed out that most methods of measuring community transmission have been removed. Community transmission is often not known until after the fact when hospitals are full of people who have been infected. Some areas are using wastewater monitoring, which has been effective. But not all areas are doing this, so risk is often unknown until many people are ill.

- A HICPAC member expressed support for Option A because it offers the flexibility that is necessary at a facility level to make the types of choices that are tradeoffs. One extreme would be masking of all individuals entering a facility year-round regardless of what is occurring in the community. In much of healthcare, consideration is given to the number needed to treat (NNT). Thinking about the number needed to mask when there is lower prevalence of a pathogen and the fact that the level of exposure does not always lead to infection, this would be instituting an intervention that has diminishing returns. When there are low levels of pathogens in the community that have less impact on population immunity, a facility should have the ability to make those decisions, accounting for everything else

going on in that facility. Masking can have downsides, such as communication barriers and the ability to maintain everyone at this very high level of intervention that is not practical or sustainable. Some of the positions supporting the 2023 Draft are really describing that tradeoff between the interventions implemented and the potential gain for those. Despite the changes in reporting requirements, there are a lot of data. Many facilities use data such as wastewater, internal infections, infection rates among staff, capacity, number of individuals admitted with infections, et cetera and are toggling their interventions based on those data. Allowing that flexibility makes more sense from a practical perspective versus being tied into one of the options that has been laid out. “Should consider” gives facilities that flexibility and a hint about approaches some facilities are taking.

- A HICPAC member did not feel that Options A and B for Question 4a and “should consider” language were strong enough and were not being seen in practice in healthcare facilities. For example, it is disturbing to visit a labor and delivery unit with newborns who have little protection and no one is masking.

- One of the things PSAN hears from many patients that is disturbing is that often they are infected but not diagnosed and few precautions are being used, including masking. Most hospitals are not using rapid testing, so it could be days later when a test result comes in showing that a patient has a highly contagious condition.

- Dr. Lin reminded everyone that there is existing guidance to use source control for respiratory etiquette with patients who have symptoms, including the Core Practices.

- Dr. Wright added that for HCP, if someone had a respiratory syndrome, under “Additional Considerations” for syndromic and empiric applications of Transmission-Based Precautions, they should be treated as if they have a respiratory infection and HCP wear the appropriate PPE when entering the patient’s room. If the suspicion was high enough to send the test, the patient would be on precautions. If this is not happening, it may be related to education that needs to go along with the updated guideline to ensure that the practices that already should be in place are occurring.

- A HICPAC member emphasized that use of a high level of protection based on symptomology is not being practiced. While this certainly involves education, it also involves making sure that language is strong enough. It is not only infection prevention staff who read these guidelines. HCP also regularly read them, so it is important to make sure the language is strong enough that the intent is clear.

- Another HICPAC member agreed about the importance of clarity and that the language should not be ambiguous given the many people who will be reading this. If it is not possible to make a recommendation, it is important to call out why because that helps people understand the limits of the evidence. It is important to remember that this is about asymptomatic patients. While it is discouraging to hear anecdotal descriptions of people not implementing transmission or syndromic precautions, that is not the question in front of HICPAC. The question pertains to whether HICPAC is going to change a recommendation that gives options for asymptomatic individuals to be masked to make it stronger than it already is.

- AEH pointed out that given the amount of angst the staff would have to go through to be in crisis mode every day in terms of getting asymptomatic visitors and patients to do this, it is

simply not going to happen. There are many issues with the healthcare workforce already, such as violence and abuse that have been experienced in considerable amounts during and after COVID. The “juice is not worth the squeeze” and it is not clear how this would be particularly helpful, given the potential gain that would be achieved.

- A HICPAC member reported that the University of North Carolina (UNC) has used metrics during high periods of respiratory virus transmission to have HCP mask during direct patient care, particularly in high-risk areas such as the bone marrow transplant unit. During those periods, they have found more hospital-acquired infections among patients, some of whom are immunocompromised, than they see methicillin-resistant *Staphylococcus aureus* (MRSA) in hospitals. While this is certainly important, the major difficulty in masking in those cases going beyond just a patient with a known or suspected disease that is transmitted by the air is that there is no universally agreed upon metrics for what to use. It is very difficult to convince administrators that UNC should do something when a hospital a mile away is not going to do it. Although the option to do so should be in the guideline, in the absence of what metric to use for when to increase masking, it is going to be difficult to convince administrators to implement. Facilities will worry that HCP will move to other institutions and patients will think that there is a higher risk in the facility. CDC and other groups should be encouraged to develop the data that to make estimates based on whatever parameter there is for risk to patients for acquiring disease in hospitals during high viral respiratory periods.

- The TJC liaison noted that looking at Question 4a Option A and Option B, it is difficult to control for the infinity of scenarios of interventions that can be implemented for source control. The language of the recommendation seems to capture a fair representation of interventions that would be important for an organization. At the same time, the language potentially could be expanded to state that this could be implemented using a tiered approach individually or in combination with other interventions without having to broaden the current recommendation to include more interventions. This is going to be very facility-dependent. Every organization is different and has different resources and facilities. The recommendation as it stands is a good foundation, but could use some added language.

- Dr. Wright noted that many facilities are implementing these sorts of interventions in the absence of this guideline. Her own facility has a policy in place implemented post-PHE during certain parts of the year when all HCP are masked during clinical interactions. This is in a determined part of the year based on external metrics. In the absence of a “should consider,” many facilities have chosen one of these approaches based on their own risk assessments, which they may need to change during the course of a season. Some seasons are milder and some are more extensive. The ability to have flexibility is important for facilities.

- Dr. Lin reminded everyone that with the recommendations, there is a narrative section to help clarify the issues being raised. He next moved the discussion to CDC Questions 2 and 1.

Question 2

a) **Can the Workgroup clarify the criteria that would be used to determine which transmission by air category applies for a pathogen?**
b) **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?**
c) **Can you also clarify what constitutes a severe illness?**

Question 1

a) **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 air?**
b) **Should N95 respirators be recommended for all pathogens that spread by air?**

Dr. Lin pointed out that Question 2a is an overarching question that guides the entire discussion. The rest of the sub-questions in 2 and 1 are essentially wrapped into Question 2a, "Can the WG clarify the criteria that would be used to determine which transmission by air category applies for a pathogen?" He then provided the background of the Draft Guideline presented in November 2023 (2023 Draft Guideline); presented 2 options for clarification of Transmission-Based Precaution Categories to Prevent Transmission through the Air, with rationales and Alternative Narratives A and B developed through WG discussions; and reviewed clinical effectiveness studies.

In terms of the context of the narrative from the original 2023 Draft, there is a recommendation section that is followed by a narrative section. The recommendations are the "should" and other directives related to the Transmission-Based Precautions, while the narrative is an explanation of implementation. The narrative also includes Table 3 that essentially summarizes the salient points related to PPE in each of the Transmission by Air categories. There are 3 paragraphs within the narrative that provide explanations for the 3 categories of Transmission by Air Precautions. This is from the original 2023 Draft, Air Narrative, Table 3: Transmission-Based Precautions to Prevent Transmission through the Air:

Category	Mask or Respiratory Protection	Eye Protection	AIIR[a]
Routine Air Precautions	Mask	Per Standard Precautions	Not routinely recommended
Special Air Precautions	NIOSH-approved® N95 (or higher-level) respirator	Yes	Not routinely recommended[b]
Extended Air Precautions	NIOSH-approved® N95 (or higher-level) respirator	Per Standard Precautions	Yes

a. AIIR = Airborne Infection Isolation Room for Containment of Air in a Designated Space
b. Although an AIIR is not routinely recommended, an AIIR may be suggested for certain pathogens listed in Appendix A (2007), and for pathogens with uncertain transmission characteristics

Dr. Lin read into the record the following 3 paragraphs from the 2023 Draft version of the narrative that describes each of the categories:

- **Routine Air Precautions** are focused on reducing transmission of common, often endemic, respiratory pathogens that spread predominantly over short distances based on observed patterns of transmission, and for which individuals and their communities are likely to have some degree of immunity.

- **Special Air Precautions** are applied to patients with a respiratory pathogen, typically new or emerging, that is not observed or anticipated to spread efficiently over long distances (such as through ventilation systems), for which infection confers substantial risk for severe illness in the general population, and where effective immunity (via prior infection or vaccine) or effective treatment are not available.

- **Extended Air Precautions** are used when providing care to patients with pathogens that are observed to spread efficiently across long distances and over extended times, such that room air needs to be contained (e.g., prevented from moving into the hallway where individuals are not appropriately protected).

As a reminder, the following is the list of major pathogens from the *2007 Guideline, Appendix A* anticipated to require Transmission-Based Precautions to prevent transmission through the air.[6] Note that this pathogen list is not comprehensive, and other pathogens such as SARS-CoV-2 are anticipated to be included in the updated draft guideline. Some pathogens may require additional Precautions such as Contact Precautions:

Droplet Precautions + Standard Precautions (6 bacteria, 7 viruses)
1. Adenovirus (pneumonia only) (+Contact Prec.)
2. *Corynebacterium diphtheriae* (pharyngitis)
3. *Haemophilus influenzae* (meningitis, epiglottitis, pneumonia [children])
4. Influenza virus
5. Mumps (infectious parotitis)
6. *Mycoplasma pneumoniae* (pneumonia)
7. *Neisseria meningitidis* (meningitis; sepsis; pneumonia)
8. Parvovirus B19 (erythema infectiosum)
9. Pertussis (whooping cough)
10. Rhinovirus
11. Rubella (German measles)
12. *Streptococcus pyogenes* (pneumonia; scarlet fever; major [but not minor] skin/wound/burn)
13. *Yersinia pestis* (pneumonic)

Airborne Precautions + Standard Precautions (1 bacteria, 3 viruses)
1. Measles
2. *Mycobacterium tuberculosis*
3. SARS-CoV-1
4. Varicella-Zoster Virus (chickenpox; disseminated zoster)

In terms of Question 2a, “Can the WG clarify the criteria that would be used to determine which transmission by air category applies for a pathogen?,” two major viewpoints emerged from the WG’s discussion, which are captured in two alternate narratives, A and B. Significant

[6] https://www.cdc.gov/infectioncontrol/guidelines/isolation/appendix/type-duration-precautions.html

differences exist between the narratives, including but not limited to the application of masks and respirators, and the approach to determining Transmission by Air categories.

This following proposed narrative language options (Alternative Narrative A versus Alternate Narrative B) would be proposed to replace the three paragraphs shown before. Dr. Lin noted that each of these narratives include a prelude section. For each proposed narrative option, the prelude, plus the three paragraphs that pertain to the categories of potential Transmission-Based Precautions are presented.

Alternate Narrative A

- "Pathogen-specific recommendations for categories of Transmission-Based Precautions to prevent transmission through the air are applied based on an assessment of risk of infection and associated adverse outcomes. Important considerations include:

  (1) **Transmissibility** (i.e., ease of spread as determined by factors related to pathogen, contact patterns, and environmental conditions).

  (2) **Burden of morbidity and mortality associated with infection among patients, healthcare personnel, visitors, and others**. Morbidity and mortality are affected by factors such as level of protective immunity in the population from vaccination or previous infection, the availability of effective treatment, and prevalence of risk factors that increase the risk of infection.

  (3) **Whether a pathogen transmitted via air is observed to spread efficiently over long distances**, such as through ventilation systems.

- **Routine Air Precautions** are focused on reducing transmission of common, often endemic, respiratory pathogens for which individuals and their communities are likely to have some degree of immunity, and for which masks have been observed to be effective at reducing risk of transmission of infection.

- **Special Air Precautions** are focused on reducing transmission of respiratory pathogens for which infection confers substantial risk for severe morbidity or mortality in the general population, and where effective immunity (via prior infection or vaccine) or effective treatment are not available. Pathogens to which Special Air Precautions may be applied are typically, though not exclusively, new and emerging.

- **Extended Air Precautions** are focused on reducing transmission of respiratory pathogens that are observed to spread efficiently across long distances and over extended times, such that additional engineering controls are needed (e.g., special air handling and ventilation)."

To summarize how Alternate Narrative A differs from the 2023 Draft Narrative, Dr. Lin highlighted that no substantive change was made to the original narrative. However, four clarifications were made. First, the new initial paragraph lists important considerations (transmissibility; burden of morbidity and mortality; efficiency of spread over distance). Second, mask recommendations are based on observed effectiveness in reducing risk of transmission of infection. Third, "severe illness" has been clarified as "morbidity and mortality" to more clearly encompass a variety of pathogen-related adverse outcomes that are not limited to hospitalization and death. Fourth, the category of Special Air Precautions might also include other pathogens that are more established.

Key points from WG members supporting Alternate Narrative A were as follows:

- Masks should be an option for PPE based on observed clinical effectiveness for reducing risk of transmission for many pathogens.
- Multiple Transmission by Air precaution categories allow the recommendations to be matched to pathogen considerations.
- Two of the proposed categories (Routine Air Precautions; Extended Air Precautions) incorporate approaches considered to be standard practice, and one proposed category (Special Air Precautions) is expected to increase overall use of NIOSH-approved® N95 (or higher level) respirators for certain pathogens and situations.

Alternate Narrative B

- ❑ "Pathogen-specific recommendations for categories of Transmission-Based Precautions to prevent transmission through the air are applied based on an assessment of exposure and risk of infection and associated adverse outcomes. Important considerations include:

  (1) **Transmissibility** (i.e., ease of spread as determined by factors related to pathogen, contact patterns, and environmental conditions).

  (2) **Adverse outcomes associated with infection among patients, healthcare personnel, visitors, and others.** Morbidity and mortality are affected by factors such as level of protective immunity or immunocompromise in the population, the availability of effective treatment, and prevalence of risk factors that increase the risk of infection. Adverse outcomes also include lost workdays due to infection and onward transmission to other patients, workers, and others outside the health care facility.

- ❑ **Standard of Practice Air Precautions** are applied to patients with any pathogen capable of being transmitted via air* and require the use of a NIOSH-approved® N95 filtering facepiece respirator (FFR).

- ❑ **Limited Air Precautions** are applied based on an exposure and risk assessment to pathogens and situations in which there is no risk of aerosol generation. It may be possible to use masks instead of respirators, following consultation with employees. Must allow voluntary use of respirators.

- ❑ **Engineering Air Precautions** are used when providing care to patients with pathogens that, based on an exposure and risk assessment, require additional measures to prevent transmission, such as AIIRs and higher-level respirators (powered air purifying respirators [PAPRs] and/or elastomeric respirators). All novel and emerging pathogens must start in this category and may be moved to other categories based on an exposure and risk assessment."

Capable of transmitting through the air means that there is evidence that:

1. Aerosols containing the pathogen can be generated by or from an infectious person
2. The pathogen remains viable in the environment for some period of time
3. The target tissues in which the pathogen initiates infection (or colonization) are accessible to the aerosol

* Includes all pathogens previously identified as "droplet" or "airborne" and other pathogens that meet criteria for biological plausibility of air transmission (Jones and Brosseau, Journal of Occupational and Environmental Medicine, 2015; 57[5])

The key points from WG members supporting Alternate Narrative B are as follows:

- ❑ Start with Standard of Practice Air Precautions (NIOSH-approved® N95 respirator) for all pathogens that are capable of being transmitted through the air. This is based on scientific evidence that indicates:

  - There is no ballistic droplet transmission without inhalation: whenever a person is close enough to an infected individual to receive a sneeze or cough directly into an open mouth/nose/eyes, there are also many large and small aerosols being inhaled at the same time.
  - Masks are not designed to provide filtration and fit to protect the wearer from inhaling aerosols.
  - N95 FFRs are the minimum level of respiratory protection that are designed to protect the wearer from inhaling aerosols. NIOSH-approved® N95 respirators are required to meet performance standards to ensure they provide filtration, breathing resistance, and other metrics necessary to provide reliable respiratory protection.
  - Distance is not an accurate surrogate for an exposure and risk assessment.
  - Disease among healthcare personnel, especially if unrecognized (i.e., mild symptoms or asymptomatic) can result in transmission to patients and other healthcare personnel. It is not just severe disease and mortality that matter in the context of outcomes for prioritizing interventions.

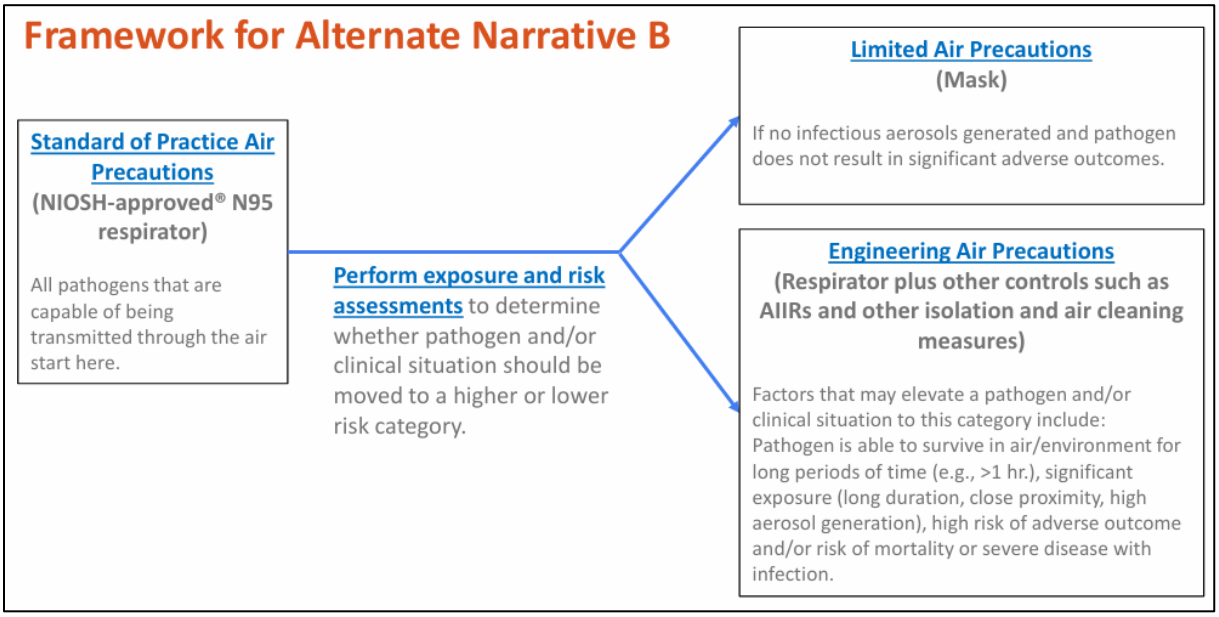
- ❑ Then conduct an exposure and risk assessment to determine whether the pathogen and/or clinical situation should be moved to a higher or lower risk category.

  1) Exposure and risk assessments should address the clinical situation and whether infectious aerosols are being generated (e.g., whether the pathogen infects or is present in the respiratory tract and infectious aerosols can be generated by breathing, speaking, coughing, sneezing, etc.; whether infectious aerosols can be generated by other symptoms such as vomiting and diarrhea; whether aerosols can be generated by medical procedures or interventions such as intubation, wound debriding, bed linen changes, etc.) as well as the risk of adverse outcomes (e.g., morbidity, mortality, lost time from work, onward transmission to other patients/workers/community).

  2) If there are no infectious aerosols being generated, then may use **Limited Air Precautions**.

  3) Exposure and risk assessments may determine that additional measures are necessary to prevent exposure and transmission to patients, visitors, and health care workers (**Engineering Air Precautions**). Factors that may elevate a pathogen and/or clinical situation to Engineering Air Precautions include: pathogen is able to survive in air/environment for long periods of time (e.g., >1 hour), risk of mortality or severe disease with infection, and/or high risk of adverse outcome.

This schematic describes the framework for Alternate Narrative B, which contains the same elements listed in the above bullets in a graphical form:



Dr. Lin pointed out that the vision for this option would be that this type of framework would be used within HICPAC to make decisions about pathogens, and exposure and risk assessments also could be done locally.

Additional points from WG members supporting Alternate Narrative B included the following:

- ❑ Masks are not designed to prevent the wearer from inhaling hazardous aerosols. Respirators, such as N95 filtering facepiece respirators, powered air purifying respirators, and elastomeric respirators, are designed to provide the tight face seal and filtration levels required to protect the wearer from inhaling hazardous aerosols. Thus, masks should not be used for pathogens that spread through the air.

- ❑ N95 filtering facepiece respirators should be recommended for use with all pathogens that are capable of spreading through the air. This recommendation is based on extensive scientific research into the use of respiratory protection to protect workers from inhaling hazardous aerosols in a variety of industries other than health care.

- ❑ Capable of transmitting through the air means that there is evidence that:[7]
    1) Aerosols containing the pathogen can be generated by or from an infectious person;
    2) The pathogen remains viable in the environment for some period of time; and
    3) The target tissues in which the pathogen initiates infection (or colonization) are accessible to the aerosol.

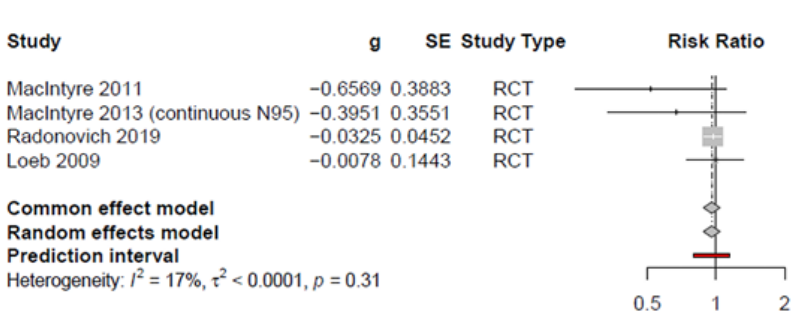
[7] Jones and Brosseau, Journal of Occupational and Environmental Medicine, 2015; 57[5])

This table bridges some of the Alternate Narrative B concepts to the original 2023 Draft Guideline:

Key Concepts Discussed for Narrative B	2023 Draft Guideline
Particle inhalation is the predominant mode of transmission by air both near and far from a source.	In draft (Section A) "Pathogens suspended in the air cause infection via inhalation and deposition along the respiratory tract, anywhere from the nasal or oral passages to the lungs."
Risk is a function of particle concentration in the air and exposure time.	Pathogen load and shedding rate are cited as factors; time concept is also in draft.
Pathogen survival in air for several hours is not confined to just a few organisms.	This will be addressed in Part 2, pathogen-specific portion of draft guideline.
Infection control guidelines should be focused on source and pathway controls that reduce particle concentration and minimize exposure time.	Source control and use of a hierarchy of controls (including PPE) to reduce particle concentration and minimize exposure time are addressed in guideline.
Respirators are effective at limiting inhalation. Surgical masks are not.	Existing draft guideline describes greater expected filtration efficacy for fit-tested respirators (Section B). The draft guideline emphasizes that recommendations are based on evaluation of clinical effectiveness between masks and respirators in healthcare settings. *Merits further HICPAC discussion.*

Dr. Lin next moved to a new section of the presentation focused on clinical studies. He explained the rationale of discussing clinical studies as follows: Clinical studies are critical in informing guideline recommendations for the clinical setting. Such studies compare prevention strategies in the context of feasibility, user adherence, and implementation within a hierarchy of controls (e.g., engineering, administrative, and personal protective equipment controls) available in the healthcare setting to reduce risk of infection. The overarching question originally posed to CDC for systematic review that was subsequently presented in draft form during the November 2023 HICPAC meeting[8] was, "For healthcare personnel caring for patients with respiratory infections, what is the effectiveness of medical/ surgical masks compared with N95 respirators in preventing infection?" This is Figure 3 from the CDC Evidence Review presented at the November 2023 HICPAC meeting, which shows the four randomized-control studies that provide evidence concerning the outcome of seasonal laboratory-confirmed viral respiratory infections comparing masks versus respirators:

Figure 3. Seasonal Laboratory-confirmed Viral Respiratory Infections



The forest plot shows the risk ratios of the individual studies, followed by a summary risk ratio for the common effects model and random effects model. The weighting of these studies is not

[8] https://www.cdc.gov/hicpac/media/pdfs/HCP-N95Mask-SLR-MainAppendix-2023-11-01-Draft-508.pdf

equal. For instance, the weighting for Radonovich 2019 is at 88% of the overall effect. That is because of the differences in the denominators that were studied in terms of HCP participants and seasons. Because there is an outsized influence of the Radonovich 2019 study, this deserves scrutiny by HICPAC as part of the presentation. Dr. Lin emphasized that all 4 studies are included in the evidence review as a part of informing the original 2023 Draft Guidance. The objective; design, setting, participants; intervention; outcome measures; findings; and author conclusion are presented as follows for each study:

Loeb et al. *JAMA* 2009[9]

- **Objective:** To compare surgical mask with N95 respirator in protecting workers against influenza.

- **Design, Setting, Participants:** Noninferiority randomized clinical trial of 446 nurses in emergency departments, medical units, pediatric units in 89 tertiary care Ontario, Canada hospitals.

- **Intervention**: Assignment (subject level randomization) to either fit-tested N95 respirator or surgical mask when providing care to patients with febrile respiratory illness during the 2008-2009 influenza season.

- **Outcome Measures:** Primary: lab-confirmed influenza (positive PCR or a 4-fold rise in hemagglutinin titers). Secondary: detection of non-influenza viruses by PCR.

- **Finding:** No difference in lab-confirmed influenza (mask 23.5% versus N95 22.9%, P = .86).

- **Author Conclusion**: “Among nurses in Ontario tertiary care hospitals, use of a surgical mask compared with an N95 respirator resulted in noninferior rates of laboratory-confirmed influenza.”

MacIntyre et al. 2011[10]

- **Objective:** To determine the efficacy of medical masks compared to fit-tested and non-fit-tested N95 respirators in HCPs in the prevention of disease because of influenza and other respiratory viruses.

- **Design, Setting, Participants:** Cluster randomized clinical trial of 1441 HCPs in 15 Beijing, China hospitals during 2008/2009 winter for 4 weeks. A convenience sample no-mask/ respirator group of 481 health workers from 9 hospitals was compared.

- **Intervention:** Participants wore masks or respirators during the entire work shift for 4 weeks (clustered by hospital group assignment).

[9] Loeb, Mark, et al. "Surgical mask vs N95 respirator for preventing influenza among health care workers: a randomized trial." JAMA 302.17 (2009): 1865-1871.

[10] MacIntyre, Chandini Raina, 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.” Fit-tested N95 respirators to medical masks to prevent respiratory virus infection in health care workers. *Influenza and Other Respiratory Viruses* DOI: 10.1111/j.1750-2659.2010.00198.x .

- **Outcome Measures:** Primary endpoints (1) Clinical respiratory illness [CRI] 2+ respiratory OR 1 respiratory + 1 systemic symptom; (2) ILI (fever ≥38°C + one respiratory symptom; (3) lab-confirmed viral respiratory infection; (4) lab-confirmed influenza A or B.

- **Findings:** Non-fit-tested N95 respirators were more protective than medical masks against CRI (OR .48, P = .045); no other comparisons significantly different.

- **Author Conclusion:** "A benefit of respirators is suggested but would need to be confirmed by a larger trial, as this study may have been underpowered."

MacIntyre et al. 2013[11]

- **Objective:** Comparison of three policy options for the use of medical masks and N95 respirators in healthcare workers.

- **Design, Setting, Participants:** Cluster randomized clinical trial of 1,669 hospital-based HCPs in Beijing, China in the winter of 2009-2010.

- **Intervention:** Participants were randomized to (1) medical masks for entire shift, (2) N95 respirators for entire shift, (3) N95 respirators while caring for a patient with known respiratory illness or when conducting AGPs, over a 4-week period.

- **Outcome Measures:** Primary endpoints (1) Clinical respiratory illness [CRI] 2+ respiratory OR 1 respiratory + 1 systemic symptom; (2) ILI (fever ≥38°C + one respiratory symptom; (3) lab-confirmed viral respiratory infection by PCR; (4) lab-confirmed influenza A or B by PCR; (5) lab-confirmed bacterial colonization in symptomatic subjects (S. pneumoniae, legionella, B. pertussis, chlamydia, M. pneumoniae, H. influenzae by PCR).

- **Findings:** CRI highest in medical mask arm (17.1%) followed by targeted N95 (11.8%) and continuous N95 arm (7.2%), P = .02. Bacterial respiratory tract colonization in subjects with CRI was highest in the medical mask arm (14.7%) followed by targeted N95 arm (10.1%) and continuous N95 arm (6.2%), P = .02. After adjustment for confounding, only continuous use N95 remained significant against CRI and bacterial colonization.

- **Author Conclusion**: "Continuous use of N95 respirators was more efficacious against CRI than intermittent use of N95 or medical masks." "Continuous use of N95s resulted in significantly lower rates of bacterial colonization…"

Radonovich et al. 2019[12]

- **Objective:** To compare the effect of N95 respirators vs medical masks for prevention of influenza and other viral respiratory infections among HCP.

- **Design, Setting, Participants:** Cluster randomized pragmatic effectiveness study conducted at 137 outpatient study sites at 7 US medical centers between Sept 2011 and May 2015.

[11] MacIntyre et al. 2013 MacIntyre, C. Raina, et al. "A randomized clinical trial of three options for N95 respirators and medical masks in health workers." *American Journal of Respiratory and Critical Care Medicine* 187.9 (2013): 960-966.
[12] Radonovich, Lewis J., et al. "N95 respirators vs medical masks for preventing influenza among health care personnel: a randomized clinical trial." *JAMA* 322.9 (2019): 824-833.

- **Intervention:** Each year for 4 years, during 12-week period of peak viral respiratory illness, pairs of outpatient sites (clusters) within each center were matched and randomly assigned to N95 respirator or medical mask groups. HCP instructed to use N95 or mask when in close contact (defined in protocol supplement page 22: within 6 feet or sharing a small, enclosed airspace, such as a typical patient treatment room).

- **Outcome Measures**: Primary: Incidence of laboratory-confirmed influenza, defined as detection of flu A/B by PCR within 7 days of symptom onset OR detection of influenza (PCR) from a randomly obtained swab for asymptomatic participant OR 4-fold rise in hemagglutination Ab to flu A/B deemed not attributable to vaccination. Secondary outcomes: (1) incidence of acute respiratory illness, (2) lab-detected respiratory infections, (3) laboratory-confirmed respiratory illness, and (4) influenza-like illness.

- **Findings:** Results and Findings were as follows:

Table 1 from Radonovich 2019 describes characteristics of occupation, occupation risk, patient risk, and clinic type. These were balanced between the two comparator groups. For example, approximately 40% to 41% in both arms were Nurses or Nursing Trainees. Approximately 8% to 9% were Physicians, Advanced Practitioners, or Physician Trainees. Occupation risk was broken down into high, medium, and low risk. High risk encompassed about 59% of both groups (respirators versus masks). Medium risk encompassed about 11.7% in the respirator group versus 11.9% in the mask group. The patient population included about 55% to 56% adults in both groups, about 23% pediatric in the respirator group and about 21% in the mask group, and a mix of adults and pediatrics comprised the remainder. For clinic type, approximately 69% to 70% were primary care clinics, about 26% were emergency or urgent care locations, and the rest were balanced between emergency transport, specialty care, and dental or dialysis centers. Table 2 from Radonovich et al. 2019 shows primary and secondary outcomes over the 4 respiratory virus seasons. These studies tend to see different numbers of infections across influenza season, which is expected given that every influenza season is somewhat different. Serology (hemagglutination inhibition assay) contributed substantially to influenza infection detection.

For the primary outcome of laboratory-confirmed influenza detected by polymerase chain reaction (PCR) or serology, there was no significant difference in risk between comparator groups, which is shown in a forest plot in Figure 2b in the paper. The adjusted relative risks for the N95 respirator and medical mask groups for both the intention-to-treat (ITT) and per-protocol (PP) groups for the primary outcome and the other predetermined secondary outcomes. Values above 1 indicate higher relative odds or risk in the N95 respirator group compared with the medical mask group. There was no difference with the incidence rate ratio of 1.18 (0.95-1.45) for the ITT cohort. For secondary outcomes, including laboratory-detected and laboratory-confirmed respiratory illness, there was no significant difference in risk between the comparator groups. For acute respiratory illness (ARI), which is a symptom-based outcome that did not involve any laboratory testing, the incidence rate ratio for ITT was 0.99 (0.92-1.06). Under laboratory-detected respiratory infection, including influenza and others, the incidence rate ratio was 0.96 (0.83-1.1) in the ITT and PP cohorts. For influenza-like illness (ILI), the incidence rate ratio was 0.86 (0.68-1.10) in the ITT group and 0.83 (0.64-1.06) in the PP cohort.

In terms of the strengths and limitations of Radonovich *et al.* 2019, the strengths are that this study included a comprehensive lab-confirmed outcome using PCR and serology, to include asymptomatic and pauci-symptom infection for influenza. This study also was representative of

outpatient adult and pediatric settings, including the ED, studied over 4 respiratory virus seasons. The limitations are that it is not possible to determine whether participants acquired respiratory infection due to hospital or community exposure. Incomplete adherence in this pragmatic trial could bias the study to finding no difference.

- **Author Conclusion: "**Among outpatient health care personnel, N95 respirators vs medical masks as worn by participants in this trial resulted in no significant difference in the incidence of laboratory-confirmed influenza."

With regard to additional perspectives on Radonovich *et al.* 2019, methodological concerns were raised by some WG members. First, there was a lack of a "no mask" control group or lack of active covariate adjustment, which could otherwise account for exposure from un-identified infectious patients, exposure to other potentially infectious staff or household exposures, differences in exposure (higher versus lower intensity, in different patient care settings), potential differences in hand hygiene, and potential differences in other clinic-level infection control practices (e.g., ventilation or patient screening). Relevant WG discussion points related to that methodologic concern were that a major feature of large randomized clinical trials (RCTs) is that their design allows for balancing of both measured confounders (e.g., adherence to intervention, vaccination rates) and unmeasured confounders (e.g., exposures from sources other than patients with suspected or confirmed respiratory illness). A "no mask" control group would not be feasible due to ethical concerns. The second methodological concern raised was that the intervention was used only within 6 feet of patients. A relevant WG discussion point was that this was confusing because the primary *JAMA* article indicated that the intervention was used only within 6 feet of patients, while the manuscript supplement indicated that the study intervention was used in two situations: within 6 feet of patients or within a small, enclosed airspace (such as a typical clinic room). The third methodological concern raised was that clinics were re-randomized each respiratory season, potentially crossing over from one intervention arm to the other and introducing potential non-adherence to assigned intervention. Relevant WG discussion points were that each intervention period lasted 12 weeks (respiratory virus season) followed by a 9-month wash-out period. Adherence was measured and was balanced between the groups.

The WG created two Narratives, A and B, which provide two approaches for clarifying or modifying the original Transmission-Based Precautions Categories to Prevent Transmission through the Air. The following table characterizes the major contrasts between Alternate Narratives A and B:

Alternate Narrative A	Alternate Narrative B
Retains category framework of 2023 draft guideline: • Routine Air Precautions (mask) • Special Air Precautions (N95 + eye protection) • Extended Air Precautions (N95 + engineering controls)	Proposes a different framework from the 2023 draft guideline: • Standard of Practice Air Precautions (N95) • Limited Air Precautions (mask) • Engineering Air Precautions (N95 + engineering controls)
Pathogen-specific recommendations are based on assessment of risk of infection and associated outcomes. Important considerations: (1) Transmissibility, (2) burden of morbidity and mortality, and (3) ability of pathogen to spread over long distances (e.g., through ventilation systems).	Pathogen-specific recommendations are based on assessment of risk of infection and associated outcomes. Important considerations: (1) Transmissibility, (2) Adverse outcomes, which includes morbidity/mortality, lost workdays, onward transmission of infection.
Multiple categories (including a category for mask as PPE) are considered for pathogen-specific recommendations.	N95 (or higher level) respirators are used initially for all known pathogens with potential to transmit through the air, with subsequent exposure and risk assessment to determine whether the pathogen and/or clinical situation should warrant a higher (engineering controls) or lower risk (possible mask) category. Engineering Air Precautions are used for new/emerging pathogens.

For the discussion session for Questions 2 and 1, HICPAC was asked to consider which narrative approach (A or B) would be preferred by HICPAC to help answer Question 2 and Question 1.

Discussion Points: Question #2

For this discussion, HICPAC members, ex officios, and liaison representatives raised the following questions, observations, and suggestions/recommendations:

- Referring to the diagram showing how Alternative Narrative B would be operationalized, a HICPAC member pointed out that as defined as part of Narrative B, pathogens transmitted by air are infectious aerosols. It sounded like there would never be an instance in which limited air precautions actually would be implemented. This gets to a fundamental difference in what is intended to be accomplished in the Isolation Guideline. The intent is not to stop every single particle that is emitted from a human, and instead is to try to prevent the risk of transmission of a significant pathogen. The way this reads, there does not seem to be an option where a pathogen or situation would be downgraded from the new standard of practice of air precautions to limited air precautions as described and defined. That is problematic because it is known from the evidence that masks are perfectly acceptable and protective in many situations, and this would take the tool out of the toolbox. Narrative B includes a description of a risk assessment that is almost as if this has to be done for permutation of a clinical scenario, including involving employee consultation and voluntary use. This takes away some of the value that this group is trying to do, which includes expert review of the evidence that is needed to say what is required for each of these pathogens. The nomenclature is also problematic. Establishing that the standard is an N95 for all of these situations implies that in some ways, using limited air precautions would be downgrading from the standard. It is not clear how the second bullet on Slide 54 stating "Capable of transmitting through the air means that there is evidence that: 1) Aerosols

containing the pathogen can be generated by or from an infectious person . . .” aligns with limited air precautions being implemented only if no aerosols are generated. That is, it sounds like very little if anything would ever fit in the “limited” category and that risk assessment would be done by HICPAC as part of the Appendix A work when, in reality, it would be done at local level. How that would be done functionally in a clinic setting or across clinics seems wildly impractical. Voluntary use is described in the narrative for the limited category.

- Dr. Lin indicated that the WG discussions pertaining to Alternate Narrative B included the idea that a mask would be limited in terms of its application, and there would be exceptional situations in which a mask would be used for pathogens that spread by air. Some of these situations might involve pathogens that are considered lower risk based on adverse outcomes and would be conditioned on aspects related to immunity, such as through very high vaccination rates among HCP in certain settings (e.g., potentially settings that are lower risk). While not specifically defining those situations that would need to be further defined if Narrative B was selected, that was the general intent discussed by the WG. From the standpoint of implementation, HICPAC could set some parameters around risk factors or risk assessments that would need to be done at the local level, but there is a fair amount of burden of condition at the local level for providers and facilities to be able to make exposure and risk assessment, which are inherently local.

- A HICPAC member noted that the narrative does not take inoculating dose into account. In general, one organism does not cause an infection. Infection depends upon the susceptibility of the host and the number of organisms. If this was expanded, all dentists and other groups would be wearing N95s all of the time in addition to hospital and healthcare providers. Even with measles vaccines, which is one of the most effective at 98% to 99%, HCP still use masks or N95s because roughly 3% of the healthcare force for whom the vaccine does not take or for whom there are medical contraindications or religious objections. There is no way to reach 100% vaccine compliance. It is not practical for healthcare organizations to perform risk assessments, nor do they have the expertise to do them. Therefore, Alternative B is not necessary or feasible.

- It seemed to a HICPAC member that both A and B require a risk assessment. There are three categories in Narrative A that require assessment of issues related to risk. The difference between the narratives does not seem dramatically different. Anytime there is a hazard, some level of risk assessment must be done. While CDC can help in conducting assessments, there are differences to some extent. For example, there may be differences geographically in terms of outbreaks occurring in one part of the country and not another, vaccination rates being higher in one part of the country versus another, rural and urban differences, and other differences that require some level of risk assessment. Between 2007 and 2024, a lot more scientific knowledge is available about airborne exposures. A few months ago, the World Health Organization (WHO) changed their definitions based on the changing understanding that a differentiation cannot be made between droplet and airborne particulate transmission. It seems that the language is different in these updates, but the practice is the same. The vast majority of airborne transmissible diseases from the example list will still fall under what would have been considered droplet, which requires a mask and not a respirator. Masks were created to protect the patient from spit and other emissions moving from a surgeon into an open wound during surgery. Studies have shown that masks do a pretty good job with source control, though not 100%, and there is a lot of evidence about the difference between protective levels of masks and respirators that goes far beyond a limited number of clinical studies. Clinical studies are hard because the real-world

is way more complex than a laboratory situation. As mentioned earlier, control groups create an ethical issue, and compliance is an issue in the real-world. That does not mean they should be ignored. There is no mention of laboratory tests, which have been studied extensively in terms of respiratory protection. There is no reason to believe that the laws of physics by different biological contaminants are different than they are for chemical contaminants. Particulates are particulates in terms of the ability to travel. There are pros and cons to both types of studies, but none of the information is included showing that filter material, charge, and fit have any effect. It is known that respirators are much more protective. Only the MacIntyre *et al.* 2013 study assessed continuous use during an entire shift as a variable. The Radonovich study said there was not high compliance. It sounds like instead of focusing on what works and ensuring that there is good compliance, these options simply would reconfirm what has been done. The reality is that very little would change in terms of protecting HCP.

- Considering the goal to align the categories of Standard of Practice and Engineering Air precautions, the TJC liaison said that if this guideline were to go out prior to that alignment, the burden would be on the organization to determine which would go into each category. The concern is that if the guideline begins with a lower set of precautions, a risk assessment is performed, and there is a realization that precautions with more controls are needed, staff may feel unprotected. When creating an Isolation Guideline that mirrors these categories, there probably should be a smaller subset of the unknown. Historically, models have started higher and then de-escalate. A risk assessment may not be performed in a timeline manner. The Standard of Practice Precaution starts with the NIOSH respirator but make lack necessary engineering controls up front for certain pathogens (such as TB).

- Dr. Lin said for TB for instance, he would envision that applying this type of framework that is a decision made by HICPAC that is pathogen-specific to say that TB would need engineering air precautions at the outset. This is not to say that every patient who presents to a hospital automatically begins in the left box (of Standard of Practice Precautions). HICPAC would envision pathogen-specific decisions to be made where possible. Based on the WG discussion, the vast majority would be either Standard of Practice Air Precautions or Engineering Air Precautions to begin with in clinical practice.

- A HICPAC member recalled that some of the WG's final list of shared interests presented earlier were to consider those that protect patients and healthcare personnel from infection that is transmitted via infectious particles in the air; are feasible and sustainable; and balance benefits and harms in relation to both patients and healthcare personnel. Those are key guiding principles to considering these issues. As noted earlier, there are a lot of data about the difference and efficacy in N95 or higher-level respirators, face masks, and different types of materials used for face masks. Then there are clinical data that suggest real-world implementation does not appear to make a dramatic difference in what happens to HCP in terms of the acquisition of infection. The stigma that may exist around compliance and feasibility cannot be ignored. Not everybody will or can wear masks long-term. If the balance and benefits of burden were different, such as a better respirator that is more feasible for persons to wear for long periods of time that had reduction in infection associated with it, HICPAC may not be having the same conversation. Perhaps there is an opportunity to use this as a platform to spur development of something that suits all of these needs, increases the benefit, and decreases the burden.

- If one of the options is approved, a HICPAC member pointed out that there will be a timeframe during which sites do not have Appendix A done, so they will have to do their own crosswalk. The majority of sites that are currently Droplet are likely to map to the mask and there will be some decisions about eye protection, which some facilities have added. For many pathogens, such as TB and measles, these are not going to change. Until HICPAC makes the recommendations and even after that, there is a risk assessment of what fits in the middle category. While this may vary by type of facility, it does give people who read this document the ability to make that decision rather than saying that they must start with an N95 as the Standard of Practice. Standard of Practice almost sounds like Standard of Care, which is concerning because names have meaning and also can convey that someone is less protected if starting with a mask. Based on the evidence, a mask may be adequate, feasible, and more likely to be used.

- Dr. Lin pointed out that the names were not set in stone and could be discussed later. It would be helpful to the WG to get directionality, especially for the first box (Alternative B diagram), about whether it would be primarily N95 respirators or have multiple options. In terms of implementation details, these are new types of approaches that have not been implemented and would take some discussion. The WG recognizes that there already is uncertainty with that.

- Dr. Wright noted that the issue about the crosswalk and what would happen in the interim came up in the original discussions in November 2023. There was some discussion about whether the WG could work with CDC to create some sort of a framework by which facilities could figure out how to bridge that. If they get to a draft that goes to the *Federal Register*, there potentially would be time for some work to happen on that. She cautioned everyone that while they could make assumptions about what might fall into each category no matter what narrative HICPAC chooses, they will not know until they look at the evidence pathogen by pathogen.

- A HICPAC member strongly disagreed with the categorization of the data and studies saying that a mask is either equal to or only slightly less protection than respirators. HICPAC was given a tiny look at studies, but there are enumerable studies going back decades showing higher levels of respiratory protection and, in fact, that is why OSHA does not consider masks to be respiratory protection at all. There were many limitations with how some of these studies were done in terms of distance, whether patients were symptomatic or febrile, et cetera. There is a lot more to those studies and a lot that was not shared with HICPAC during this meeting. A staggering number of HCP were infection with COVID at a higher level than in the community based on most cases of data. That is not surprising because HCP were exposed to more and there were shortages of PPE and all sorts of problems. HICPAC has to do better this time. They cannot put in place something that reflects what has been going on. They have to look at newer science for patients and HCP. PPE is problematic, which is why there tend to be issues with compliance and is why there is a hierarchy of controls with PPE at the bottom. PPE is difficult to wear, may not fit properly, supply chain issues, et cetera. All of the PPE problems were highlighted during the COVID pandemic. However, there are things they should be talking a lot more about in terms of engineering controls like ventilation. That has been pushed aside by HICPAC. The wording “hierarchy of controls” has made it into the language, but then it is not followed because it goes directly into PPE. There are two things HICPAC can do with PPE. They can say that because people do not use PPE that much, “throw the baby out with the bathwater,” or they could work with NIOSH on better PPE for the healthcare setting and better

engineering controls that decrease viral load in the air so that people are more protected. However, they cannot keep doing the same thing that allows HCP and patients to be so vulnerable because many of them contracted COVID and contract other airborne diseases in the hospital setting. That is not right. A hospital is supposed to be a place where people get well, not get sick.

- Dr. Lin pointed out that engineering controls and ventilation are destined to be in a different guideline and not ignored by HICPAC, which is outside the scope of this particular discussion. The point is well-taken and everyone agrees about the importance of ventilation in preventing infection.

- The SHEA liaison agreed on the need for better, more comfortable, easier to use PPE and echoed that ventilation in the scope of this document is something HICPAC could support. One comment made earlier implied that there would not be any change in current recommendations if HICPAC selected Alternative Narrative A. The goal in this section of the guideline is to create a framework that describes the options that should be available when walking through all of the pathogens in order to make recommendations as an expert opinion group about the most appropriate protections that should be used for a specific pathogen. There should be opportunities to say that isolation masks are the most appropriate PPE use in certain situations. Whether those situations map exactly to Droplet precautions as they are now is not a foregone conclusion. It is not fair to say that if HICPAC chooses Alternative A, nothing would change because that is not known. What is known is that if Alternative A is selected, all 3 options would be available to recommend as the starting point of protection for specific pathogens when the pathogens are known. There is a lot more scientific and experimental information about aerosol transmission, the way aerosols move and transmit, and the way PPE protects against aerosols. There are decades of experience of HCP wearing isolation masks in rooms and taking care of patients who have influenza, adenovirus, and other viral infections before COVID without seeing increasing infections in HCP compared to the general population during that time. After the first wave of COVID when sufficient PPE was available for staff, disproportionate rates of COVID infection were not observed in HCP compared to community where there were staggering numbers of cases.

- While there is a separate document that will look in more detail at engineering controls such as ventilation, a HICPAC member emphasized the fact is that this document is about isolation precautions. Spending an enormous amount of time on PPE and not other controls creates the effect of a bias toward PPE when that is what is focused on in isolation guidance, and then creates the need to go to elsewhere for other types of controls.

- Dr. Lin noted that within the WG, there was discussion about potentially moving the order of the different parts of Section B to move up ventilation and other engineering controls higher to reflect the hierarchy, which is one potential way to emphasize that it is important in terms of protection, though it was outside of the discussion during this meeting.

Preliminary Poll

Dr. Lin indicated that at this point, the WG would be soliciting feedback from HICPAC members regarding their opinions on the 4 CDC questions related to the Isolation Precautions Guideline to get a sense of where HICPAC members were leaning in terms of the language that would be included in the letter going back to CDC regarding those 4 questions. He emphasized that this feedback would be conducted similarly to a non-binding straw poll and that it should not be construed as a formal vote, which would be conducted the next day.

Non-Binding Poll #1
Question 1a: Mask Use
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?

Option A (Narrative A)	**Option B (Narrative B)**
Yes. Among multiple approaches, there should be a category of Transmission Based Precautions that includes masks for pathogens that spread by air.	No. Through an exposure and risk assessment, there could be a situation in which a mask may be appropriate. But from the beginning, by default, there should not be a category of a mask for a pathogen that spreads by the air.

For Question 1a, 10 HICPAC members selected Option A (Narrative A) and 1 selected Option B (Narrative B).

Non-Binding Poll #2
Question 1b: Mask Use
Should N95 respirators be recommended for all pathogens that spread by the air?

Option A (Narrative A)	**Option B (Narrative B)**
No. N95 respirators should not be recommended for all pathogens that spread by air.	Yes. N95 respirators should be recommended for all pathogens that spread by air.

For Question 1b, 10 HICPAC members selected Option A (Narrative A) and 1 selected Option B (Narrative B).

Non-Binding Poll #3
Question 2a: Transmission by Air Categories
Can the WG clarify the criteria that would be used to determine which transmission by air category applies for a pathogen?

Option A (Narrative A)	**Option B (Narrative B)**
Voting on the key concepts representing Alternate Narrative A as opposed to the exact narrative wording. [Slides 44-45 & 69]	Voting on the key concepts representing Alternate Narrative B as opposed to the exact narrative wording. [Slides 48-49 & 69]

For Question 2a, 10 HICPAC members selected Option A (Narrative A) and 1 selected Option B (Narrative B).

Non-Binding Poll #4
Question 2b: Transmission by Air Categories
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?

Potential Response: The category of Special Air Precautions might also include other pathogens that are more established. Note: Both Alternate Narratives A and B support including other pathogens that are more established.

For Question 2b, 11 HICPAC members agreed with the potential response.

Non-Binding Poll #5
Question 2c: Transmission by Air Categories
Can you also clarify what constitutes a severe illness?

Option A (Narrative A)	**Option B (Narrative B)**
"Severe illness" will be clarified as "morbidity and mortality" to more clearly encompass a variety of pathogen-related adverse outcomes that are not limited to hospitalization and death.	"Severe illness" will be clarified as "adverse outcomes" that encompass morbidity and mortality, as well as other adverse outcomes such as lost workdays due to infection and onward transmission to other susceptible persons.

For Question 2c, a poll was not taken. HICPAC members instead discussed this section, given that it was not discussed in detail earlier in the session.

Non-Binding Poll #6
Question 3: Voluntary Use
Should the document include a recommendation about healthcare organizations allowing voluntary use?

Option A	**Option B**
Yes, the guideline should include a recommendation about healthcare organizations allowing voluntary use. The current guideline language may not be sufficient to allow for voluntary use of a NIOSH-approved® N95 (or higher level) respirator.	No, a specific recommendation is not needed. The current guideline language is sufficient to allow voluntary use of a NIOSH-approved® N95 (or higher level) respirator.

For Question 3, 5 HICPAC members selected Option A and 6 selected Option B.

Non-Binding Poll #7
Question 4a: Source Control
Should there be a recommendation for use of source control in healthcare settings that is broader than current draft recommendations?

Option A	Option B
No, a recommendation for the use of source control in healthcare settings that is broader than the current draft recommendations is not necessary.	Yes, a recommendation for the use of source control in healthcare settings should be broader than the current draft recommendations.

For Question 4a, 9 HICPAC members selected Option A and 2 selected Option B.

Non-Binding Poll #8
Question 4b: Source Control
Should source control be recommended at all times in healthcare facilities?

Option A	Option B
No, HICPAC recommends that source control decisions be determined by local risk of pathogen transmission and epidemiology, rather than at all times.	Yes, source control should be recommended at all times in healthcare facilities.

For Question 4b, 10 HICPAC members selected Option A and 1 selected Option B.

Discussion Points: Preliminary Polls & Final Thoughts

For this discussion, HICPAC members, ex officios, and liaison representatives raised the following questions, observations, and suggestions/recommendations:

- A HICPAC member noted that concepts like “severe illness” translates for some readers perhaps as whether someone is hospitalized or dies. The WG considered whether to expand that to include morbidity and mortality or something larger with adverse outcomes. Using morbidity and mortality makes sense because other outcomes could describe someone with very severe illnesses, especially since patients are being taken care of in a variety of locations where they were never taken care of before. There are concerns about “adverse outcomes” because that is a large and broad term. For example, an infection with onward transmission but mild illness could be considered an adverse outcome. Thinking about the impact of that within the framework of morbidity and mortality would be more favorable.

- A HICPAC member expressed a preference for Narrative B given the wider variety of outcomes, but questioned adverse outcomes such as “lost workdays” due to infections because retired persons do not have lost workdays and that would seem to disadvantage older individuals. Perhaps something like “impairment of ability for daily functioning” or some other measure would be better. Transmission is clearly important, although that is not necessarily what makes disease more severe. The 2009 influenza A outbreak clearly was a pandemic, though the novel strain that caused the 2009 pandemic was not more deadly than standard influenza. Therefore, it is important to distinguish between transmissibility and virulence since the two do not necessarily go hand-in-hand.

- A HICPAC member agreed that the definition should not be limited to hospitalization and death. Given that there are wide interpretations of “morbidity,” it is not clear whether changing the term to “morbidity and mortality” will achieve the desire to expand the definition beyond “hospitalization and death.” Many healthcare facilities may interpret “morbidity” as severe enough illness that it would require hospitalization. Narrative B spells this out more.

- Dr. Lin clarified that the definition of “morbidity” is the impact of a disease on health and is as broad as possible because there is not a demarcation of what is not a morbidity if something causes disease and has symptoms. In this situation, “morbidity and mortality” does not have an adjective in front of it, so the adverse outcomes do not necessarily change the definition or interpretation of “morbidity.” The “lost workdays” and “onward transmission” are associated but not necessarily classically construed to be “morbidity.”

- A HICPAC member noted that this is somewhat like an epidemiological definition for “severe illness” and is murky in terms of severe illness in the hospital versus severe illness in the ED. It is not clear whether the idea is to predict severe illness or categorize illness in the time period in which there is transmissibility or if it is about the ultimate outcome. That is, where in the continuum is the illness severe?

- Referring to the wording on Narrative A, Dr. Lin pointed out that “morbidity and mortality” first appears in the initial paragraph of considerations in item 2. In order to differentiate between Routine Air Precautions and Special Air Precautions, a sentence was included that states, “for which infection confers substantial risk of severe morbidity and morality.” On a global level, there is going to be a discussion and evaluation of morbidity and mortality, but the way Narrative A is currently laid out, there is some interpretation of what “severe” is. For Narrative B, “adverse outcomes” is the preferred consideration, and “morbidity and mortality” is one component of that. Although not explicitly in the descriptions of these precautions, there is some consideration of pathogens that cause mild disease under the details of Limited Air Precautions. For the most part, Narrative B does not focus so much in the initial box on “morbidity and mortality.” It is a different type of application for that concept. All novel and emerging pathogens start with Engineering Air Precautions, so there probably is some implicit acknowledgement that morbidity and mortality may be higher for novel and emerging pathogens, although it is not necessarily uniform. Because everything has migrated language-wise, they were talking “apples and oranges” to some extent. The WG would like some direction from HICPAC on the preferred language in terms of considering “morbidity and mortality” and “adverse outcomes” generally speaking, and then they could talk about “severe” anywhere along the spectrum depending upon the category.

- A HICPAC member thought the “adverse outcomes” wording potentially to include outcomes beyond individual clinical outcomes for a person who has an infection with that pathogen. Morbidity and mortality implies very clearly that this is a clinical outcome for someone infected with that pathogen. “Severe illness” is a clinical outcome regardless of how it is defined. This member favored the adverse outcomes being broad and inclusive because as they have discussed, there are risks, burdens, and benefits to any of these approaches—some of which are not clinical outcomes, but are important in terms of a strong and resistant healthcare system. Things like lost workdays due to infection are very important in terms of the functionality of these recommendations on the healthcare system.

- Another HICPAC member agreed that “severe” may end up resulting in lost workdays for someone who typically does not ever miss a day. There is more flexibility in Option B. When thinking about highly susceptible people, there is definitely a theme that could be identified from deaths and respiratory illness. There are sometimes outcomes for an individual and a population that are not death, hospitalization, et cetera.

- A HICPAC member said they also favor Option B for its flexibility. Option A is also favorable because of the Special Air Precautions, but the application when trying to determine that based on morbidity and mortality, because there is not great community surveillance for occupational health, so often times morbidity and mortality in a workforce are based on lost days of work.

- A HICPAC member expressed concerns about how broadly “adverse outcomes” is applied and how boundaries are supposed to be placed on the goal of the different types of precautions. They are not meant to protect against everything that possibly could occur or the permutations of what might be an adverse effect for one person versus another. Thinking practically about how to delineate what is considered all of the potential adverse outcomes and then use that to decide which organism gets attached to which of the isolations is unclear, because there is such variety. Rhinovirus for most people would be mild, and for others, it may not be mild. If this is not parameterized, it will be very hard to apply. As for the discussion on lost work days, all of the options will have some impact on lost workdays based on the policies that are implemented because people will be restricted from work based on the infections they have. In a way, that is built into the other guidelines. Whether the application of isolation precautions would have prevented the infection is not clear because there is so much community acquisition versus acquisition in the healthcare facility.

- Dr. Wright agreed about the feasibility, but observed that neither alternative narrative liked the term “severe illness,” so the question seems extraneous. It is difficult to choose one side or the other. It is just that it is applied differently in each narrative. It would be helpful to give the WG a sense of what would need to be reworked in the narrative.

- A HICPAC member agreed that classically when thinking about severity of illness, only morbidity and mortality are considered. These outcomes (e.g., lost workdays, transmission, inability to complete daily activities, et cetera) are important. Perhaps the WG could rework and reword these outcomes and include secondary outcomes.

- Dr. Lin commented that the wording would be adapted over time. In this case, adverse outcomes are examples rather than definitive considerations. The main question regards whether to focus on morbidity and mortality in terms of making decisions about categories, while other considerations fall outside of what is classically thought of as morbidity and mortality. Narrative A’s focus is morbidity and mortality, and Narrative B’s focus is morbidity, mortality, plus other considerations. This is a way to think about it in order to have some directionality in moving forward in terms of the guideline.

- A HICPAC member expressed agreement with the categorization and pointed out that they soon would be talking about the HCP Guideline and when infected HCP should return to work because of very serious concerns about staffing issues. It is important to take into consideration those other issues when looking at categorization because the different categories have different levels of protection. Engineering controls like AIIRs are not

necessarily about distance because the data on how far pathogens travel have not been assessed in this context. It does create a safer environment on the unit and within the room itself, depending upon how it is set up. Staffing is taken very seriously because everyone has seen what happens in a crisis and potentially, there could be a worse crisis. The reality is that this does need to be looked at when thinking about the level of protection needed. While the morbidity and mortality of a particular pathogen may not be severely high, the consequences to staffing could be so dramatic that it cripples healthcare institutions for periods of time. Therefore, consideration should be given to other issues beyond morbidity and mortality when determining which air category a pathogen should be characterized under.

- The PSAN liaison pointed out that perhaps a HICPAC statement is needed about voluntary compliance. Otherwise, facilities are going to claim that they do not need to allow HCP to wear a respirator. The concern is that the frontline workers on the ground look to the guidelines and will want to see that kind of language there.

- Dr. Lin asked whether members thought that should live in this guideline or in OSHA or other places. The two are conflated, which may make it somewhat difficult to figure out exactly what HICPAC wants. They may have to tease this out on the second day to be clearer. A potential way to address this would be to say that while the principle may appear elsewhere, HICPAC agrees with that principle.

- Dr. Wright clarified that what they were voting on was whether the language would move from the narrative to a formal recommendation versus removing it all together.

- The PSAN liaison expressed concern about people reading introductions, fine print, et cetera. The guidelines deal with when someone should wear a mask or a respirator.

- Dr. Lin added that Question 3a deals with that and is the current language in the Draft Guideline. The question regards whether the narrative in the Draft Guideline is sufficient or if it needs to be elevated to a recommendation in order for it to be active.

- Dr. Lin concluded that now that the WG had presented and discussed the 4 Questions that were sent by CDC to HICPAC in January 2024, the next steps for the second day of this meeting would be to address the remaining discussion points, hear additional public comments, and vote on responses to the 4 Questions to return to CDC.

Healthcare Personnel Guideline Workgroup Update & Discussion

Connie Steed, MSN, RN, CIC, FAPIC
Chair, HCP Workgroup

David Kuhar, MD
Division of Healthcare Quality Promotion
Centers for Disease Control and Prevention

Ms. Steed and Dr. Kuhar provided an update on the *Guideline for Infection Control in Healthcare Personnel*, 1998. Ms. Steed noted that the findings and conclusions being presented during this session were draft, had not been formally disseminated by CDC, and should not be construed to represent any agency determination or policy. She conveyed that none of the WG

members reported financial or intellectual interests related to the topics in this guideline update except for the following:

- ❑ Speaker and consultant for Pfizer; speaker for Sanofi Pasteur; consultant for Medscape; speaker and workgroup member of the Gerontological Society iCAMP workshop committee; recipient of research award from Pfizer and research subaward from CDC (via Catholic Charities).
- ❑ Scientific advisor for Seres Therapeutics; consultant for Rebiotix, Inc.; and participant on a scientific advisory board for Vedanta Biosciences.
- ❑ Consultant for Global Life Technologies, which includes education.
- ❑ Spouse receives research support from Sanofi Pasteur, Medimmune, and Gilead and serves on advisory committee for Novartis.
- ❑ Consultant and speaker for Pfizer and Merck.
- ❑ Liaisons to the HICPAC committee for:
  - The SHEA, but on this WG, serves as an SME and does not represent the views of SHEA.
  - The ACOEM, but on this WG, serves as an SME and does not represent the views of ACOEM

As a reminder, the original guideline was published in 1998. The goal of the Healthcare Personnel Guideline WG (HCP WG) is to provide updated information on *Infection Control in Healthcare Personnel (HCP), Section 2.* The HCP WG was charged with focusing on pathogen-specific issues for Infection Control in Healthcare Personnel. Where information is out of date, the WG will make updates using evidence-based methods where evidence is available. Occupational health providers working in healthcare facilities are the intended audience for the 1998 guideline. The focus is to establish the infrastructure needed for Occupational Health Services (OHS) to deliver occupational infection prevention and control services to HCP, and to prevent pathogens known to be transmitted in healthcare settings. Recommendations would include the establishment and management of an occupational health program and prevention of transmission of pathogens among HCP and patients, such as including the management of HCP exposures to infections or illness through post-exposure prophylaxis and work/patient care restrictions. As a reminder, work restrictions are limitations placed on HCP related to being at work or performing certain job tasks in health care settings aimed at safeguarding HCP and patient health and safety. Work restrictions are also a mainstay of preventing transmission in healthcare and are an integral component of a hierarchy of controls (e.g., ventilation, masking). Work restrictions are implemented when HCP may be potentially infectious to others, or when HCP are at increased risk for acquiring infection. Implementation may be based on a standardized timeframe or until the results of an evaluation determine clearance to return to work, depending on the infection.

Regarding the status of this work, Section 1: *Infrastructure and Routine Practices for Occupational Infection Prevention and Control Services* was published in October 2019.[13] The WG is now working its way through the pathogen sections for review, approval, and posting. In terms of Section 2: *Epidemiology and Control of Selected Infections Transmitted Among HCP and Patients*, the decision was made to post infectious diseases as literature reviews and discussions are completed so that they are available more quickly instead of waiting until the WG completes review and discussion of all of them given the volume. In accordance with that decision, Cytomegalovirus (CMV), Diphtheria, Group A *Streptococcus*, Measles, Meningococcal

[13] https://www.cdc.gov/infectioncontrol/guidelines/healthcare-personnel/infrastructure-routine-practices/index.html

Disease, Mumps, Pertussis, Pregnant HCP, Rabies, Rubella, and Varicella-Zoster Virus are complete and published to the CDC website.[14]

Ms. Steed indicated that the draft Viral Respiratory Infections recommendations and literature review data would be presented during this meeting for an initial vote. This is the predominance of what the WG discussed during its meetings this year. It took a lot of creativity and thought on how to establish some parameters by which to base decisions. In terms of Gastroenteritis, the WG has performed background research and drafted initial recommendations to be presented during a future HICPAC meeting. *Staphylococcus aureus* (*S. aureus*) is pending a literature review. The Conjunctivitis section was approved by HICPAC during the June 2023 public meeting and is due to enter initial CDC clearance pending an update of the literature review. Parvovirus B19 has completed initial CDC clearance and the *Federal Register* 60-day public comment period. Updated draft recommendations will be presented during a future meeting. "On Deck" are Scabies/ Pediculosis, Hepatitis A, and Herpesviruses.

Moving to the major discussion for this meeting, Viral Respiratory Infections, Ms. Steed began by reviewing the *1998 Guideline, I.E.22. Viral Respiratory Infections Section*. The narrative for this section provided information on the epidemiology and transmission prevention of respiratory viruses in healthcare settings; focused on 2 pathogens, Influenza and Respiratory Syncytial Virus (RSV); and provided the following 3 recommendations:

- ❑ Recommendations
    a. Administer influenza vaccine annually to all personnel, including pregnant women, before the influenza season, unless otherwise contraindicated.
    b. Consider the use of antiviral postexposure prophylaxis for unvaccinated health care personnel during institutional or community outbreaks of influenza for the duration of influenza activity, or consider giving vaccine to unvaccinated personnel and providing them with antiviral postexposure prophylaxis for 2 weeks after vaccination.
    c. Consider excluding personnel with acute febrile respiratory infections or with laboratory evidence of epidemiologically significant viruses from the care of high-risk patients (e.g., neonates, young infants, patients with chronic obstructive lung disease, and immunocompromised patients) during community outbreaks of influenza or RSV infections

[14] https://www.cdc.gov/infection-control/hcp/healthcare-personnel-epidemiologycontrol/index.html

- Categorization
  - Category 1B: Strongly recommended for all hospitals and reviewed as effective by experts in the field and a consensus of Hospital Infection Control Practices Advisory Committee members on the basis of strong rationale and suggestive evidence, even though definitive scientific studies have not been done.

When the WG reviewed these recommendations, the decision was made to remove the first 2 because they are covered in other places. The first recommendation on influenza vaccine is covered by the Advisory Committee of Immunization Practices (ACIP), while the second recommendation is covered in other CDC guidance that discusses antiviral prophylaxis. The focus of the WG's discussion had a lot to do with the third recommendation. One reason for that was that HICPAC designated it as a Category 1B recommendation at that time. Key to this is that some studies have been conducted since 1998. Based on the WG's discussion, the scope of this section update will be to include individual pathogens based on epidemiologic importance in healthcare settings and the available data to inform recommendation updates.

Pathogens that the WG is proposing to include in the section are: Influenza, RSV, and SARS-CoV-2. The updated recommendations preferably will address both exposed and ill HCP and ideally will take a singular approach for all respiratory viruses instead of having different timeframes, et cetera that make it confusing for healthcare organizations. The WG reviewed current CDC viral respiratory pathogen recommendations and found that facility, health department, and WG feedback suggest that there are significant challenges in implementing current SARS-CoV-2 work restrictions that need to be taken into consideration. Ms. Steed reviewed the following table that the WG developed to compare the current viral respiratory infection guidance for SARS-CoV-2 and influenza. RSV is not included because there have been no updated recommendations for RSV since 1998:

Pathogen	SARS-CoV-2			Influenza			
Population	Healthy adults with mild to moderate illness						
Current Recommendation	Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2 (2022)			Infection Prevention and Control Strategies for Seasonal Influenza in Healthcare Settings (2021)			
Infection Status	Exposed	Infected	Infected	Exposed	Suspected or Unknown	Suspected or Unknown	Infected
Symptom Status	Asymptomatic	Symptomatic	Asymptomatic	Asymptomatic	Symptomatic with fever and respiratory symptoms	Symptomatic with acute respiratory symptoms without fever	Asymptomatic
Duration of Work Restrictions	None required; series of 3 viral tests typically at day 1 (day of exposure is day 0), day 3 and day 5	10 days if testing not performed or positive test at day 5-7 OR ≥7 days since symptoms appeared if negative viral test obtained within 48 hr prior to return to work AND	10 days if testing not performed or if positive test at day 5-7 OR ≥7 days since date of first positive viral test if negative viral test obtained within 48 hrs prior to return to work	N/A	Duration of fever plus 24 hrs	N/A	N/A
Fever Based Return to Work	N/A	≥24 hrs since last fever without use of fever-reducing medications AND	N/A		≥24 hrs after fever cessation without use of fever-reducing medicines	N/A	
Symptom Based Return to Work	N/A	Symptoms improved	N/A		Ongoing respiratory symptoms should be considered for evaluation by occupational health	N/A	
Duration of Masking	Duration not specified; instructed to wear well-fitting source control	N/A	N/A		While symptoms such as cough and sneezing are present	While symptoms such as cough and sneezing are present	
Duration of Monitoring	Duration not specified; instructed to monitor for fever or symptoms	N/A	N/A		N/A	N/A	
HCP returning to a Protective Environment	N/A	N/A	N/A		Consider temporary reassignment or work exclusion for 7 days from symptom onset or until resolution of symptoms (whichever is longer)	Consider for temporary reassignment or work exclusion for 7 days from symptom onset or until resolution of all non-cough symptoms (whichever is longer)	

In terms of review scoping, Dr. Kuhar indicated that the WG discussed goals for this section and made the decision to use evidence-based methods to determine the duration of work restrictions for potentially contagious HCP that diminishes transmission risk while minimizing potential unintended health and safety consequences for HCP and patients. The focus was on

Influenza, RSV, and SARS-CoV-2 (omicron variants) in previously healthy adults with mild to moderate symptomatic illness. Consideration was given to the benefits and potential consequences of restricting potentially contagious HCP from work. The benefits are that restrictions protect patients, residents, and HCP by eliminating a source for transmission. However, restrictions also have the potential to cause staffing shortages that can result in lapses in both HCP and patient safety[15] as learned during the pandemic. There was a lot of discussion about looking for the right spot in which to achieve balance between preventing transmission and not causing harm.

Regarding the initial key question, the plan was to conduct a rapid systematic review following Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Scoping Reviews (PRISMA-ScR) standards. The Key Question developed by the group was, "What is the duration of viral shedding measured from symptom onset or diagnosis using culture or RT-qPCR?" The WG indicated that they favored using culture, but there was a lack of certainty about whether there would be much culture data available. For SARS-CoV-2 Omicron, a total of 4,924 studies were screened and 7 studies were included. For Influenza A, a total of 1,432 studies were screened and 6 were included. For RSV, a total of 160 studies were screened and 1 was included. The PRISMA Diagram provided a detailed review for each pathogen of the numbers of articles identified and screened, duplicates removed, articles excluded and so forth to arrive at the exact number included which can be found in the presentation slides. This table shows the results in terms of cumulative proportion (%) of participants whose shedding resolved, measured in days from symptom onset, diagnosis, or inoculation:

1.A. Omicron	N	Subtype	Dates														
Study (Natural Infection: shedding measured from symptom onset unless noted)				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Jang 2022	9	NR	Dec 2021	0	0	0	0	11	11	33	67	100						
Boucau 2022^	34	BA.1	Jul 2021 - Jan 2022	3	14	29	47	50	64	73	73	82	94	94	94	97	97	
Kang 2023 (JOMV)	34	NR	Sep 1, 2021 - May 31, 2022	12	32	38	50	62	71	74	79	88	97	100				
Bouton 2023^	75	NR	Nov 2021 - NR	0	38	45	60	72	86	92	96	99	99	100				
Kang 2023 (JOI)^	82	BA.1, BA.2, BA.5	Jan 14 - Aug 2, 2022	1	5	37	65	79	89	99	100							
Jung 2023	32	BA.1, BA.2	Mar 14 - Apr 3, 2022	12	32	25	47	69	84	97	100							
Smith-Jeffcoat 2024^#	236	NR	Nov 2022 - May 2023	50	49	57	62	69	78	84	89	89	92	98	97	98	99	100
1.B. Influenza	*N*	*Subtype*	*Dates*															
Study (Natural Infection: shedding measured from symptom onset)				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Killingley 2016#	39	H1N1	Sep 2009 - Jan 2011	0	0	10	34	70	82	89	89	94	94	100				
Killingley 2010	4	H1N1	Sep 14, 2009 - Jan 25, 2010	0	0	0	25	50	75	75	75	100						
Han 2019*	16	H3N2	Dec 2015 - Jul 2017	0	44	81	88	94	100									
Study (Challenge Study: shedding measured from inoculation)																		
Doyle 1998	42	H1N1	NR	0	22	35	43	55	76	96								
Hooker 2021	12	H1N1	Jun - Jul 1997	0	0	8	17	33	75	92	100							
Memoli 2015#	20	H1N1	Apr 2012 - Jun 2013	0	5	5	30	30	40	60	75	95	100					
1.C. RSV	*N*	*Subtype*	*Dates*															
Study (Natural Infection: shedding measured from symptom onset)				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Bagga 2018	4	NR		0	0	0	0	0	0	50	100							
Legend: Colors Every 10%				0	10	20	30	40	50	60	70	80	90	100				

^: Shedding measured from symptom onset or diagnosis; #: Shedding measured using RT-qPCR; *: Challenge study reporting duration of shedding in days from first positive viral load; NR: Not reported

In terms of the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) summary of findings for all Omicron studies, results indicated that Omicron shedding ended among ≥70% and ≥80% of all participants on Day 9, ≥90% on Day 10, and 100% on Day 15 post-symptom onset or diagnosis. There were no concerns about the validity, imprecision, inconsistency, or indirectness of the data and there was a high level of confidence in the findings. All influenza study results indicated that influenza shedding ended among ≥70% of participants on Day 8, ≥80% and ≥90% on Day 9, and 100% on Day 10 post-symptom onset,

[15] Bartsch SM, Weatherwax C, Leff B, et al. Modeling Nursing Home Harms From COVID-19 Staff Furlough Policies. JAMA Network Open 2024;7(8):e2429613 e2429613; Kane RL, Shamliyan TA, Mueller C, et al. The association of registered nurse staffing levels and patient outcomes: systematic review and meta-analysis. Med Care 2007;45(12):1195-204; Needleman J, Liu J, Shang J, et al. Association of registered nurse and nursing support staffing with inpatient hospital mortality. BMJ Quality & Safety 2020;29(1):10-18; and Lasater KB, Aiken LH, Sloane DM, et al. Is Hospital Nurse Staffing Legislation in the Public's Interest?: An Observational Study in New York State. Med Care 2021;59(5):444-450.

diagnosis, or inoculation. There were no concerns about the validity, imprecision, inconsistency, or indirectness of the data and there was a high level of confidence in the findings. RSV was not GRADE-ed because there were so few participants.

To summarize Key Question 1, for RSV (not GRADE-ed), 1 study reported resolution of shedding in 4 of 35 adults by the end of Day 8 after inoculation. Data were not provided for 31 of 35 participants. RSV studies tended to focus more on children. For Influenza A, there was high confidence in the findings. All studies reported resolution of shedding among ≥90% of participants by the end of Day 9 after symptom onset, inoculation, or diagnosis. While there was a question about whether vaccination status might affect the duration of shedding, no included studies reported comparisons of shedding among unvaccinated and vaccinated individuals. For SARS-CoV-2 Omicron, there was high confidence. All studies reported resolution of shedding among ≥90% of participants by the end of Day 10 after symptom onset, inoculation, or diagnosis. A total of 3 studies reported daily shedding among unvaccinated and vaccinated individuals and 2 studies suggested that unvaccinated persons shed longer, but for an unclear number of days. There was a range of roughly 1-3 days. The WG discussed these results in detail. The discussion encompassed that viral shedding primarily measured by culture for most infected healthy individuals extends to Day 9-10 for Influenza A and SARS-CoV-2 Omicron. It also was clear that some healthy individuals seemed to shed longer.

While limited data suggested that vaccination may decrease shedding duration, the amount of decrease was unclear and was not consistent among all of the studies. Therefore, the WG developed 2 additional key questions to investigate whether there is a relationship between the duration of symptoms and the duration of shedding because this has been used as a marker, as well as the risk for transmission from a potentially contagious individual over time. The viral shedding data was not quantified, so it was difficult to know what changes were over each day, et cetera as they marched out toward Day 10. The WG developed Question 2, “What is the association between the resolution of symptoms, specifically fever, and the resolution of viral shedding measured using culture, RT-qPCR, or RT-PCR?” For SARS-CoV-2 Omicron, 793 studies were screened and 1 study was included. For Influenza A, 977 studies were screened and 3 were included. No search was conducted for RSV since the only study found did not include those data. This table shows the results in terms of cumulative proportion (%) of participants with resolution of shedding and resolution of symptoms or improvement in symptom score:

Study (Virus, subvariant/ subtype)	N	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A. Resolution of shedding measured from disappearance of symptoms																	
Jang 2022 (Omicron, BA.1)	8	Fever	38	75	75	75	100										
Jia 2011 (Influenza, H1N1)[#]	67	Fever	--	18	45	64	76	82	91	97	100						
Jia 2011 (Influenza, seasonal)[#]	37	Fever	--	--	30	83	97	97	100								
Memoli 2015 (Influenza, H1N1)[#,$]	19	Any symptom	95	95	100												
B. Resolution of shedding and resolution of any symptoms																	
Han 2019 (Influenza, H3N2, 10^6+$10^7$$TICD_{50}$)[*,$]	16	Resolution of shedding	0	44	81	88	94	100									
	21	Resolution of symptoms	7	7	14	24	33	67	86	90	90	90	90	100			

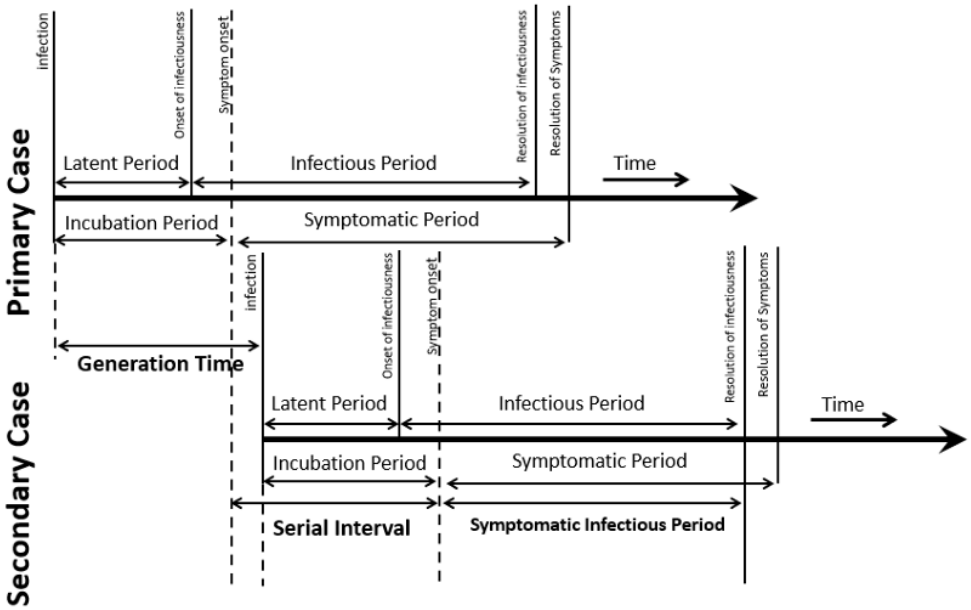
#: Shedding measured using RT-qPCR; *: Challenge study reporting duration of shedding in days from first positive viral load; $: only 2 participants developed fever

Legend: Colors Every 10% 0 10 20 30 40 50 60 70 80 90 100

The Jang and Han papers used culture and the Jia and Memoli papers used PCR to detect shedding. The Memoli paper reported from the end of *any* symptoms. The Han paper seems to show that resolution of symptoms tended to march out much longer than resolution of shedding. However, the Han paper did not report the data in a way that clearly linked the participants who were shedding and symptom progression together. Therefore, it was not completely clear

whether a person who was shedding also was having symptoms. This is just a limitation from the study. Key Question 2 also could be GRADE-ed. For SARS-CoV-2 and influenza, there was limited data from 2 studies suggesting fever resolves before shedding. While there were no concerns about validity or indirectness, there were some imprecision and inconsistency concerns and a low level of confidence in the findings. For influenza, 2 studies suggested resolution of shedding occurred before resolution of symptoms in the majority of participants. There were no concerns with validity and indirectness, but some concerns with imprecision and indirectness and low confidence in the findings. The concerns were in part driven by the low number of participants in these studies and low numbers of studies.

To summarize, no search was conducted for RSV because only 1 study reported adult shedding data. There was a low level of confidence in the findings for influenza A. Most study participants had positive indicators of viral shedding after fever resolution, and symptoms tended to persist after resolution of viral shedding. There also was low confidence for SARS CoV-2 Omicron because most study participants had positive viral cultures after fever resolution, with some beyond >24 hours. The WG discussion emphasized that the data are limited, and symptom data may be difficult to interpret due to variability in how shedding and symptoms were measured and reported between studies. For both SARS-CoV-2 omicron and influenza A, if fever is present, individuals seemed likely to be shedding. Resolution of fever did not reliably align with resolution of viral shedding. For influenza A, respiratory symptoms tended to persist longer than viral shedding. Given that there was low confidence in the findings for Key Question 2, the WG wanted to better understand the infectious period (e.g., time from onset to resolution of Infectiousness in an individual) to inform the duration of work restrictions. The WG reviewed data on transmission of SARS-CoV-2 Omicron and Influenza A to better understand the daily risk for transmission from a contagious individual. The available data in the literature generally focuses on 2 measurements to report transmission information, generation interval or time versus serial interval. This figure depicts the transmission parameters as a respiratory virus is transmitted from a primary case to a secondary case:[16]



[16] Transmission Parameters (adapted from Kim et al. 2023)

The aim for most papers is to report the generation time, which is the moment of infection in a primary case to the moment of infection in a secondary case to whom they have transmitted. That typically covers the incubation period in the primary case. The serial interval is the moment of symptom onset in the primary case to the time of symptom onset in the secondary case. There are some advantages and disadvantages to each of these measures. While the generation interval identifies when transmission has occurred to a secondary case, which is a very useful marker, and when the primary case was contagious, this is typically impractical to measure in a study because capturing the moment of infection takes a lot of planning and testing and is difficult to implement. Often, the serial interval is used instead to approximate the generation interval. The serial interval identifies when a secondary case is symptomatic, can be measured in a study, and most individuals with a respiratory virus realize they are infected and contagious upon symptom onset even though their infectious period may begin prior.

The WG then worked toward developing Question 3, “What is the pair-level serial interval, defined as the number of days between symptom onset in primary and secondary cases?” For SARS-CoV-2 Omicron, a total of 269 studies were screened and 14 were included. For Influenza A, a total of 3,248 studies were screened and 14 were included. While 37 studies were screened for RSV, none were included. These tables show the cumulative proportion (%) of symptom onset in secondary cases measured in days from symptom onset in the primary case with SARS-CoV-2 and Influenza A, respectively:

A. Omicron

Study (Mixed Subvariant)	Pairs (N)	Dates	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Shim 2022	202	Nov 25, 2021 - Jan 8, 2022	24	51	71	84	93	100									
Weil 2022	37	Dec 9, 2021 - 14 Feb 2022	29	55	79	88	88	93	95	100							
Guo 2023 (JOMV)	248	Jan 1 - Feb 15, 2022	25	51	69	81	88	92	95	97	98	99	99	99	100		
an der Heiden 2022	≥11,512	Jan 10 - Apr 18, 2022	21	43	61	74	82	88	92	94	96	98	98	99	100		
Li 2024	48	Mar 5- Apr 25, 2022	8	56	75	90	90	94	96	96	96	98	100				
Guo 2023 (IORV)	104	May 1 - Jul 17, 2022	28	47	72	87	92	96	99	99	100						
Study (BA.1 only)																	
Song 2022	12	Nov - Dec 2021	20	47	67	87	93	100									
Kremer 2022	1,788	Nov 20 - Dec 31, 2021	15	37	58	75	85	91	95	97	98	99	100				
Del Aguila-Mejia 2022	443	Dec 1-31, 2021	7	22	39	57	71	79	85	90	93	95	97	98	100		
Zeng 2023	72	Dec 9, 2021 - Jan 2, 2022	0	49	68	83	83	95	98	98	100						
Backer 2022	221	Dec, 13-19 2021	14	34	54	74	84	89	95	98	99	100					
Bendall 2023	11	Dec 21, 2021 -Jan 18, 2022	27	55	73	82	91	91	100								
Guo 2023 (JOVM)	15	Jan 1 - Feb 15, 2022	14	22	50	50	72	94	94	100							
Xin 2023	113	Jan 19 - Feb 4, 2022,	5	19	42	59	73	80	87	92	96	98	100				
Liu 2023	10	Jan 1 - Mar 26, 2022	35	53	59	75	85	94	100								
Study (Later Subvariants)																	
Zeng 2023 (BA.2)	38	Dec 9, 2021 - Jan 2, 2022	8	45	84	95	97	97	97	97	97	100					
Guo 2023 (JOMV) (BA.2)	254	Jan 1 - Feb 15, 2022	24	46	59	71	79	85	91	100							
Liu 2023 (BA.2)	14	Jan 1 - Mar 26, 2022	46	60	71	80	86	91	96	97	100						
Guo 2023 (IORV) (BA.2)	45	May 1 - Jul 17, 2022	28	54	72	82	92	92	97	97	100						
Guo 2023 (IORV) (BA.4)	8	May 1 - Jul 17, 2022	29	29	71	100											
Guo 2023 (IORV) (BA.5)	51	May 1 - Jul 17, 2022	27	43	73	89	91	98	100								
		Legend: Colors Every 10 %	0	10	20	30	40	50	60	70	80	90	100				

B. Influenza A

Study (Mixed Subtypes)	Pairs (N)	Dates	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cowling 2009	14	Jan 2 - Sep 30, 2008	7	29	43	71	93	93	100								
Eibach 2014	5	Jan 20 - Apr 6, 2012	40	40	60	80	100										
Luvira 2022	5	Feb 22 - 28, 2013	0	20	60	80	80	100									
Iyengar 2015	8	May - Oct 2013	0	88	100												
Cohen 2019	30	2013 - 2014	20	60	87	87	93	100									
Study (H1N1 only)																	
Mcbryde 2009	37	May 16 - Jun 3, 2009	16	43	68	86	97	100									
Morgan 2010	11	Apr 10 - May 8, 2009	18	45	55	82	91	91	100								
Ghani 2010	58	Apr 27 - Jun 10, 209	8	35	50	72	85	91	98	98	100						
Suess 2010	8	Apr - Aug 2009	13	25	100												
Komiya 2010	14	May 17 - Jul 24, 2009	7	36	71	79	86	93	93	100							
Roll 2011	51	Apr 26 - Jul 7, 2009	12	43	59	73	78	86	90	92	94	96	96	98	98	98	100
Archer 2012	19	Jun 14 - July15, 2009	37	63	74	95	100										
teBeest 2013	37	Jun 2009	14	35	70	86	97	100									
Thai 2014	6	Jun 2009 - Apr 2010	33	67	100												
		Legend: Colors Every 10 %	0	10	20	30	40	50	60	70	80	90	100				

It is important to note that there are variables that could affect transmission. While many of these studies are in households in the community, variables such as masking and immunization often are not discussed and what people were doing is unclear. It also is important to note that asymptomatic or pre-symptomatic transmission is not accounted for because this is about symptom onset in the primary case to symptom onset in the secondary case.

The information for Key Question 3 also was GRADE-ed. For all 14 Omicron studies for any subvariant, results indicated that secondary case symptom onset occurred among ≥70% of all participants on Day 5, ≥80% on Day 7, ≥90% on Day 8, and 100% on Day 13 post-symptom onset or diagnosis. There were no concerns about validity, imprecision, inconsistency, or indirectness and there was a high level of confidence in the findings. For all 14 Influenza A for any subtype, results indicated that secondary case symptom onset occurred among ≥70% of all participants on Day 4, ≥80% on Day 6, ≥90% on Day 7, and 100% on Day 15 post-symptom onset or diagnosis. There were no concerns and a high level of confidence in the findings.

To summarize Key Question 3 data, no adult studies were identified for adults. For influenza A, symptom onset occurred in at least 80% of secondary cases by the end of Day 6 in all studies. For SARS-CoV-2 Omicron, symptom onset occurred in at least 80% of secondary cases by the end of Day 7 in all studies. The WG discussed the information desired from transmission studies and determined that the vast majority of secondary case symptom onset for both pathogens occurred in the first few days from primary case symptom onset. Despite the persistent viral shedding seen in the data from Key Question 1 for 9 to10 days for both pathogens, most transmissions seemed to occur earlier in the primary cases' courses of illness. Therefore, work exclusions may be more impactful earlier in the course of illness. The WG discussed developing a process to better estimate when transmission to secondary cases occurred. The serial interval for the primary case begins at symptom onset, which may miss the beginning of their infectious period and then goes to the secondary case's moment of infection to their incubation period and ends at symptom onset. Subtracting the incubation period from a serial interval can approximate the moment of transmission to that secondary case.

The incubation periods for SARS-CoV-2 and Influenza have been well-reported. For Influenza A, the incubation period has been shown to be 1.3 to 1.5 days, with a 95% confidence interval.[17] As an example, all studies reported symptom onset in ≥80% of secondary cases by the end of Day 6. If the incubation period of 1 day is subtracted, it will conservatively estimate the latest likely day of transmission. Hence, this suggests that at least 80% of transmissions from the primary case are estimated to have occurred by the end of Day 5. This can be applied to any day to estimate the day of transmission. For SARS-CoV-2 Omicron, the incubation period has been shown to be slightly longer at 2.01 to 5.61 days, with a 95% confidence interval.[18] All studies reported symptom onset in ≥80% of secondary cases by the end of Day 7. If the incubation period of 2 days is subtracted, it will conservatively estimate the latest likely day of transmission. Hence, this suggests that at least 80% of transmissions from the primary case are estimated to have occurred by the end of Day 5.

[17] Lessler J, Reich NG, Brookmeyer R, Perl TM, Nelson KE, Cummings DA. Incubation periods of acute respiratory viral infections: a systematic review. Lancet Infect Dis 2009;9(5):291-300.
[18] Xu X, Wu Y, Kummer AG, Zhao Y, Hu Z, Wang Y, et al. Assessing changes in incubation period, serial interval, and generation time of SARS-CoV-2 variants of concern: a systematic review and meta-analysis. BMC Medicine 2023;21(1):374.

In terms of the WG discussion, the WG determined that using the daily cumulative proportion (%) of secondary cases with symptom onset and subtracting the pathogens incubation period to estimate the daily progression of risk for transmission from symptomatic HCP could be done. In addition, the daily progression of risk for transmission could be used to inform when HCP could return to working in a healthcare facility. While the WG favored this method to identify transmission risk, they also identified and discussed several additional factors that might reduce or extend the duration of work restrictions independent of this.

First, there was discussion about whether additional work restrictions should be indicated for HCP recovering from influenza or SARS-CoV-2 who returned to work to avoid persons at risk for severe disease. Persons at risk for severe disease from influenza or SARS-CoV-2 include those over the age of 65 years and those with medical comorbidities (e.g., asthma, blood disorders, cardiovascular disease, cerebrovascular disease, chronic lung diseases, endocrine disorders, liver disorders, renal disease).[19] Given that reliably restricting HCP from interacting with patients or coworkers at risk for severe disease is not feasible in most situations, the WG proposed not tying additional HCP work restrictions to patients or coworkers at risk for severe disease and determined that work restrictions would adequately protect all populations in healthcare.

Second, the WG discussed whether potentially contagious HCP should be routinely tested for SARS-CoV-2 or influenza to facilitate returning to work sooner. This was recommended in the *Interim Guidance for SARS-CoV-2*.[20] This has not been done historically for influenza. The literature review, especially for Key Question 3, suggested that infected persons are contagious earlier in disease course, so shorter durations of work restrictions are not likely to be further reduced by getting 2 negative test results at least 48 hours apart. The relationship between positive tests and transmissibility is unclear. The WG also recognized that routine laboratory processes for testing are challenging to implement. For instance, most laboratories have no weekend or after-hours access. While there are home tests, the results are determined by the person who is testing themselves and may lack objectivity, accuracy, and documentation. Overall, the WG did not propose a strategy for using SARS-CoV-2 testing to facilitate returning HCP to work sooner.

Third, the WG discussed whether the vaccination status of infected HCP alter the duration of recommended work restrictions. Limited data from Key Question 1 suggested that vaccination may reduce the duration of viral shedding in mild to moderately ill adults with Omicron. However, the results were not quantified, and they were not consistent between all studies. Therefore, the WG did not propose different work restrictions for vaccinated versus unvaccinated HCP.

Fourth, the WG discussed whether the use of antivirals could reduce the duration of work restrictions. Antivirals are not routinely indicated for reducing the risk for transmission to Others. Neuraminidase inhibitors have been shown to reduce viral shedding by 1 to 2 days for influenza and may reduce risk for transmission.[21] For SARS-CoV-2 Omicron variants, nirmatrelvir/ritonavir has been shown to decrease viral shedding in adults. However, the risk for rebound viremia may negate the potential for decreasing risk of transmission and may be

[19] https://www.cdc.gov/flu/highrisk/index.htm
[20] https://www.cdc.gov/covid/hcp/infection-control/guidance-risk-assesment-hcp.html
[21] Aoki FY, Boivin G. Influenza virus shedding—Excretion patterns and effects of antiviral treatment. Journal of Clinical Virology 2009;44(4):255-261; and Fry AM, Goswami D, Nahar K, Sharmin AT, Rahman M, Gubareva L, et al. Efficacy of oseltamivir treatment started within 5 days of symptom onset to reduce influenza illness duration and virus.

problematic.[22] Therefore, the WG did not propose reducing the duration of HCP work restrictions if antivirals were taken.

Fifth, the WG considered whether potentially contagious HCP could return to work sooner if a source control device is used for the remainder of that time. A number of laboratory-based articles have reported particle reductions in air samples from masked individuals[23] and viral RNA reductions in air samples taken near masked individuals[24]. In addition, a limited number of articles reported transmissions from contagious, masked HCP in a healthcare setting. For example, a letter to the editor[25] reported that 2 masked HCP who worked while pre-symptomatic or symptomatic with SARS-CoV-2 exposed 33 patients. None developed symptoms and 22 were tested for SARS-CoV-2 at some point while asymptomatic and were negative. A limited number of articles reported searching for transmissions from contagious, masked HCP in a healthcare setting. For example, in a multifacility prospective cohort study[26], 116 acute care, 26 long-term care, and 67 rehabilitation patients received care from a masked HCP with laboratory-confirmed SARS-CoV-2 during the period of communicability. Among 42 HCP who worked during the period of communicability, 29 (69%) HCP were asymptomatic and 13 (31%) were symptomatic when providing care. A total of 133 patients (64%) had at least 14 days of prospective symptom surveillance that included Day 5 and Day 10 SARS-CoV-2 testing if they remained asymptomatic to determine whether they developed symptomatic disease. While 3 became positive for SARS-CoV-2 that was presumed to be from an HCP, the authors acknowledged that an alternate source of SARS-CoV-2 could not be excluded. The authors concluded that wearing a surgical mask for source control is highly protective against transmission. The WG discussed that masking for source control reduces the risk for transmission but recognized that some risk may still be present. It is difficult to quantify the transmission risk reduction provided, and source control devices must be used consistently and correctly to be effective for preventing transmission. Therefore, the WG proposed the use of source control devices to diminish some possible residual transmission risk in recovering HCP returning to work.

[22] 11. Lee E, Park S, Choi J-P, Kim M-K, Yang E, Ham SY, et al. Short-Term Effectiveness of Oral Nirmatrelvir/Ritonavir Against the SARS-CoV-2 Omicron Variant and Culture-Positive Viral Shedding. jkms 2023;38(8):e59-0; Yang W, Peng Y, Wang C, Cai H, Zhang L, Xu J, et al. Reduced Viral Shedding Time in High-Risk COVID-19 Patients Infected by Omicron and Treated with Paxlovid: A Real-World Study from China. Infection and Drug Resistance 2024;17(null):1267-1279; and Zhong W, Jiang X, Yang X, Feng T, Duan Z, Wang W, et al. The efficacy of paxlovid in elderly patients infected with SARS-CoV-2 omicron variants: Results of a non-randomized clinical trial. Front Med (Lausanne) 2022;9:980002.

[23] Zeng K, Santhya S, Soong A, Malhotra N, Pushparajah D, Thoon KC, et al. Serial Intervals and Incubation Periods of SARS-CoV-2 Omicron and Delta Variants, Singapore. Emerg Infect Dis 2023;29(4):814-817.

[24] Archer BN, Timothy GA, Cohen C, Tempia S, Huma M, Blumberg L, et al. Introduction of 2009 pandemic influenza A virus subtype H1N1 into South Africa: clinical presentation, epidemiology, and transmissibility of the first 100 cases. J Infect Dis 2012;206 Suppl 1(Suppl 1):S148-53.

[25] Mponponsuo K, Kerkerian G, Somayaji R, et al. Lack of nosocomial transmission to exposed inpatients and coworkers in an investigation of five SARS-CoV-2–infected healthcare workers. Infection Control & Hospital Epidemiology. 2021;42(8):1025-1026. doi:10.1017/ice.2020.392

[26] Victoria R. Williams, Lorraine Maze dit Mieusement, Nicholas Tomiczek, Adrienne K. Chan, Natasha Salt, Jerome A. Leis, Risk of SARS-CoV-2 transmission from universally masked healthcare workers to patients or residents: A prospective cohort study, American Journal of Infection Control, Volume 49, Issue 11, 2021, Pages 1429-1431, ISSN 0196-6553

The Evidence to Decision Framework provides a summary of perspectives expressed by the WG as they discussed the data and worked toward proposing draft recommendations to HICPAC for consideration. This included an effort to emerge approaches to both Influenza and SARS-CoV-2 Omicron into a single approach. According to all perspectives, updating recommendations about work restrictions for HCP with influenza or SARS-CoV-2 is a priority for healthcare. The WG is not planning to propose a recommendation based on testing alone, so testing accuracy was deemed not to be applicable in this case. In terms of the domain of benefits and harm, a set number of days of work restriction for both pathogens has the potential to increase work restriction duration for influenza and likely shorten it for SARS-CoV-2. Shortening work restrictions for SARS-CoV-2 could reduce presenteeism and potentially could result in reductions in SARS-CoV-2 transmissions in healthcare. There were concerns that people were avoiding testing and mentioning symptoms if it would mean that they could be out of work for 10 days. Allowing HCP to return to work earlier for SARS-CoV-2 has the potential to increase the risk for transmission, but that risk could be reduced by using masking for source control. There is high certainty in the evidence for the duration of transmission risk-based on serial interval pair data.

For the outcomes of importance domain, individual, societal, reimbursement considerations, and other healthcare systems perspectives all placed a high value on continuing to prevent transmission in healthcare and increasing staff availability and HCP and patient safety. The balance of desirable and undesirable effects favored reducing the duration of work restrictions for SARS-CoV-2, as transmission of either pathogen in healthcare is not expected to increase and undesirable effects due to understaffing likely would decrease. In terms of the domain of resource use, no cost-effectiveness analyses were conducted. However, the WG discussed the potential for costs related to work loss being potentially reduced with a shorter duration for restrictions for SARS-CoV-2 as well as understaffing, which has the potential to lead to increased workplace injuries, healthcare-associated infections (HAIs), and direct costs for healthcare facilities. Maintaining desirable health outcomes, including maintaining prevention of transmission for both pathogens, could reduce costs to reimbursement entities that would then be passed to patients, healthcare systems, or providers. The certainty of the evidence of resource requirement costs is unclear, so the WG did not weigh resource use heavily.

For the equity domain, from the individual perspective, improving staffing levels may decrease burnout due to increased workloads that can result from having fewer staff and potentially could ameliorate inequities that result from limited sick leave. From the population perspective, a recommendation potentially could improve staffing levels, maintain desirable health outcomes, and may minimize HCP burnout. In terms of reimbursement coverage decisions, there was an unclear effect on equity among the WG members. Health systems and public health recommendations potentially may maintain desirable health outcomes, thereby ensuring that all patients and providers have the opportunity to maintain optimal health. Regarding the acceptability domain, no assessment of knowledge, attitudes, and practices was performed among key stakeholders. However, the WG's overall conclusion was that a recommendation likely would be acceptable to stakeholders and desirable from the employer and employee perspectives. Regarding the feasibility domain, no implementation assessment was conducted. However, the WG assumed that this recommendation would be feasible.

With all of that in mind, the WG proposed the following draft recommendations for HICPAC's consideration:

- ❑ For asymptomatic healthcare personnel who have an exposure to influenza or SARS-CoV-2 viruses:
  - Work restrictions are not necessary.
  - Wear a source control device from the day of first exposure through the 5th day after last exposure.
  - Monitor for development of signs or symptoms of a viral respiratory infection for 5 days after their last exposure.

- ❑ For healthcare personnel who are not moderately to severely immunocompromised with mild to moderate suspected or confirmed influenza or SARS-CoV-2 infections:
  - Restrict from work until
    - At least (3-5) days have passed from symptom onset* (first day of symptoms = day 0) AND
    - They are fever free for at least 24 hours without the use of antipyretics AND
    - Symptoms are improved.
  - Wear a source control device, upon return to work, until the end of day 7 from the first day of symptoms.

    *Or from their first positive SARS-CoV-2 test, if asymptomatic

Discussion Points

For this discussion, HICPAC members, ex officios, and liaison representatives raised the following questions, observations, and suggestions/recommendations:

- A HICPAC member asked whether the request for HICPAC was to choose a number from the range of 3 to 5 days as proposed in the draft recommendation versus an actual range, which would be difficult to implement.

- Dr. Kuhar confirmed that the intent was to pick a cutoff rather than a range. The WG was asked to consider 2 questions when drafting the proposed recommendations: 1) Based upon the data you reviewed, how long do you think HCP should be restricted from work and how long to come back masking; and 2) If you had to pick the most conservative recommendation for duration of work restrictions that you would consider, how many days would that be? When polled, the WG came down between 3 to 5 days.

- A HICPAC member emphasized that the methodological approach the WG took was truly fantastic and practical. Many of the transmission studies were in household settings or outside of healthcare. Therefore, 3 days seemed reasonable in the healthcare setting given the recommendation to wear source control until the end of Day 7 from the first day of symptoms. However, the use of the term "source control device" does not align with the Isolation Guideline that uses the term "source control." In addition, it was not clear what to do about workers who had severe disease and moderate to severe immunocompromise in terms of whether the default to the guidance about how patients are treated or if they could return to work in a similar fashion but perhaps mask longer because the limited studies showed prolonged duration of shedding in those cases.

- Dr. Kuhar indicated that the idea was that no matter what is chosen in the 3 to 5 days range, HCP would mask upon return to work out to Day 7. “Source control device” did not mean anything more than how it is defined in the Isolation Guideline. The WG discussed HCP with severe disease and moderate to severe immunocompromise a good bit, but there was not necessarily a definitive direction determined. There is potential for people with a huge array of contagious illnesses to shed longer. Considerations were to not address immunocompromise, potentially to address it in this section, or perhaps address it in the immunocompromised person section in the introduction of Section 2 of the Draft Guideline that goes through what immunocompromise status might mean, some examples, the degree of immunocompromise, and that persons who are immunocompromised persons might be contagious for longer than others. While the introduction indicates that immunocompromise could be a factor in deciding when to return to work, there is not a formal recommendation attached to that section. There was discussion that this does not necessarily need a recommendation for the field and could be recognized in the immunocompromised section as a general approach (e.g., consulting an infectious diseases specialist).

- Because of the way it is written, a HICPAC member pointed out that someone trying to implement this would have to exclude moderately to severely immunocompromised or those with mild to moderate severe infection from the policy entirely. If written without that language, language could be added to recommend additional considerations for restrictions for those who have severe disease or immunocompromise and then those could be added.

- Ms. Steed agreed with the comment and said that the WG could reword the recommendation to make it more general.

- A HICPAC member noted that there was slightly different wording for the asymptomatic exposed HCP compared to other people. This implies that someone has tested for influenza or SARS-CoV-2. It was not clear whether this was intentional or the WG meant to mirror the language for exposure to known or suspected influenza or SARS-CoV-2 in the interest of risk reduction.

- Ms. Steed recalled that the WG discussed known or suspected, which might make it clearer.

- Although the data reviewed are not perfect in that they do not examine the work setting, a HICPAC member noted that the information was useful and there were a lot of studies. However, the 3-to-5-day restriction was surprising because the data showed a longer period of shedding. The WG was recommending that a significant number of HCP who are affected would go back to work while there was still infection, with the control being a surgical mask. People cannot keep a surgical mask on all of the time. They have to take it off to eat and drink. There were many cases in which the entirety of a unit’s staff were infected from break room exposure. It is concerning that HICPAC would knowingly be sending a significant number of infected people back to work. Another concern with the current and proposed language is that one of the factors in the decision for return to work is if symptoms are improving. If someone has a minor cough and now hardly coughs at all, okay. What if someone is coughing incessantly and is now improving, but is still coughing a lot? What if someone feels dizzy when they stand up, but now only feels dizzy half of the time when they stand up? In practice, supervisors contact sick HCP and tell them they must return to work when the number of days of work exclusion are up. Whether someone is sick from influenza, COVID, or anything else, if they feel too sick to work, they should not have to work. That is

why there are sick days. The 3 to 5 days will pull people back to work whether they feel ready or not, and they will return knowing they are infectious.

- A HICPAC member supported including something about moderately to severely immunosuppressed in the document. In terms of seeking out occupational health advisement, in rural critical access settings that often is the same person who is responsible for infection prevention, quality, accreditation, et cetera. If someone is ill who also serves in this role, it is possible that a worker might return too soon.

- A HICPAC member cautioned about the use of serial interval over duration of viral shedding because a lot of households are small. Looking at when 80% of the secondary cases were symptomatic leaves out the fact that people are very exposed in households and are going to get infected. Someone who gets infected on Day 2 will not have the opportunity to become infected on Day 6. It is not like a new person comes into the household and then is at risk for infection.

- AEH pointed out that while everybody has had the opportunity to get vaccinated for COVID, some have chosen not to do so, but it seems that community and healthcare risk are relatively low as compared to a few years ago. This raised the question about whether that changed the thought process in terms of the proposed recommendations.

- Dr. Kuhar responded that the data were for the Omicron variant at the time, which was all the WG could get. For SARS-CoV-2, things have marched forward and the serial intervals for the newer variants are reported to be even shorter. However, there was no literature addressing those at the time.

- Ms. Steed pointed out that one of the reasons for trying to get HCP back to work more quickly and use source control was to help with the issues related to staffing, burnout, and other complexities. The WG was concerned about trying to balance ways to address the distress of having providers out for 10 days, which is where their thought process came from.

- Dr. Kuhar added that the WG discussion was robust and consistent that very few healthcare settings at this point are adhering to 10 days of work restriction.

- In terms of the shedding data versus the infection data, a SHEA WG member pointed out that one of the limitations the WG felt was problematic with just using shedding data was that there was a mix of culture and PCR data in those studies. It is known from PCR studies that they can pick up residual fragments of viral genetic material that does not reflect transmissibility or live virus, so the WG did not feel that that was the best marker. Instead, they thought that the risk of infection, which is why HCP are being kept out of work, was the better option. Symptom improvement is a critical part of return to work for all of the reasons that were mentioned. No one in the health world wants people returning to work when they are too sick to work, which is why they must have improvement of symptoms. Conversely, keeping someone out of work for 5 to 10 days who is better, has no symptoms, or is completely recovered or has very mild symptoms within a day or two of there is a financial hardship for that worker and the team on the floor where they work. The primary driver heard from employees about returning to work is financial, not that they are being made to return or made to stay out. HCP want to return when they are well enough to do so, are happy to wear a mask to be sure that people are safe around them during that time, but

want to get back to work where they can continue to earn their income. That drive is not within the control of CDC or HICPAC. That is about the way sick leave and vacation time are structured and health insurance and leave policies. It is also important to remember that this guidance is not only for COVID or influenza—it is respiratory viral guidance.

- Dr. Kuhar showed the results for Key Question 1 as a reminder that all but the Memoli influenza study were measured with culture. As studies were being reviewed, the WG did see some other studies that had PCR. When it came down to adhering to the exclusion criteria, it worked out that almost all of the studies reviewed except Memoli were measured by culture. The Memoli study was PCR. Therefore, these studies do represent culture for viral shedding. To be clear about the scope of the recommendation proposed, without a doubt in the WG discussions, the feeling was that simplicity and a recommendation that could somehow encompass all respiratory viruses with one approach would be preferable. It would be easier to implement and because people are not generally tested for the majority of respiratory viruses, that would be much more useful for healthcare. However, what the group proposed was just a recommendation for influenza and SARS-CoV-2 in the language because those were what the data were for. In terms of the transmission studies, serial interval, and estimating the day of transmission, the WG straw poll showed that the number of days the WG was comfortable with for proposed work restrictions was 3 days. The straw poll for being extra conservative was 5. It is important to remember that for 5 days, the conservative number proposed, mirrors the Day 7 numbers in the Shim 2022 Omicron study in which 100% of estimated transmissions already would have passed because the incubation would be subtracted. The WG felt that the Day 7 numbers reflected the residual risk for 5 days of work restrictions that a mask might potentially be managing. A 3-day work restriction would reflect Day 5 in the Shim study. That is how the decisions were made. Influenza has a shorter incubation period, so proposing Day 5 would be the numbers for Day 6. Some studies have crossed the 100% threshold, but clearly not all. With 3 days of work restriction, Day 4 is the estimated risk for 71% of transmissions in the Cowling study. Regarding the comment about household studies and potentially saturating transmission, this was discussed early on by the WG. There were 2 points that emerged, one of which was that household transmission for SARS-CoV-2 did not approach 100% in household studies, so the expectation was not that suddenly everyone was infected. In earlier versions, the WG asked that the data be stratified by household versus community transmission studies. There was a split between them. The an der Heiden 2022 study that had 11,000 pairs was conducted in the community, not in the household. There was no clear difference in the percentage estimation between studies conducted in households versus the community.

- To address some of the concerns raised earlier about the problems caused by a longer period of work restriction, A HICPAC member pointed out that if workers are brought back while they are still infectious and they infect other workers, there is going to be a staffing problem. Putting on a mask is not enough to protect everyone, particularly those who are at higher risk. Forcing staff to return to work when they do not feel well enough causes a lot of burnout, in addition to the high number of staff who now have long COVID and find it increasingly difficult on a long-term basis to do their work. The answer to the financial issue of not being paid while out of work for an extended time period is recommending that employers provide paid sick time—not forcing sick HCP to return to work.

- In terms of scope, a HICPAC member thought the WG made a compelling argument for 3 to 5 days based on the preponderance of data and identified the outliers such as super spreaders. It would be helpful to hear more about the WG's discussion on not considering

testing to return to work in the context of the availability of many testing platforms, including a combination influenza/COVID platform. Some of the household studies have shown that the culture data maps very well to the antigen data, though PCR is obviously different. Why not consider a test-negative earlier return to work strategy?

- Ms. Steed indicated that the WG group discussed this extensively. One of the key issues was the inconsistency, confusion, and lack of compliance with established standards. There are issues related to all healthcare organizations having access to the best testing. Using antigen testing requires 2 tests, and there also is the difficulty of the providers who can test to actually get the testing done. A lot of it had to do with practicality and the request to recommend something that is protective but not so cumbersome that implementation or testing would delay the guidance given for work restriction.

- Dr. Kuhar added that issues were raised regarding the challenges of implementing laboratory processes consistently and fairly. If the work restriction was 3 days, testing would be done on Day 1 and Day 3 and staff would be returning to work on the same day they were being tested, so it would not save any time. In terms of other issues with use of the testing, antigen tests do not always detect disease. In addition, the relationship between testing and contagiousness is not clearly established.

- In response to some of the issues raised, a HICPAC member emphasized that no one was saying that HCP who do not feel well should be going to work. Instead, the data support that at some point, the risk of being infectious is low but not zero. The delta from the risk being some number to being zero is addressed through the use of source control, which is not perfect, but a very small proportion of people remain infectious. That has to be weighed with the impact that has on all of the healthcare workforce to be out when they feel well enough to go to work. Feeling well enough to go to work is not on the table for those who do not feel well enough to go to work. Based on the data shown, tests are not necessary for a safe return to work. Testing also impacts parts of the workforce in adverse ways because tests cost money and they are not available for free, so they are behind the counter at CVS because they cost $20. This not only impacts someone's return to work, but also decreases the incentive to test in the first place. What is known from the data is that the most infectious period is in the early stage of infection. The idea is to decrease the barriers to testing in the first place to identify if someone is infected and then get them back to work when they are safe. For all of the reasons discussed and the unintended consequences on the healthcare workforce, these are important considerations. It would be helpful to have further direction on what HICPAC should say about influenza versus all viruses, because there is a big difference in applying this across the board to suspected infections as well.

- As Medical Director of an Occupational Health Program for 28 years, a HICPAC member said they would never have sent HCP back to work unless they were fully capable of doing their job and were not at risk of injuring themselves or being ill. That would apply to COVID, influenza, RSV, or injuries. There are several issues in terms of testing, one of which is that antigen tests are neither sensitive nor specific. In fact, some hospital laboratories do not even perform antigen tests. Most of the testing centers have closed with the decrease of COVID, so testing on the weekend is much more difficult—particularly tests for return to work. Although the proposed recommendation is evidence-based, HICPAC should look at this being a recommendation for all potential viral respiratory diseases. It is not practical to have one timeline for RSV, another for influenza, and a third for COVID. They do not want to game the system by people not wanting to be tested or testing only with a limited test

because that will get them back to work with another virus. While this is not perfect, it seems to be the best way forward. Though not in this proposed recommendation, when patients are assessed for return to work and then wearing source control, they have to be able to contain their secretions. Ideally, HCP would have health insurance that let them stay out. Unfortunately, that is beyond the CDC and HICPAC to recommend or enforce. The reality is that workers do run out of sick leave time and then have to take time off at no pay or file for disability, which is another incentive to get them back to work. The WG achieved an appropriate balance between safety of patients, safety of HCP, and what is best for the healthcare system.

- A HICPAC member observed that there was not disagreement that people who are not feeling well enough should not go back to work. Perhaps "and feels well enough to return to work" could be included in the language as part of the guidance. This would make it clear to the settings that are not following that strategy. Improvement of symptoms is questionable because sometimes with COVID or influenza, a cough can persist for more than 2 weeks even though the person is not infectious. A combination of symptoms improving and feeling well enough to return to work would capture both. This probably should include infections other than respiratory viruses (e.g., measles, mumps, rubella). In terms of the scope and implementing this recommendation, it is definitely not just COVID and influenza. While people can acquire home tests for COVID, most people do not test for influenza. People who test negative for COVID might return to work immediately. While some people are probably following the guideline and masking, some are not. If people have respiratory symptoms, it would be incredibly helpful for all health departments and managers to know how long those people should be out.

- Looking at the draft proposed recommendation, a HICPAC member thought it was carving out a specific population of people who are not immunocompromised, who are fever-free without antipyretics, and who are improving. At that point, consideration could be given to 3 to 5 days.

- Dr. Kuhar said that was in part because of the review of Key Question 2 about the symptom data seemed to be showing that if a fever was present, someone was more likely to be shedding. However, there was low confidence in those data. Symptoms are expected to be improving with the criteria put forward.

- Across all of the pathogens being considered, a HICPAC member thought it would make general sense for "well enough to work" to be a good tenant of basic practice. It seems like immunocompromise needs to be called out with additional considerations, such as extending duration of staying home, extending masking upon returning to work, consultation, et cetera. Phrasing it the way it is proposed carves out a substantial population for whom there may not be a lot of visibility, which makes it difficult. While there is an asterisk, the beginning of the recommendation applies to mild to moderate disease. Verbiage-wise they are not included because they were the asymptomatics the whole time. Perhaps there is a way to carve out people who are asymptomatic.

- Dr. Lin observed that at this point, it seemed that there should be a sense from the membership on the scope of the recommendation in terms of whether HICPAC members wanted to limit the recommendation to SARS-CoV-2 and influenza or to extend it to other respiratory viruses, including ones that are suspected and undiagnosed. He asked whether a fair way to present this would be that Option A would be restricted to SARS-CoV-2 and

influenza and Option B would be expanding to all confirmed or suspected respiratory viruses. Thinking of it in that way, “suspected or confirmed respiratory viruses” would include ILI.

- Dr. Wright added that a definition of “influenza-like illness” or “viral illness” with symptoms would have to be provided. Keeping everyone out of work for 3 days who has post-nasal drip during allergy season would not make sense.

- A HICPAC member thought it would be helpful to create a definition for “viral respiratory illness.” If a child in a household tests positive for RSV, there is a high likelihood that other members of the household who develop symptoms could have RSV as well. However, that was not incorporated in the draft proposed recommendation and put boundaries around this. Again, for the most part, there will not be a test. The chance that someone will be tested for COVID or influenza in the home decreases daily, will only become less, and will set up a resilient model when other viruses may increase and decrease in the community, such as rhinovirus, enterovirus, et cetera.

- Dr. Kuhar pointed out that the current influenza recommendations address the issue of what constitutes respiratory illness. The Influenza Section puts forward recommendations for “symptomatic with fever and respiratory symptoms, symptomatic with acute respiratory symptoms, and symptomatic with acute respiratory symptoms without fever” as the breakdown.

- A HICPAC member noted that “acute respiratory symptoms without fever” would include a runny nose of any kind. As currently stated, there are no restrictions so the dividing line is that ILI would be a trigger.

- Dr. Kuhar added that there is no work exclusion, but if symptoms of coughing and sneezing are present, the recommendation would be masking while at work.

- SHEA reiterated that the intent of the WG was to provide useful guidance for an Occupational Health Program in this time and setting in which not everyone is getting testing, and it is unknown what they have. The guidance is not to say it only applies if someone thinks it might be influenza. Instead, the goal is to address viral respiratory illness and the appropriate work exclusions regardless of pathogen. Providing differential guidance based on whether someone gets tested will disincentivize people from getting testing because they will end up excluded from work. Most of the time people are not tested and do not know what they have, but still should not go to work if they might have a viral respiratory illness. The WG’s goal was to provide guidance that would be helpful and the same for people who may have a viral respiratory illness—regardless of what the respiratory illness is. As written, the proposed language is already inclusive of people who do not test positive or never get tested but have symptoms.

- A HICPAC member asked whether the percentage of adults with influenza or SARS-CoV-2 who have fever is known. There is a lot of focus on fever, but adults are much less likely to run a fever than children. If there are data on this, it would be great to hear it. If not, the proposed language is based on a symptom that may or may not be present.

- Dr. Kuhar recalled that the WG discussed this and that minority of cases for both pathogens had fever. Referring to the table showing the cumulative proportion of symptom onset in

secondary cases measured from days of symptom onset in the primary case for influenza, by the end of Day 1 or roughly 24 hours later, 7% of symptom onset has occurred in secondary cases. On Day 2, 29% have had symptom onset, on Day 3, 43% have had symptom onset. Because the interest is more in when transmission occurred, subtracting a conservative number for the incubation period for influenza allows for a conservative estimate of the latest likely date of transmission, which is 1 day. What the WG polled as a very conservative approach to the number of days of work restrictions for someone with influenza or SARS-CoV-2 correlates to Day 5, so the Day 6 number represents all transmissions that happened by the end of Day 5. For Day 3 or a 3-day work restriction is subtracting 1 day from Day 4, so the Day 4 numbers are estimating the transmissions from the primary case by the end of Day 3. For Omicron, 2 days were subtracted, which is just shy of the 2-day incubation period range.

- A HICPAC member pointed out that the latest day for which transmission happens in an unmasked close contact household setting felt very different from a healthcare worker who is masking for source control and returning to work.

- Dr. Kuhar reminded everyone that there were no healthcare studies. These were all serial interval studies in the community or households. He agreed that at this time, it would be helpful to hear HICPAC members' thoughts about selecting 1 number between 3 to 5 days. HICPAC comments on their preference between 3 to 5 days were as follows:

  - CDC colleagues did an enormous amount of work on these amazing data. To the extent that there are good data on for influenza and COVID, a shorter period of 3 to 5 days has been used, plus source control, plus having the HCP evaluated by Occupational Health with improved symptoms, and afebrile for 24 hours protects the HCP and the patient. Therefore, this is a very reasonable recommendation, and 3 days should be fine.

  - Clearly, a lot of thought has been put into this. The data that were shown was for unmasked community settings, not masked healthcare settings in terms of transmission. With all of the caveats noted (e.g., carving out immunocompromised, symptom improvement, and Occupational Health evaluation), 3 days would be acceptable.

  - As clarified, this would be applied to respiratory illness regardless of pathogen and is broader than confirmed influenza or COVID. Therefore, 3 days would be acceptable for all of the viral illnesses someone might experience.

  - It is absolutely shocking that this committee would vote to recommend that approximately 30% of infected persons with COVID who are still shedding virus at Day 3 should be sent back to work—knowing that they are still shedding virus. There is still a significant amount of shedding among infected persons on Day 5 based in some of the studies. The reasons given for sending these individuals back to work are not based on science. They are based on needing more staff, which is not going to happen if more people are being infected. Source control cannot be 100% because people do have to take their masks off at certain times. If there is not going to be proper protection for infected people who could spread virus, they should not return to work. If the question regards the finances of the HCP, HICPAC could recommend that employers provide paid sick leave. Studies have proven that this is a factor in preventing spread of infection. If given a choice of 3 to 5 days, it should be at least 5 days, but longer is preferable.

- The phrasing should be worded so that it is clear that the recommendation is about viral respiratory illness, not just suspected and confirmed SARS-CoV-2 or influenza. It is striking that the recommendation is not evidence-based but is instead an 80% threshold, which falls at the 4-day mark and would be preferable, but the 3-day mark could suffice.

- UNC has 3 PCR tests that are available 24/7 for employees who might be ill with respiratory symptoms. Testing is done at Occupational Health during normal weekday hours and at an ED on nights and weekends. PCR results are returned within 2 to 4 hours for influenza, COVID, and RSV. They look for any commonalities that would suggest HCP-to-HCP transmission. Earlier in the COVID pandemic in 2020 and 2021, there clearly was transmission within hospitals, birthday parties, and other gatherings. Since moving to 5 days plus masking, UNC almost never sees any evidence of HCP-to-HCP transmission. While the UNC evidence is not published, does not suggest that the current practice is leading to transmission among HCP. UNC also has studied transmission to patients, which has found overwhelmingly that visitors are transmitting to patients. When HCP do transmit, it most commonly occurs when they are in the pre-symptomatic stage.

- Thinking about the work week, 4 days is not realistic. If the caveats previously mentioned are addressed, 3 days would be acceptable.

- Some institutions have more of an issue with absenteeism than presenteeism, so 3 days would be acceptable.

- Looking at the range of estimates from the tables, it is 71% to 93% for Day 3 versus 85% to 100% for Day 5, which seems like a marginal improvement and justifies selection of Day 3 given the proposed expansion to other respiratory viruses and the addition of "feels well enough to return to work." Improvement of symptoms seems very hard to sort through.

- Day 3.

- Day 3 with a few caveats. It would be helpful to clarify the day of return to ensure that everyone is talking about the same thing, because 3 days of work restriction with symptom onset of Day 0 is actually a return to work on Day 4. Making that explicit would be helpful so that there is no confusion that results in people returning a day earlier than HICPAC is recommending. Clarifying the definition of ILI also would be helpful. Perhaps language could be included in the narrative about realistic strategies facilities could take when people return to work in terms of break rooms, et cetera. It is very difficult to find spaces for that in some facilities, but it would be helpful to give facilities some guidance. For instance, people in the Northeast cannot sit outside to eat.

- Putting the most weight on deciding the impact of infection and symptom intervals. Looking at the 3- and 5-day columns, there appear to be diminishing returns going from 3 to 5 days to get to the actual likely number of people being infected secondarily from day-to-day. People being well enough to return to work applies to everything. Being able to keep people safe even before COVID, that is a principle that in general has been proven to have efficacy in preventing infection. These points are compelling in terms of being comfortable with 3 days.

- Those who want to present to work do not test. Some facilities provide masks to people who are coughing and sneezing and are still picky about break rooms. Society is trying to figure out where this fits in within the context of coming out of the pandemic. There is less transmission with this type of standard for all respiratory viruses because people will be more likely to wear a mask even if they do not test. Some facilities recommend masking with every patient interaction. It is difficult to pull this proposed recommendation out, realizing that many other facilities are implementing interventions to ensure that they are keeping people safe outside of the guideline.

- A HICPAC member requested clarification about whether someone with no fever, but a cough would fall under the proposed recommendation or would be told to do something like masking, but that if they developed X, they would fall under the guideline. For instance, the highly vaccinated HCP workforce may or may not have fever. It seems like this should at least be mentioned, even if someone does not fall into the work restrictions. Many people are trying to do the right thing and would like more guidance about what is expected and how they can best protect their colleagues, themselves, their families, and their patients. The more guidance HICPAC can provide, the better.

- Dr. Kuhar reminded everyone that the current guidance is the influenza guidance that points to fever and respiratory symptoms. When masking is referred to, it includes symptoms such as coughing and sneezing. The proposed recommendation could be more actionable.

- A HICPAC member pointed out that someone who has sneezing during allergy season versus a viral respiratory illness, they potentially could be out of work for 3 days. Therefore, the definition will matter a lot.

- Dr. Kuhar clarified that the intent was that someone is suspected of having a viral respiratory illness as posted on the CDC website as the current guidance.

- A HICPAC member noted that workers are all seen by a specialized Occupational Health physician who assesses HCP and makes a decision whenever they see a patient as to whether it is allergies, a viral respiratory disease, or another problem.

- Other HICPAC members emphasized that having a specialized Occupational Health physician who assesses HCP is the exception, not the norm. Many smaller rural and community hospitals are highly unlikely to have a dedicated Occupational Health physician. This role may be the responsibility of someone who “wears numerous hats” and needs definitive guidance about returning to work without having to conduct an assessment in all cases.

- A HICPAC member pointed out that everyone in an ED has got something. If everyone was being tested every day, no one would be at work.

Dr. Lin pointed out that a common scenario is someone with a runny nose who otherwise feels well, which is a gray zone that causes a struggle with boundaries. He emphasized that no official votes were taken during this session and that the opinions, feedback, and straw polls should not be construed as a vote. A formal vote will be taken tomorrow.

Public Comment

Overview

Angela Driver, MA
Zoom Coordinator
Centers for Disease Control and Prevention

Ms. Driver explained that when a speaker's name was called, their microphone would be unmuted. She requested that speakers clearly state their full name and organization for the record before providing comment, and indicated that a countdown timer would be displayed to specify how much time remained.

Public Comment

Andrew Wang, PhD, MPH
Federally Qualified Healthcare Center
The People's CDC

Hi. Thank you so much for having me. My name is Andrew Wang. Thank you for this opportunity to speak to you today on November 14th during HICPAC's public comment session. I have formally submitted public comments. I have no financial conflicts of interest or fiduciary investments in companies or organizations that produce or manufacture personal protective equipment. First, I want to recognize and express my sincere appreciation for all of your time and meaningful work by this committee to provide guidance in the practice of infection control and strategies to ensure safe US healthcare settings for patients and co-workers. Balancing approaches is important when considering realistic, idealistic, or practical approaches. But the public trusts all of us in the medical community to understand and be aware of the evidence and adopt policies that ultimately enforce approaches that align with the evidence. During this meeting, the incoming administration has already announced that an individual who has worked to discourage vaccinations will be nominated as the Secretary of Health and Human Services. Establishing the highest standards is needed to protect healthcare and prevent individuals like this, who opposes any levels of safe standards and will try to dismantle them. As a public health professional with a Doctorate and Masters of Public Health, I'm aware of the challenges in healthcare and the need for precise and meaningful guidelines. My expertise has been in the area of health disparities as a health services researcher focused on health equity. I serve at a Federally Qualified Healthcare Center (FHQC) that provides care for underserved patients in Chicago. I was previously an Administrator of an Occupational Medicine Department in one of the largest academic medical centers in Philadelphia. Today, I'm speaking on behalf of public who have ongoing serious concerns regarding infectious diseases such as COVID that is spread in the air and currently affects the health and well-being of healthcare workers and patients in healthcare settings. Your decisions being made today establish a serious precedent for future generations, especially if these standards are not at the highest and most rigorous levels. Lowering these standards will result in putting healthcare workers and patients in more dangerous conditions and lead to fewer allocation of resources for future pandemics, especially at less-resourced healthcare facilities that serve the most vulnerable and underserved communities like my own. Ultimately, higher standards ensure that health equity is addressed, while allowing lower standards will further worsens disparities. HICPAC has an important role to ensure the most rigorous and higher standards of protection regarding infection control guidelines because it impacts the health of healthcare workers and patients. The implications of today's and tomorrow's decisions are far-reaching, including primary and specialty community clinics across the country. The *Isolation Precaution Guideline* and *Healthcare Personal Guideline* are pivotal decision points, especially with the incoming new administration. Already,

persons of color and people with low income or who face poverty have disproportionately worse outcomes in healthcare, but also from COVID infections and most likely will develop long-COVID. I urge you to strengthen CDC's infection control guidance in line with practices that ensure the highest level of protections against the spread of infectious disease, especially through aerosol transmission. First, I asked members of HICPAC to ensure the highest standards and ensure the least number of hospital-acquired COVID infections and adopt an approach that protects against the spread of any diseases. Thank you so much for your time and I appreciate all of your support in this work.

Mary Jirmanis Saba, MD
Member, The People's CDC

Hello. My name is Dr. Mary Jirmanis. Today, I'm here speaking on behalf of The People's CDC, a CDC watchdog group and health equity group. At The People's CDC, we continue to receive comments from our constituents complaining about healthcare facilities violating their rights to safe healthcare. These fall into 2 categories: healthcare workers who refuse to mask with patients or facilities who refuse to guarantee N95 mask-wearing or other reasonable accommodations. We have constituents who complain to us about themselves or other loved ones catching COVID at the doctor because practitioners refused to mask. We are seeing in writing again and again from them, our constituents, that healthcare systems explicitly do not consider N95 mask-wearing a reasonable accommodation, even if the patient has to be unmasked. We have many complaints about hospitals refusing people's requests to be in private post-operative rooms, even when these patients, again, are unable to be masked themselves, saying that this is too burdensome on a hospital. Although up until just last year, hospitals tested patients for COVID upon entry to minimize spread, now HICPAC is proposing to allow healthcare workers to return to work when they are fever-free, even though many people never have a fever at all with COVID, but they are still infectious. The CDC's own data shows that infectiousness varies widely. Ending isolation should depend on an appropriate isolation period of at least 7 to 10 days and 2 negative consecutive rapid tests, as attested to by our isolation letter signed by 400 public health experts—not on the whims of employers who need to solve an ever-increasing healthcare employment crisis exacerbated by untenable working conditions and the increasing crisis of long-COVID. Now, your draft guidance is implying that healthcare facilities could determine whether or not workers are allowed to wear N95s in the workplace. We've already heard complaints about this that workers from Mass General Brigham who made the difficult decision to quit their jobs because they were only allowed to wear surgical masks once universal masking was lifted in May 2023. Again, lifting universal masking was not a decision based on science. Listen to the public comments. Listen to your own scientists at CDC who continue to publish *MMWRs* showing how dangerous COVID continues to be. Just this September, a new *MMWR* showed that infants had a higher percentage of hospital COVID admissions than any other age group except over 75. Infants. In this study, nearly 1 in 20 required mechanical ventilation and 9 infants died during their COVID-associated hospitalizations. Children just at start of their lives. Healthcare workers and patients will be drastically impacted by your recommendations. The public is overwhelmingly asking you to make universal masking the new standard of care and to require healthcare workers to wear N95s in cases of confirmed or suspected aerosol transmission, as well as to make N95 masks widely available within healthcare systems, regulate and fund improved ventilation, and follow the data on isolation protocols, not hospital profit margins. Thank you.

Jackson Riso
Long-COVID Patient

Hello. My name is Jackson Riso and 3 years ago, I became debilitated by long-COVID. I had to shut down my small business that I had worked extremely hard to build and let go of my 2 full-time employees. Each time I have gotten COVID, my disability has gone from bad to worse. We now have studies that demonstrate what I have personally experienced. Every time we get COVID, we get worse. Because of this vulnerability, it is not safe for me to access healthcare of any kind. There is no preventative care that is worth the risk of another COVID infection. Today, we have a greater knowledge that ever before of how viruses are spread and how damaging even seemingly mild infections can be. This knowledge was paid for in blood by the lives lost during the public health emergency. Yet, we consistently fail to implement this knowledge, and so Americans continue to die in overwhelming numbers from hospital-acquired infections. Millions of vulnerable patients like myself, patients with chronic conditions like long-COVID or cancer or heart disease, wish to receive care but don't because we are all too aware of the crippling power that SARS-CoV-2 still has. Throughout the day, I have listened to your presentations. I have heard your talking points. I have seen your slides. I've looked at your charts and graphs, and I have read your bullet points. As a patient, I can tell you that you are missing the most fundamental question, “Can everyone in the United States access healthcare safely? Yes or no.” If the answer is “no,” then some things need to change. The recommendations presented in this meeting do not meet the demands of the moment. They will not make healthcare safe enough to genuinely protect the most vulnerable members of our society. It is beyond time to once again implement mandatory masking in all healthcare facilities. You are on this committee for any reason. What do you want your legacy to be? Do you want to be remembered as the ones who halted progress and said, “fewer deaths are good enough” or do you want to be remembered as the ones who pushed forward and championed a new age of safer and more inclusive healthcare? The doctors who look to you for guidance swore an oath to “do no harm.” Today, we the patients, ask you to lead them in fulfilling that oath. Masks work. We know they work. It is time to make them standard. Thank you.

Deborah Socolar, MPH
Long-COVID Patient
Cancer Survivor
Retired Health Policy Consultant

Hello, my name is Deborah Socolar. I am active on pandemic issues with several public health groups. I am, for example, Health Policy Advisor to MaskTogetherAmerica. But today, I speak only for myself. I'm a long-COVID patient, cancer survivor, and retired health policy consultant. I have a vocal cord disability, so I will also submit my comments in writing. I'm aghast at the current continued failure to prevent healthcare spread of airborne germs that cause long-term disability and death. My mother caught COVID from a caregiver in 2021 and died of it. I caught it from her and still suffer the effects. Like many people I know, I can't risk repeat infection and worse disability, so I go without much needed medical care because healthcare settings pose a threat. Most have abandoned routine tests. Staff will often work while infected, yet few use masks. If I ask medical staff to mask, they often resist. HICPAC and CDC should call for restoring routine testing and masking year-round by all staff, visitors, and patients, except the rare patients who cannot, with widespread N95 use. I greatly appreciate the panelists today who recognize that appalling numbers of patients and staff get COVID in the healthcare settings and facilities. When surges start, facilities may not know who is infected or high risk, and that action is urgent to strengthen ventilation, sick pay, and protections besides PPE. But, few of your members recognize those points. It is disturbing to hear proposals to focus protections on high-

risk units. High-risk patients use all parts of a hospital. Immunocompromised people shouldn't be endangered in the orthopedist's office. I worry especially for my relatives whose babies are due next summer. The CDC webpage on protecting infants and children notes infants under 6 months have high COVID hospitalization rates, but offers no help except vaccination in pregnancy. How should hospitals and doctors protect newborns from widespread COVID? The need for universal masking is obvious and routine testing of staff who shouldn't work unless infection-free. Sadly, your proposed policies won't protect infants or the rest of us in our contacts with healthcare. Thank you.

Shea O'Neil
Volunteer, World Health Network
Volunteer, Air Support Project

Hi. I'm Shea O-Neil, advocate for patient rights and human rights in the COVID-conscious community; volunteer at the World Health Network and Air Support Project non-profit; immunocompromised and apparently not in the picture; and likely to be voted to be denied safe healthcare and thrown to the wayside—the way that things are looking so far at least. I have a few questions for you too after listening in on today, getting a small amount of time to glimpse at slides, and now be given the grand opportunity of leaving a 3-minute comment to defend my life before your voting tomorrow, which I'm not even sure is with the legal number of entities. First of all, who's gonna send the memo to all the firefighters that they should start using surgical masks for wildfire smoke now, or to the lab workers that work with other infections, diseases like tuberculosis, bird flu, or whatever else pops up that can spread by the air. Just let them know to put down those PAPRs and N95s and throw on a baggy blue surgical mask, because it probably works just as fine. Who is going to tell NIOSH they were wrong and wasted their time on tests that certify these respirators, protect from the particle size that infectious diseases like COVID spread on, and just let him know that surgicals are probably just as good according to a few cited studies that don't agree on outcomes, so you decided to ignore the more controlled ones in favoring the ones full of inconsistencies, and then use that to lead to the decision that abandons the entire field of physics and goes against current industry guidelines because it's just once in every 5-year infection control standard after all for healthcare facilities where people who are at their most vulnerable inside of during a time when SARS-CoV-2 is recognized to spread year-round and cause long COVID in 25% of infections, with new infections looking worse. But maybe your healthcare workers aren't the ones spreading it to them. It's just their visitors because you all are magical and "Oh, no, we couldn't ask the visitors to wear respirator masks. That's rude." These people in the hospital just need to deal with being repeatedly infected when seeking healthcare in their vulnerable positions. It's a risk you all are willing to take today and somehow, you've been put in this position to decide for us. That's not the "Precautionary Principle." The only way to address the reality of this breath-emitted, aerosol-spread, short- and far-distance travelling, infectiously lingering, extremely contagious, quickly evolving vaccine- and immunity-evading, year-round pathogen of COVID-19 and its often long-term severe counterpart long-COVID is to make aerosol-filtering face-confirming respirator masks like N95 and their equivalents or better standard precaution in healthcare facilities. Anything less will not work. Don't worry. You don't have to stay up all night to rewrite what you just did today. I'm pretty sure the World Health Network sent you the correct answers to CDC's four questions. It's in your inbox and I'm pretty sure they're okay with you using them verbatim. Thank you for your time.

Kaitlin Sundling, MD, PhD
Physician Scientists, Pathologist, and Assistant Professor
Madison, Wisconsin

My name is Kaitlin Sundling. I am an MD PhD physician scientist and pathologist in Wisconsin. I have no conflicts to disclose. I'm a volunteer with The People's CDC and Wisconsin Community Health Action, although I'm not speaking on behalf of any group. I am commenting in support of universal masking and strengthening infection control policies. Infection control begins with the basic assumption that infections are worth preventing. Healthcare workers need strong guidelines from the CDC to ensure best practices are followed. I hope we can all agree that it should not be up to individual healthcare workers to decide whether hand washing is needed, whether exam rooms should be clean, or whether gloves should be worn during procedures. Masking is no different. This committee needs to decide if aerosol transmission a personal belief or a scientific fact. All healthcare settings pose risks of aerosol transmitted infectious diseases such as tuberculosis, COVID, seasonal influenza, avian influenza, measles, and so on. Many healthcare settings have implemented fall to winter universal masking without adverse impacts to operations. COVID spreads year-round, and year-round universal masking as a standard precaution is the only sensible solution to prevent healthcare-acquired infections. Masking should not only be a reactive approach that comes after preventable exposures have already occurred. Mask bans have been enacted in multiple locations, creating a dangerous situation in our communities. Meanwhile, healthcare crisis standards enacted during PPE shortages risk becoming permanent policies. This committee must formally address the very real instances where healthcare workers and patients have not been allowed to wear respirators and where healthcare policies have been used to deny patient requests for staff to wear respirators. As the foremost authority on infection control, you have the opportunity to combat stigma and misinformation about masking by recognizing the need for universal masking in healthcare, and that respirators, at minimum N95, are the only appropriate respiratory protection against aerosol transmitted pathogens. Regarding the *Healthcare Personnel Guideline*, shortening COVID isolation for healthcare workers would put both patients and workers at risk. In May 2024, as Mary mentioned, The People's CDC submitted a letter to the CDC with over 400 expert signatures supporting that COVID-positive workers must isolate at home for at least 7 to 10 days and should test negative before returning in person. Universal masking in healthcare with broad use of N95 respirators is necessary for safe patient care and workforce protection. Please use your authority to strengthen infection control using a multi-layered precautionary approach. Thank you.

Don Ford
(Reg Mills), OBT

Hello. My name is Don Ford. I have no conflicts of interest. I spoke at last year's meeting on this issue, and I'm primarily focused on helping rewrite the vaccine policies of VRBPAC and ACIP. Before I get started, I want to point out that the people on this committee were able to limit transmission and create safe healthcare spaces using a layered approach, and yet I hear other members of the committee locking onto individual aspects of their approach as if that single mitigation is enough alone. When you consider that it is not an individual item protecting folks, you have remember that splitting hairs over symptoms is completely pointless, especially when a large portion of transmission is asymptomatic. Rather than chopping up complex guidelines that can be easily misunderstood, this demonstrates that they should be at least masking all the time and using respirators when they're concerned about symptoms or having had exposure. This debate has ignored the obvious solution of different quality masks for different environments and that if folks are symptomatic, then they should be home until they are not

symptomatic—3 or 5 days does not handle the issue. I hear the committee discussing what is best for hospital management when your role is to determine what is best for healthcare practices. The group is not called “Hospital Management Practices.” It’s “Healthcare Infection Control Practices Advisory Committee.” You’re supposed to be speaking to what is best for the patients and the healthcare workers providing care, and the hospitals are supposed to then fit into those regulations. We are not supposed to fit patients into them of hospitals, or why even have this committee in the first place. The work group discussion about endorsing voluntary masking missed that these rules are already being used against workers to prevent masking. You’re putting undue requirements on the facilities and the workers. This confusion alone shows that it is too complicated not to have a flat recommendation. The current recommendation already lowers the level of care available. This has led to misinformation coming from healthcare providers themselves that masks do not protect them enough, or that they don't need to wear them. At least the policy of “any mask is better than no mask” needs to be recommended by this committee if you’re not going to have a full-time recommendation, though respirators should be required for any suspected pathogen that travels through the air in line with WHO changes to airborne. We dealt with this in the RNA vaccine recommendations this year. A year later, we're aligning that rule with what the recommendation was the whole time with the recommendation for at least 2 boosters a year instead of 1. But unlike VRBPAC, this committee does not meet over the same issues year-after-year, except this exact issue because it got kicked back by the CDC for not doing what was best for administering care. Now you're making the same mistakes today. I need everyone on the committee remember that we are going to be back here next year under a Trump presidency still trying to make this work because the same people who are commenting right now are the same people who got this issue kicked back in the first place. You have to make it very clear right now. Also, when discussing 3 versus 5 days, many of you included incubation as part of the 2 days, which is not the right time for them for them to be in isolation. If you're so concerned about workers being out sick, then put masks on them all the time and upgrade the masks for different levels of exposure, then making respirators available to all staff. Work with NIOSH to create ease of use or new standards and from there, create workgroups to handle these other mitigations like UVC air filtration and other sterilizing methods. This will be added to the VRBPAC list and you should get ahead of it now. Thank you.

James Morris
Individual Commenter

Hello. Thank you. I will start by saying that I do have a potential conflict to share. I have worked at multiple pharmaceutical companies in the past, but my comments are entirely my own and are not connected to any company or organization. I am a member of or have worked with. My background within pharmaceutical industry, where we are regulated by the FDA, has a significantly different approach to what is being done here and in healthcare facilities. The severity of the regulations and the consequences of failure to follow them in the pharmaceutical industry are so severe that it's common practice for pharmaceutical companies to go above and beyond the regulations to be absolutely certain there are no compliance issues, nor are there any problems that could even be suspected of such. The fact that you are even discussing many of the topics that are here today are things that are beyond the scope of even imagination or consideration within the pharmaceutical industry. Because of that, it quite frankly is a difficult, if not impossible, thing to imagine even changing the minds of many of the people on this committee, because the ability to take a proper perspective on air seems to be beyond even the point of consideration. Because of that, I have little hope that this committee will change their way to take a more conservative approach to what should be done, as has already been mentioned by the previous commentators. The main point is that more needs to be done than

currently is to minimize, reduce, and mitigate infections. It's not being done. There's a rush at most healthcare facilities to do the absolute minimum. Whatever guidance there is, that is the actual target that's done. The failure to even have a substandard recommendation is a failure of this committee. Thank you.

Deborah Gold
Certified Industrial Hygienist
Retired Annuitant, Cal/OSHA

Thank you for the opportunity to comment at this meeting. I had retired from Cal/OSHA's Deputy Chief for Health in 2014, but was recruited back to provide technical help in March of 2020, when COVID-19 was beginning to blaze through healthcare, congregate living, and prisons. The incorrect information that COVID-19 would not spread through the air and the lack of appropriate precautions allowed COVID-19 to overwhelm long-term care facilities and prisons. I again left Cal/OSHA last year and am not speaking for the agency. At least 13 people died during the first outbreak at San Quentin Prison, which started at the end of May 2020. 122 people were transferred in a 10-hour bus ride from the California Institute for Men where 500 people were sick and 9 had died. On arrival, the men were placed on the upper floors of the 5-tier Badger building. 1,457 people incarcerated San Quenton were infected in a 2-week period. The judge's tentative ruling said, "Broomfield testified that he believed Brett Badger was an appropriate and safe place to quarantine the CIM transferees because he believed COVID-19 could only spread through droplets or contact from hard surfaces, not through aerosolization." Staff were generally not using respirators and served as a vector for COVID-19 to different areas of the prison. Many employees were infected and at least one died. The Marin County Public Health Officer was concerned that the prison outbreak had spread to the community. Ultimately, the state health department set up an emergency operations center to institute controls, such as source control, testing, physical isolation, air filtration, and respirator use. This illustrates the importance of the differences between scenarios outlined in the work group presentation. Scenario A captures what happened in May in San Quentin, which followed their past practices with diseases such as mumps and chickenpox. The built environment encouraged transmission of COVID-19. Simple masks were initially provided and respirators, when provided, were not used consistently or correctly. Scenario B recognizes the importance of preventing both short- and long-range inhalation and reflects what the CDPH implemented at San Quentin to stop the outbreak. Screening, source control, ventilation, and other engineering controls must be used to limit the areas in which infectious aerosols may be present and reduce their concentrations. Where infectious aerosols may be present, employees must effectively use NIOSH-approved respirators, including respirators more protective than N95s. Clinical studies of infectious pathogens, laboratory studies, and 100 years of respirator use in various industries have found repeatedly that only respirators that fit the face will prevent inhalation of aerosols, including infectious aerosols. Where healthcare workers have additional personal risks, such as pregnancy or immunocompromised housemates, even when policy does not require respiratory use, the employer should provide them to employees and allow them to use to tested respirators. Thank you.

Chloe Humbert
Retired

Hi. I'm Chloe Humbert. Semmelweis is known for his campaign for hand-washing standards. He was attacked by contrarians until his death. Today he is vindicated, yet respiratory hygiene is the science denier flavor of the day. It's not okay that doctors and nurses are maskless, breathing directly on patients who then get infected. Now is the chance for those in positions to do so to set a precedent for deserved protection of worker and patient safety to be on record giving evidence based practitioners something to hang on to. We are going back. The only question is how far back people and medical leadership are willing to sign onto? The announced incoming Department of Defense Secretary is someone who said on national TV that he doesn't wash his hands. We know what can happen because of what has happened before. In the 1850s, Florence Nightingale went to the Crimean War, a hospital in Constantinople that's Istanbul now, and that situation was no “Turkish delight on a moonlit night.” She arrived at a British military base atop a cesspool where patients lay in their own feces among rodents and more soldiers died from infectious diseases than injuries in battle. Under Nightingale, the place was scrubbed, and she reduced the facility’s death rate by two-thirds. We might go further back. The Dark Ages was called that because society moved backwards from the technological advances that had come before. The fall of the Roman Empire was marked by elites who cared only about the status quo. They could have developed a steam engine as far back as Herod in 15 BC, but didn't bother. Going forward is a choice. In an article in the *Journal of Infectious Diseases and Preventive Medicine*, there's a description of what happened back then, “In medieval times, hospitals were hazardous places. Epidemic infections killed large numbers of hospital patients during this period. Hospital infection and death rates were high. When a sick person entered the hospital, his or her property was disposed of and in some regions, a Requiem Mass was held as if he or she had already died.” Going backward is a choice. We know better now. We use surgical gloves, autoclaves, disinfectants, checklists, and yes, respirator masks exist. But big healthcare corporations don't want to pay for that. They lock up PPE, force nurses to work without sick leave at hospitals, and make patients beg for reasonable accommodation. Going forward is a choice. Let this not be a case of rearranging deck chairs on the Titanic, but a time when serious healthcare professional leadership takes a stand for sanitary conditions in healthcare and makes respirator masks and the “Precautionary Principle” the standard of care instead of doing with masks what would be like calculating whether you should wash your hands after the toilet based on age or health status. Thank you.

Amanda Finley, CAN, CNPR
Media Relations Specialist, Anthropologist
Lead, COVID-19 Long-Haulers Discussion Groups

Thank you very much for the opportunity to speak today. My name is Amanda Finley. I lead COVID-19 long-haulers discussion groups. I have lived with long-COVID since March 6, 2020 and I am here today to beg you to stop adding to our ranks and mandate universal masking in healthcare. At the beginning of the pandemic, I followed the CDC's every recommendation. We had no other sources to rely on, so we relied on the experts. Over time, it became apparent that what we were seeing on the ground was not being reflected in guidance, and over time I lost all faith in the CDC. I also lost my home when I was too sick to work and wound up living in a tent. I got sick with COVID again before vaccines were available, and yet again one month after the pandemic was declared over and after receiving every booster. The vaccine-only approach has failed us in life-altering and lethal ways. Many are losing everything, partners, jobs. When someone in my long-COVID cohort goes quiet and doesn't respond to messages or calls, I start checking obituaries where I often find them. Some have even ended their own lives because

existence is medically too unbearable. Yet when we go into see our litany of medical experts, we do so at great peril. Almost none of them protect us by wearing something as simple as a good mask. We're even mocked by staff for taking precautions. The science is clear: 1) masks work; 2) the only prevention for long-COVID is not to get COVID; and 3) vaccines, while a necessary tool of public health, cannot prevent COVID. We clean water before we drink it. We cook food to eliminate the risk of most pathogens. We wash our hands to prevent fomite spread. Why are we not doing the same with the air we breathe when the risks are so evident? How many people have suffered needlessly because they put off care knowing their providers would not mask? In December 2023, Renee Semarge of Kansas City, also a COVID long-hauler, went to a pulmonology appointment masked where she again contracted COVID. None of the office were masked. She has been primarily bed-bound since. As we stare down the barrel of an H5N1 pandemic and an impending administrative change, it is imperative that we learn the lessons of COVID. We must protect our most vulnerable. Protect the people who care for the most vulnerable. Protect people from becoming the most vulnerable. We demand masks in healthcare, we demand proper examples to follow, and we demand true leadership. Please step up and fulfill the public mandate in your very name—the Centers for Disease Control *and* Prevention. Thank you.

Peg Seminario, MS
Industrial Hygienist
Safety and Health Director, AFL-CIO (Retired)

My name is Peg Seminario. I'm an Industrial Hygienist and served for 30 years as the Safety and Health Director at the AFL-CIO until my retirement. I've worked on many infectious disease regulations and guidelines for healthcare workers, including bloodborne pathogens, TB, and COVID-19. Unfortunately, for decades we had to fight CDC and many infectious disease professionals in the healthcare industry to recognize TB, SARS-CoV-2, and other respiratory diseases as aerosol-transmitted diseases that required engineering controls, ventilation, and NIOSH-approved respirators to protect workers. Given the experience we had with the COVID pandemic and all the evidence we now have on aerosol transmission, there should be no disagreement that existing infection control guidelines and policies are inadequate to protect patients and healthcare workers from infectious pathogens that pose an inhalation hazard, and that these measures need to be strengthened. But even with COVID, many now claim the pandemic is over and protections are no longer needed. But as you've heard today, serious health risks continue. Nursing home workers and residents are getting sick, individuals suffering with long-COVID are getting additional infections which make them sicker, and millions of people have health conditions that put them at high risk. So, the weak and inadequate protections in healthcare settings are causing many people to get very sick. I can speak to you for my own personal experience, and I'm somebody who knows about COVID and knows about protection. I got a really bad case of COVID this past February. It was my first infection. Despite being extremely careful about getting exposed, I'm at high risk. My husband has very severe lung disease and is at very high risk. The only place I spend any time indoors is at doctors' offices and in the grocery store, and I always wear an N95 or KN95. A few days before I got sick, I had a doctor's appointment at a large private healthcare facility. I wore my KN95 except for the time I was in a triage room getting my vitals checked. There was no mandatory masking policy in the healthcare facility, even though flu levels and COVID wastewater levels were very high. None of the nurses were masked. A couple of days later, I started having symptoms, I tested positive, I isolated and took PAXLOVID™, but I was sick for over a month and tested positive for the same type. Even worse, I infected my husband, who got very, very sick, which greatly worsened his severe lung condition. He also developed pulmonary embolisms that have yet to resolve and continues to have other effects. Patients and healthcare workers need

stronger infection control guidelines and protections that require N95 respirator, source control, and voluntary use of inhalation hedgers—not a continuation of the weak measures that are only making people sick. Thank you.

Yaneer Bar-Yam
President, New England Complex Systems Institute
Co-Founder, World Health Network

Hi. My name is Yaneer Bar-Yam. I am President of the New England Complex Systems Institute and a Co-Founder of the World Health Network. I'm here not to address HICPAC directly, but to speak to those listening healthcare professionals, patients, and advocates who are committed to public health and safety. Let me highlight several critical concerns. Members of HICPAC and the organizations they represent have significant financial conflicts of interest. This issue, documented in a complaint submitted to the HHS Office of the Inspector General, raises serious questions about the integrity of their guidance. Additionally, HICPAC is operating in secrecy with workgroup meetings closed to public scrutiny. This violates the Federal Advisory Committee Act, which mandates transparency. Such closed-door decisions erode trust and undermine accountability. HICPAC also lacks the legally required number of voting members, further undermining the legitimacy of its recommendations and decision-making process. Most importantly, the science of airborne transmission, essential for understanding diseases like COVID-19 and tuberculosis, is glaringly absent from HICPAC's guidance. Ignoring the science compromises the safety of both patients and healthcare workers. Compounding this issue, the voting members of HICPAC lack the necessary expertise in airborne transmission. While they may consider themselves infection control experts, their opinions on this critical topic cannot be treated as expert input. Science must drive policy. It provides the evidence necessary for informed decisions about safety and prevention. When silence is sidelined, lives are put at risk. One actionable step is for CMS to add COVID-19 and other airborne infections to the list of healthcare-acquired infections for which treatment is not reimbursed. This would align with existing policies and create a powerful incentive for hospitals to implement necessary precautions. Far too many have suffered illness acquired in healthcare, become disabled with long-COVID, or died from preventable infections. Far too many have avoided necessary care due to these risks. Every preventable case is a tragedy and a failure of the system. Please call the HHS Office of the Inspector General and ask them to investigate our complaint against the HHS Secretary, CDC Director, and HICPAC Designated Federal Officer for gross misconduct regarding HICPAC's violation of the law. The Inspector General's Office is very receptive.

Paul Hennessy

Hi. No conflict of interest. HICPAC has woefully failed the public with your draft recommendations, which must be redone and the vote needs to be delayed. Your precautions for airborne illnesses are especially antiquated, so let's start there. Your updated infection control guidance must follow the "Precautionary Principle." You need to consult with aerosol experts and mandate clean air protections in hospitals, such as ASHRE 241 standards or better as recommended by the EPA. Your updated guidance must include isolation, low pressure rooms, frequent testing for COVID and H5N1, improving ventilation and air purification, and broad masking requirements. HICPAC discussed exceptions in who should be masking, at what times, and justified your reasons to gamble on infectious periods. But it's easy. Everyone should be required to wear high quality respirators—staff, patients, and visitors. Also, COVID is infectious for 10 days or more—not 3, not 5. Your return-to-work policies for COVID and flu are dangerous and force healthcare workers back to work while still infectious. This guidance must make clear obligations for employer protections, not exceptions based on profit margins.

Worried about pushback from healthcare facilities? Elastomeric respirators are reusable, more economical, and even more protective than N95s. These need to be required for all pathogens, and it's malpractice to do anything less. COVID, TB, and H5N1 can all transmit asymptomatically. Without strict infection control measures, you are allowing illness to spread to vulnerable people seeking medical care. You need to go above and beyond for infection control in medical settings. That includes outpatient care centers. Why are you talking about when an employee should be allowed to sneeze without a mask? You sound like doctors in the 50s who recommended smoking. COVID vaccines have limits. They do little to prevent transmission, and repeat infections lead to immune damage and brain damage. Prevention must be paramount in medical settings for the good of patients and staff. The new guidance must also recognize the science on airborne transmission. COVID lingers in the air like smoke and no amount of hand washing or surface cleaning will stop that. Masking and clean air need to be a part of healthcare in the same way that gloves are. Would you want to share a room with a COVID patient or see a maskless doctor who has just been treating COVID patients? The CDC must also redo its flawed evidence review comparing N95s to surgical masks. The two are not the same and baggy blues do little to prevent airborne spread. HICPAC has failed to engage with the public, listen to past comments, or provide transparency. Your e-mail comment system makes it impossible to see the public record. Going forward, comment periods must be available on regulations.gov so the public's comments can be accessible, and we can hold you accountable for ignoring us. For the next 4 years, the Trump administration will promote anti-science rhetoric, the further minimizing of COVID and H5N1, less funding, and fewer protections for the medically vulnerable. But you all have ushered that in by stubbornly denying the science of airborne transmission and failing to improve upon prevention measures. It's time to put better airborne protections in place now, mandate masks across the board, and prepare medical settings for the best possible infection control measures. Until then, redo the draft and delay the vote. Thank you.

Esther Heerema, MSW, LNHA
Executive Director and Administrator
Nursing Home and Senior Administrator, Edison Christian Life Services

My name is Esther Heerema. I'm the Executive Director and Administrator of a nursing home and senior living organization. But more importantly, I'm a family member of a nursing home resident. I'm speaking today on behalf of the 101 nursing home residents I have the privilege to care for, as well as for the thousands I have cared for in the past 30 years, along with their families and the staff who provide that care. On behalf of these individuals, I bring a request to decrease the isolation requirement for nursing home residents who test positive for COVID from the current requirement of 10 days to 5 days. Why? First of all, nursing homes are their homes. They live here. This is not a hospital where they go for a couple of days. Second, this outdated requirement forces caregivers to choose between doing what is required by a CDC directive last updated almost 3 years ago when COVID was drastically different, and doing what is ethically and morally right for our residents. A nursing home room is required to be at least 8 by 10 feet, which is 80 square feet. How would we all feel about being involuntary secluded for 10 days in 80 square feet when we're not sick? Inappropriate isolation causes physical decline, including the loss of strength, functioning, and mobility. It causes cognitive decline when a resident is not allowed to enjoy their typical routine, interact with their friends, have a change in scenery, or participate in music or social programs. This reduces mental stimulation and places residents at risk for cognitive loss. It causes emotional and psychological distress and decline, including apathy, depression, anxiety, reduced connection with reality, discouragement, and residents who just want to give up. And these are not temporary declines, and this is not theoretical in nature. Recently, we have several residents who contracted COVID. When told they had to

remain in their room for 10 days, I heard statements such as “I'm not even sick. Why do I have to stay in my room? I'm going crazy. I need to get out. How is it possible that I have to be in here for 10 days now? Not again. This feels like I'm in jail.” One resident was so upset she hit the wall repeatedly with her hand and was inconsolable as she cried. Upon getting out of isolation, another came into my office saying “I'm free. I'm finally free.” As health care providers, we are required to do no harm, to weigh the risks versus benefits, and to provide holistic care in a home-like environment. No one else in the United States is required to isolate for a minimum of 10 days. I love and serve my residents and it's my honor to magnify their voices. It is past time to decrease the isolation requirements so we can provide ethical and medically appropriate care to the people who for so many years have served and cared for us. Thank you.

Brittany Davis, DDS
Georgia Dentist

Hi. I just wanted to thank everybody for letting me speak today. I'm a dentist in the State of Georgia and wanted to provide a little bit of perspective from the healthcare provider aspect of things. I finished my training as a Dentist at Columbia University College of Dental Medicine. I was a student between the years of 2019 and 2021 when the COVID-19 outbreak first became introduced to the US essentially. If we all remember New York being one of the first states that was hit incredibly hard by this pandemic and then also working in a dental clinic, we were determined to be one of the highest risk spaces in the hospital for several reasons. As dentists using drills and other tools, we are generating aerosols within a patient’s mouth. Of course, we are in very close proximity to our patients face-to-face within just a few feet and we are in close proximity for an extended period of time upwards of potentially 2 or 3 hours given a particularly long treatment plan. During this time, our school initiated mandatory N95 respirators, PPE, and routine COVID testing of both ourselves as student providers and of patients. It was a very rigorous sort of precaution protocol, and it was highly effective. During those years, we had no documented cases of any COVID spread from us as student providers to our patients or vice versa from patients to students. Having this mandatory N95 respirator mandate kept us as providers safe. It kept patients safe. You know, if a student were to be asymptomatic and have COVID, fortunately we are minimizing the risk of spreading it to upwards of hundreds of patients over an extended period of time. It's also keeping safe our clinic staff, our maintenance personnel, and all people who are essential to running a clinic effectively. Ultimately, I just want to say that I'm in favor for increasing universal precautions, including N95 respirator wear in healthcare establishments just for all of our safety essentially. Thank you.

Lisa Foreman, NP
Nurse Practitioner

Thank you. My name is Lisa Forman. I'm a Nurse Practitioner with over 20 years of clinical experience and no conflicts of interest. I want to address the need for continuous universal respirator use in healthcare. We know that COVID-19 and many other pathogens are primarily airborne, and that breathing is an aerosol generating procedure. Five years into this pandemic, the risk is no longer limited to the acute phase. COVID affects every organ and system of the body. It is not primarily a respiratory infection, but an airborne vasculitis. Therefore, it shouldn't be categorized with most other common respiratory pathogens. With repeated infections, an increasing percent of the population will develop long-COVID. Early on, we heard the claim that COVID would be a mass disabling event. Unfortunately, the data shows that this is precisely what is happening. Currently, we're facing the very real prospect of an additional pandemic with avian influenza and likely others within our lifetimes. Minimum standard PPE and healthcare should be the N95. We don't need RCT's to evaluate their efficacy because respirators rely on

principles of engineering and physics. Surgical masks work for splashes, but they otherwise offer very little protection to the patient or the worker. I have directly measured this in my own home with a PortaCount fit testing machine, and my results were typical. The air inside a surgical mask contains about half the number of particles as the air outside the mask. Compare this to a well-fitted N95 with at least 100 times fewer particles inside. Even a non-fit-tested respirator provides overall better protection due to the quality of the filter. There is simply no comparison. We know that over half of COVID infections are asymptomatic and that many healthcare workers go to work while actively infected. COVID infections are not seasonal, so respirators and healthcare shouldn't be either. Limiting respirator use to voluntary policies and local transmission metrics has mainly 1 outcome—it avoids overloading hospitals. But the world's reality now is that surgical masks and bare faces indoors with others are not safe, especially in healthcare facilities. Many people have put off all non-emergency healthcare for years because they can't safely access it and there is an imbalance of power that makes self-advocacy difficult. Often when patients ask their healthcare workers to mask, they are told, “CDC says we don't have to.” ADA accommodations are often ineffective. Patients depend on us to protect them, and we are morally obligated to do that. We should not be giving them one disease while treating them for another. It is wrong to ask patients to assume a 10% mortality risk from a hospital-acquired COVID infection. We can't ignore what they need because it's uncomfortable or expensive. We know what should be done and it's doable. My spouse and I are healthcare providers, and we do it every day. Please give our patients the safer healthcare they need. Thank you.

Barry Hunt, President
Canadian Association of PPE Manufacturers

Thank you. I have no conflicts. This is a turning point in the history of disease transmission and infection control. We already face an unprecedented challenge of pathogens that transmit through the air, with even more serious highly pathogenic threats on the horizon. The need for engineered infection prevention and universal air precautions is becoming more imperative by the day. Today, there's a teenager in critical condition in the ICU—Canada's first known case of the highly pathogenic strain of H5N1. It won’t be the last. Here's what's happening in Canadian standards. Because respirators are too hard to breathe through, Canada created the world's first new easy-breathing category, less than 100 Pascals, significantly easier breathing than the NISOH standard of 245 pascals. National standards now in development include universal respirator use in healthcare, PAPRs for RG4 pathogens; bioaerosol respirators with breathing resistance as low as 25 Pascals, and engineered infection prevention technologies like AutoUV, FarUV, and Upper AirUV. My recommendations to this committee:

1. Specify easy-breathing N95s less than 100 Pascals.
2. Encourage NIOSH to create a bioaerosol respirator standard with breathing resistance as low as 25 Pascals.
3. Specify and encourage engineered infection prevention including engineered airborne protection rooms a minimum of 6 air changes per hour from ventilation the equivalent of 30 additional air changes per hour from Upper AirUV, FarUV, air purifiers or displacement ventilation.
4. Specify new precautions categories: Universal Air Precautions—Respirators; Engineered Air Precautions—Respirators + Engineering Controls for RG3 Pathogens; Isolation Air Precautions—PAPRs + Engineering Controls + AIIR for RG4 Pathogens.

Over the past 10 years, it's quite possible that engineered infection prevention plus universal air precautions together could have prevented some 10 to 20 million hospital-acquired infections; up to 1 million deaths; and saved a trillion or so dollars. Disease transmission in hospitals continues to get worse, not better. It used to be that 5% of infections were acquired in hospitals. Now it could be 10% to 20% for some diseases. It used to be HIV mortality was 5%. Now it can be 10% or even higher for some diseases. The one-time capital cost to deploy engineered infection prevention across 1 million beds in the US and Canada together would be about $50 billion. The net return now could be $50 billion per year, every year—a smart investment that could pay dividends for years to come. Every journey begins with the first step. Let's take that first step now by recommending engineered infection prevention and universal air precautions. Thanks.

Closing Remarks

Michael Lin, MD, MPH
HICPAC Co-Chair

Dr. Lin expressed gratitude to everyone who contributed to the public comment session and summarized the meeting for the day. HICPAC welcomed 1 new member (Ms. Luper) and 3 *Ex Officio* members (CPT Scott Cooper, Dr. White, and Dr. Dillon). They heard updates from Dr. Bell on DHQP's activities related to broadening the scope of DHQP to include rural health expertise, long-term care, pediatrics, maternal care, dialysis centers and home dialysis, and outpatient areas. HICPAC also heard about technologies such as cleaning and disinfection sterilization related to environmental cleaning and the need to communicate these types of new technologies to frontline personnel through better education. In addition, they heard a brief update about AI technology and its potential impact on infection prevention. Lastly, HICPAC heard about integrated healthcare system approaches for surveillance and data sharing and how to integrate these types of approaches into a functional whole that is both comprehensive and resilient.

The Isolation Precautions Guideline WG, chaired by Drs. Lin and Wright, presented 4 questions posed to HICPAC by CDC regarding proposed updates to the *Isolation Precautions Guideline*. The 4 questions touched on topics related to control of pathogens that transmit by air, including the role of masks for infection prevention, clarification of approaches to application of transmission-based precautions, voluntary use of respirators, and the use of mask source control in healthcare facilities. This discussion was planned to continue during the second day of the HICPAC meeting, with a vote anticipated to provide responses from HICPAC back to CDC. Dr. Lin emphasized that the vote would regard the HICPAC response to the 4 CDC questions to provide direction for the draft guideline development, and would not be on any specific language contained in the draft guideline itself or any of its recommendations.

HICPAC also engaged in a discussion with the Healthcare Personnel Guideline WG, chaired by Ms. Steed and with input from DFO Dr. Kuhar, regarding recommendations for the *Healthcare Personnel Guideline*. HICPAC heard a presentation regarding the rationale, considerations, evidence, and proposed draft recommendations pertaining to work restrictions for HCP in 2 scenarios: 1) asymptomatic HCP who have an exposure to influenza or SARS-CoV-2 infection; and 2) HCP who are not moderately to severely immunocompromised with mild to moderate suspected or confirmed influenza or SARS-CoV-2 infection. The discussion and feedback heard during this session were anticipated to inform a vote on the second day of the meeting on these HCP work restriction recommendations.

A public comment session was held during the day for oral comments, and written comments also were submitted to HICPAC. Dr. Lin sincerely thanked HICPAC members, *Ex Officios*, liaison representatives, CDC staff, and the general public for their attendance throughout the day.

Adjourn

Alexander J. Kallen, MD, MPH
HICPAC Designated Federal Officer

With no additional business or discussion posed, Dr. Kallen officially adjourned the first day of the November 2024 HICPAC meeting at 5:49 PM ET. HICPAC stood in recess until 8:00 AM ET on November 15, 2024.

Friday, November 15, 2024

Call to Order / Roll Call / Welcome & Announcements

Sydnee Byrd, MPA, Program Analyst
Division of Healthcare Quality Promotion
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

Alexander J. Kallen, MD, MPH
HICPAC Designated Federal Officer

Michael Lin, MD, MPH
HICPAC Co-Chair

Ms. Byrd officially called to order the second day of the November 14-15, 2024 HICPAC meeting at 8:00 AM Eastern Time (ET), welcomed everyone, and called the roll. Meeting and voting quorum were established. HICPAC members disclosed the following COIs:

- Dr. Colleen Kraft serves on Scientific Advisory Boards for Adventa Bioscience and Seres Therapeutics, and is a consultant for Rebiotix, Inc.
- Ms. Connie Steed is a consultant and educator for Global Life Technologies.
- Dr. Michael Lin receives research support in the form of contributed products from OpGen, LLC and Sage Products, which is now a part of Stryker Corporation. He previously received an investigator-initiated grant from CareFusion Foundation, which is now part of BD.
- Dr. David Weber is a consultant on vaccines for Merck, GSK, and Pfizer

Ms. Byrd announced that for those who were selected in the lottery, oral public comment was scheduled following the presentations. She explained public comments would be limited to 3 minutes each, and that commenters should state their names and organization for the record before speaking. She reminded everyone that the public comment period would not be a question and answer (Q&A) session.

Dr. Kallen recognized and thanked several members who were rotating off of HICPAC, including Michael Lin, Sharon Wright, Colleen Kraft, and Jennie Kwon. He noted that Dr. Lin has been an exceptional resource to CDC and to HICPAC since 2019. He has served as Chair of HICPAC,

Chair of the Long-Term Care Post-Acute WG that helped write the *Enhanced Barrier Precautions White Paper*, and Co-Chair of the Isolation Precautions Guideline WG. Dr. Wright has been with HICPAC since 2021 and has done an outstanding job managing the Isolation Precautions Guideline WG as Co-Chair with Dr. Lin. Dr. Kraft has been with HICPAC since 2021 and has done an incredible job and very expertly has led the HCP WG. Dr. Kwon has been with HICPAC since 2023 and has been an unbelievable partner on controversial topics. He asked everyone to join him in appreciating the service of and bidding farewell to these HICPAC members.

Dr. Lin expressed appreciation to the CDC staff for having made all of their work as members of HICPAC possible. He welcomed everyone to the second day of the November 2024 HICPAC meeting. He reminded everyone that there would be 2 sessions to continue the discussion from the previous day, the first from the Isolation Precautions Guideline WG and the second from the Healthcare Guideline Personnel WG. The public comment session would be followed by votes on the proposed language from the Isolation Precautions Guideline WG and the Healthcare Personnel Guideline WG.

Isolation Precautions Guideline Workgroup Discussion Continued

Michael Lin, MD, MPH and Sharon Wright, MD, MPH
Co-Chairs, Isolation Precautions Guideline WG

Overview

Dr. Wright noted that the findings and conclusions being shared during this session were draft, had not been formally disseminated by the CDC, and should not be construed to represent any agency determination or policy. None of the WG members reported financial or intellectual interests related to the topics in this guideline update except for the following:

- ❑ Consultant to companies that produce respirators
- ❑ Research support received in the form of contributed products from OpGen and Sage Products (now part of Stryker Corporation)
- ❑ Infection Prevention consultant and lecturer
- ❑ Liaisons to the HICPAC committee for:
  - SHEA, but on this WG serves as a subject matter expert (SME) and does not represent the views of SHEA
  - ACOEM, but on this WG, serves as a SME and does not represent the views of ACOEM

She reminded everyone that the previous day, they discussed the 4 questions posed by the CDC to HICPAC regarding the draft *Isolation Precautions Guideline*. When she and Dr. Lin were reviewing their notes from the previous day, they thought Question 3 regarding voluntary use and Question 2 regarding clarification of “morbidity and mortality” versus inclusion of “adverse events” required further discussion before voting.

Question 3: Voluntary Use

Beginning with Question 3, Dr. Wright reminded everyone that the concept of voluntary use refers to the use of NIOSH-approved® respirators when one is not otherwise required. In the 2023 draft, voluntary use is largely related to the Routine Air Precautions category in the Transmission By Air section. After the previous day’s discussion, HICPAC members were asked

how they felt about the concept of voluntary use. The previous day, Question 3 was framed as one question related to a recommendation versus being in the narrative. However, Dr. Wright and Dr. Lin wanted to go back to splitting it up into the pieces that were posed by the CDC to find out how members feel about voluntary use, because they think that there may be areas where members agree in principle that may help further the discussion.

Discussion Points: Question 3 (Voluntary Use)

- A HICPAC member felt that "voluntary use" belonged where it originated with the OSHA standard that covers voluntary use. As it relates to isolation and infection control, if there are instances outside of what HICPAC has discussed with regard to when N95s or other respirators are necessary, that would be evaluated through occupational health or environmental health to assess whether there are circumstances that mean that the employee should be using an N95. That part allows for an actual risk assessment, and there are instances in which that could be necessary. It also would ensure that there is a process in place for fit testing and other aspects that are important. If voluntary use is mixed with use for Transmission-Based Precautions, there could be instances in which an employee who is using an N95 under voluntary use is perhaps not fit tested under the standard, enters a room where that is actually required under Transmission-Based Precautions, and is not protected as needed (e.g., TB, measles, et cetera).

- A HICPAC member observed that the problem with relying on the OSHA standard for voluntary use is that it leaves it up to the employer to decide whether to allow voluntary use. If a HCP decides to use a respirator voluntarily, it is because they do not feel that the employer's decision on whether a respirator is needed is adequately protective. Leaving it to the employer is saying to the HCP that their assessment of safety is irrelevant. Constant assessment is a huge part of a nurse's job, and they are well equipped to make these decisions, taking into account a variety of factors (e.g., community levels, situations within their hospital, physical environment, their own risk factors, family factors, et cetera). Depending on OSHA's wording would take away their right to make that assessment. There have been many situations in which HCP were denied the right to use a respirator when, after the fact, they learned that they were exposed. It is not possible to turn back time to fix that. Unfortunately, employers sometimes make decisions on PPE based on how it looks. They do not want to make people feel uncomfortable or scare people. That is not how decisions should be made on safety. Just like any other industry, HCP have the right to be safe at work. Sometimes, IP Officers do not intend for processes to be carried out the way they are by individual supervisors. They do not have control of every area, and this is the kind of situation where it cannot be fixed afterward. The worker cannot be made whole by paying them back pay if they were mis-paid, giving them extra vacation, or keeping them from taking illness home to family members. HCP must be given the right to assess their workplace and make decisions to protect themselves.

- Another HICPAC member agreed that voluntary use should reside within OSHA. There is a process for workers who do not feel safe. If a worker feels unsafe and there is a mask to be worn, they are going to wear it and are not going to risk their health without wearing a mask based on their employer, regardless of whether the employer wants to penalize them for failure to follow the employer's rules. The worker has the ability to file a complaint through OSHA and speak with an OSHA inspector.

- Dr. Lin suggested that since they were focused on more of the philosophical approach for this discussion, perhaps they could show the current narrative.

- Dr. Wright read the language in the 2023 draft Air Narrative as follows:

  Voluntary Use
  2023 Draft, Air Narrative

  Additional Considerations:
  - While not required for Routine Air Precautions, HCP may choose to voluntarily wear a NIOSH-approved N95® (or higher level) respirator. Federal regulations specify employers' responsibilities when voluntary use of respirators is allowed in workplaces.

- A HICPAC member thought the consideration was well-stated because it defers to the federal regulation that specifies how an employer might use it in the workplace. In terms of the point raised about a nurse or any other HCP who might assess a situation and decide to wear a respirator, that is covered in syndromic response to conditions as described in the draft. That is covered and makes sense. A personal risk assessment in a workplace of 80,000 people might be made multiple times a day and result in many different outcomes. What HICPAC is trying to show in the *Isolation Guideline* is in a given situation, this is what they must wear to be protected.

- A HICPAC member expressed agreement with the narrative as written, supported voluntary use specific to this narrative, and under the guidance of OSHA. If a HCP makes an assessment and sees that they need specific PPE, they rarely hesitate to get and use the PPE if they feel they need it for their own personal protection.

- A HICPAC member emphasized that not everyone in a state of transmissibility has symptoms. A significant amount of disease can be transmitted prior to symptoms or without them. An assessment based on syndromes and the ability to then put on a respirator is not necessarily going to be fully protective. HICPAC heard many public comments the previous day and in the past regarding patients at very high risk who asked HCP to put on a mask or respiratory who refused. Patients may be seeking care for reasons other than respiratory illness, such as being at very high risk because they have long COVID, but the HCP cannot wear a mask because their employer does not allow voluntary use. The OSHA standard leaves that decision to the employer. Some employers are fine with voluntary use, and some are not. Saying there are ways to fight being disciplined by calling OSHA, OSHA is going to say it is fine because it is up to the employer. People will be scared to use a respirator if they know they may be disciplined for it. The first sentence cannot be taken apart from the second sentence. HICPAC cannot say that people should be able to wear a respirator voluntarily and then say the federal regulation covers this and leaves it exclusively to the employer. The concern is that not all employers have the best interest of the workers in mind. Not every supervisor follows the standards. It is very helpful to have something in writing to use as justification with their supervisor because the CDC does allow this.

- Dr. Lin said that the use of a mask versus a respirator for source control seems to be defined in the guideline in that either device can be used for source control. The point is well-taken that there are situations in which an employer says that a worker absolutely cannot use a respirator for source control even if a patient asks for it. That is an important

question, but it seems to be a separate question from prevention of disease transmission from a patient to a concerned HCP. The example in his mind was a situation in which a patient is diagnosed with a pathogen for which a mask is recommended. For a patient with a sign on their door stating that a mask is required under current recommendations or precautions, the question would regard whether the HCP should be allowed to wear a respirator into that room. Pre-COVID or before respirators were at least temporarily in short supply, respirators were available in well-resourced facilities along with masks and in general, people were not restricting the use of respirators. It was not an occupational health-based decision. In some ways, this was an informal process. It has become an issue because of having gone through periods of time in which N95 or other respirators have been in short supply.

- Dr. Wright added that she did not think people thought about a respirator as much before the COVID pandemic, and every institution probably supplies them differently.

- A HICPAC member stated that his healthcare institution UNC uses a policy of "mirroring." This means that if they see a patient in the waiting room or exam room who is wearing a mask, HCP automatically don a mask as a courtesy to the patient. There are many reasons why a patient might wear a mask (e.g., COVID, cystic fibrosis, cancer). Most patients have said they greatly appreciate the HCP automatically putting on a mask if they have one and not making them explicitly request this. This includes environmental service workers, dieticians, and any other workers entering the room—not just clinical staff.

- A HICPAC member did not view this as source control but instead as a HCP choosing in a situation to notch up for their own comfort level, and they liked this phraseology because it would allow HCP to do that. Many involved in special pathogen preparedness believe in giving individuals an armamentarium in the hospital to be able to notch up to wear 2 pairs of gloves or wear a respirator. There should be voluntary use.

- A HICPAC member supported the phraseology and the concept of voluntary use, but was not clear whether this was just specific for Routine Air Precautions. It is in the phraseology, which suggested that perhaps there has been a syndromic or microbiology assessment of the patient, Routine Air Precautions are in place, and now they were saying that it would be okay for someone to wear a respirator. However, there also could be a HCP who has a low risk threshold because they have someone at home at risk or because of their own status and would be basing the decision on the community epidemiology rather than an individual risk assessment of a particular patient. It was not clear how broadly the language would apply and whether it is based on where it is placed in the document.

- Dr. Wright indicated that initially, this was placed in the Air Narrative. In the Transmission by Air section, there is description of syndromic and empiric use of PPE. The other categories put forward in the draft, Special Air and Extended Air, both include respirators already. In that section, the place it was applied to Routine Air was in a place that it was not already mentioned.

- Dr. Lin added that in terms of the scenario about wearing a respirator for community levels, he thought it harkened more to source control. Within source control, there is language about keeping secretions or pathogens to the person who may be asymptomatically infected. There also is language about how it also has a protective element, and that source

control works both ways. It is not specifying how for source control, it could be a mask or respirator, and within the source control language, a mask also could be worn because of community levels being high. That could work and would be addressed in the guideline somewhere other than Transmission-Based Precautions.

- In the context of the straw poll from the previous day, a HICPAC member asked how this narrative as written would translate into a HICPAC recommendation.

- Dr. Wright clarified that what they were trying to do and what the vote later would be on would be answers to the questions posed by CDC. They would not be picking language in the narrative or even making a recommendation should they choose that option. Instead, they would be voting on the answers to be included in the CDC letter to respond to their questions to HICPAC. In terms of the CDC question, "Is the current guideline language sufficient to allow for voluntary use of a NISOH-approved® N95 (or higher-level) respirator?" it sounded like a number of HICPAC members felt that the language was sufficient, and others did not.

- A HICPAC member said it seemed clear that most, but not necessarily all, HICPAC members participating in this meeting were very open to allowing voluntary use for a variety of reasons. The dilemma is that HICPAC is creating guidance for every healthcare facility. If there are employers in some facilities who do not want to allow voluntary use, the current language allows that. There are many employers who do not want to allow voluntary use. While HICPAC was not voting on specific language during this session, in the language presented to them, HICPAC would be stating that it is up to the employer to decide, with the knowledge that there will be many employers who will choose not to allow their HCP to voluntarily use respirators.

- A HICPAC member suggested that perhaps it might need to be addressed in the recommendations instead of the narrative that was just shared merely for the reason that some people who are trying to implement the new guideline may not spend time reading the narrative. They will go to the recommendations and see that it is not addressed. It is almost as if they would be repeating what the narrative says in the recommendation that still leads people back to OSHA.

- Dr. Wright reminded everyone that the language in the narrative would not stand up as a recommendation. This was just the example the WG provided of the kind of language that could be used in a recommendation. Based on the discussion, it sounded like the document should include a recommendation about healthcare organizations allowing voluntary use.

- Regarding Question 3a, a HICPAC member agreed that it is sufficient under certain circumstances in which the employer is okay with it. The fundamental question regarded whether the concept of voluntary use was at the discretion of the employer or employee. The current language did not seem sufficient to allow for voluntary use at the discretion of the employee as written in terms of deferring to the OSHA standard.

- A HICPAC member pointed out that the language as stated is directed toward HCP who "may choose" while OSHA states that the employer "may provide." It does not explicitly say that the employer "should" allow this. The existing language does not come down on the side of telling an employer they should allow voluntary use.

- Dr. Wright emphasized that this is not an easy conversation and HICPAC has been talking about it for a long time. She thought that the WG for the 2023 Draft kept it intentionally vague because there was a question about what should be stronger under OSHA and that perhaps this does not belong in an Isolation Precautions Guideline about preventing transmission. It was not that people did not support the concept of voluntary use. The clarifying 2-part question from CDC pertained to the 2023 Draft.

- A HICPAC member said that if the evidence supports that a mask is sufficient for Routine Air Precautions, it was not clear why HICPAC would place a requirement on an institution to not follow that guideline. This is somewhat circular in that it is specific to Routine Air Precautions where it was decided in 2023 that a mask is a form of isolation precautions.

- In terms of the well-being of the workforce, a HICPAC member noted that issues such as masking, public health precautions, and climate change have become very politicized. Many rural health facilities are publicly owned with elected officials serving as their governing board. In one instance, one hospital administrator is declining grant money to improve the climate resilience of the facility because his accepting money to respond to climate change would be so poorly received by the governing board that it would put his job at risk. It is realistic that there are facilities where the employer would decide not to allow a HCP to voluntarily step up their own level of respiratory protection. While it would be helpful for the OSHA standard to be changed, government does not move that fast. In the absence of OSHA responding to change the current wording about the employer deciding, to allow some of that language in the HICPAC guideline in order to get it in the federal universe and protect the worker. Perhaps there is a way to prioritize an employee's decision-making about what level of protection they want to use and not allow the employer to get in the way of that decision-making. This may not be the optimal place for it, but it is not clear where else it could be in the near-term.

- Dr. Lin said he struggled somewhat with the recommendation because in some ways, it does read like an employer mandate. While in general he would agree, the point about whether this is the right place to have an employer mandate is a good one. This guideline does not have the "teeth" that OSHA would have to be able to enforce a government mandate. While HICPAC may desire something like this, this may not be the right place to promote that.

- Dr. Wright added that they were getting into a technical-legal question, because many facilities will view it as an employer mandate.

- A HICPAC member said that while in agreement with this perspective, it felt like they were talking about a larger recommendation, and this does not seem like the place for it. This is very specific to Air Precautions, and it almost negates HICPAC's recommendation. It seems like voluntary use should be allowed regardless of whether there are Routine Air Precautions implemented for a specific patient. If the language remains as is, the letter back to CDC should state that HICPAC would like to see this addressed at a larger level.

- A HICPAC member noted that a majority of employees will wear nothing if they are permitted to choose PPE. Therefore, it is important to be careful with the "voluntary use" language. The reason there are guidelines and standards is to explain to employees exactly when it is recommended via the epidemiology and infectious disease transmission.

- A HICPAC member stressed that nothing HICPAC recommends is a mandate on this issue or anything else. HICPAC provides guidance, and how they word that guidance can be more or less effective and more or less useful. HICPAC cannot mandate voluntary use and instead are discussing whether they should create language stating that HICPAC supports voluntary use of respirators. HICPAC does set guidance for what PPE should be used in which circumstances.

- Reflecting on the idea of voluntary use, if HICPAC decides to include such language, thought would have to be given on the rationale as to why because voluntary use would be based on the employee's risk assessment for their personal health. However, it could be the converse that the employee decides that this is not necessary.

- Dr. Wright pointed out that the WG chairs drafted a potential response to Question 3 for what HICPAC would be voting on based on yesterday's discussion, but this was tricky because it was split almost evenly and was tipped by just one person in favor of keeping it in the narrative. She emphasized that these were individual opinions based on the conversation from the previous day about keeping the 2023 Draft language or revising, and that there was no commitment to how anyone would vote later in the day after public comment.

  Question 3
  Is the current guideline language sufficient to allow for voluntary use of a NIOSH approved® N95 (or higher-level) respirator? Should the document include a recommendation about healthcare organizations allowing voluntary use?

  Response:
  - The current guideline language is sufficient to allow for voluntary use of a NIOSH-approved® N95 (or higher-level) respirator.
  - The guideline should not include a recommendation about healthcare organizations allowing voluntary use.

- A HICPAC member felt that these responses did not capture the discussion HICPAC has been having, because if one believes there should be voluntary use but does not like the language as it stands because of an implication that an employer ultimately can decide due to referring to federal standards, that belief is not captured here. Language should be provided that supports a recommendation for allowing voluntary use, and potentially removing the second sentence with language referring to the federal standard. The current language is insufficient and should include a recommendation.

- A HICPAC member pointed out that if the second bullet is taken out in regard to removing the reference to the OSHA standard, then HICPAC has to define what constitutes voluntary use. If not referring to a standard, HICPAC in effect creating a voluntary use standard that now requires employers to allow voluntary use without referring to the OSHA standard.

- Dr. Wright clarified that the OSHA standard discusses what the employer would be required to assure for the safety of the employees if a facility has a voluntary use program. OSHA 1910.134 says that "An employer may provide respirators at the request of employees or permit employees to use their own respirators." That is the only language that comes close to a definition of "voluntary use" in the standard itself.

- Dr. Lin clarified that the goal at this point was to edit the language to reflect what HICPAC members had discussed for the last 45 minutes in order to draft the language to send back to CDC. There was concern about the current language in that even though HICPAC agrees with the spirit of voluntary use, there was concern about the OSHA standard not really allowing for that, with the employer having the discretion about whether to have a program.

- A HICPAC member stressed that the only federal group that could compel employers would be OSHA. CDC cannot compel, so it would be almost like saying that someone should do something (probably OSHA), but HICPAC in spirit supports the concept. Recalling that another HICPAC member wanted it taken out of the context of Routine Air because it is more general across the board, if that was the way HICPAC was feeling, that is very different from what is in the current draft guideline.

- Thinking about the WG discussions over the last year, Dr. Lin thought this would be a good place within the Transmission-Based Precautions section to include voluntary use because that is where a lot of concern is about the divide between masks and respirators for the categories. The other scenario about using it outside of Transmission-Based Precautions is covered in source control. He favored keeping it as is within the context of Routine Air, which makes it more specific.

- Dr. Wright added that in the reply to CDC, HICPAC could point out that this is permitted in the source control section. CDC's question is not entirely clear. It seems to fit where it is because the sense is that this is where a lot of the concern is.

- A HICPAC member suggested including language that simply states something to the effect of, "HICPAC supports the allowance for voluntary use of a respirator where a respirator is not required" since HICPAC language is just guidance.

- Dr. Wright pointed out that while it is just guidance, it will get picked up by facilities and TJC points to CDC guidance. While CDC does not mandate guidelines, other organizations most hospitals are required to follow do use HICPAC guidelines as a standard to be marked against.

- A HICPAC member emphasized that the statement in the narrative does say "While not required for Routine Air Precautions . . ."

- The TJC liaison observed that there is some ambiguity with the word "allows" because who allows it (OSHA, the employer, another regulatory body)? Organizations sometimes get hung up on this type of language, so perhaps clarifying this would be helpful.

- Dr. Lin made the following edits to the voting language for the response based on the discussion during this session:

  Question 3
  Is the current guideline language sufficient to allow for voluntary use of a NIOSH approved® N95 (or higher-level) respirator? Should the document include a recommendation about healthcare organizations allowing voluntary use?

  Response:

  - The current guideline language may not be sufficient to allow for voluntary use of a NIOSH-approved® N95 (or higher-level) respirator because current federal regulations make voluntary use at the discretion of the employer.
  - The guideline should not include a recommendation about healthcare organizations allowing voluntary use, because the current narrative language clearly supports the concept of voluntary use of N95 (or higher-level) respirators for HCP when not otherwise required for Routine Air Precautions.

- Dr. Wright reminded everyone that in general, the narrative edits wind up happening in the WG, and it is the recommendations that are approved by HICPAC with comments on the narrative by HICPAC committee members, so there would be additional opportunities for the WG to propose other language to HICPAC if the committee decides voluntary use would stay in the narrative.

- A HICPAC member pointed out that while it would be beneficial for OSHA's standard to be changed in this area, it is beyond unrealistic in this wording. It takes years to get changes made to the OSHA standards. The structure of OSHA makes this even harder because it requires votes in Congress, and it is not on their regulatory agenda. Items that have been on their regulatory agenda have been there for years and there has not been any movement. With the incoming administration, there will be no increase in requirements for employers.

- Another HICPAC member emphasized that just because it may take a long time, these *Isolation Guidelines* have not been updated since 2007, so many things take a long time. It belongs in OSHA, which governs employer regulations. HICPAC making a statement encouraging federal agencies to take on and address this topic is a way forward. HICPAC has clearly outlined in the existing language that it is supported by HICPAC.

- Dr. Kallen said that including such language ultimately would be up to HICPAC, but it could be valuable to express the general feeling of the group.

- Dr. Bell added that HICPAC is answering a very discrete question, which was the mission of this conversation. It was not about what the recommendation should be. As many HICPAC members have pointed out, this is not within their region of authority. Anything HICPAC ultimately states as a recommendation is not going to happen in a black box of just CDC. It will have to include discussions with other agencies that actually own the issue. The organization CDC is not going to go carte balance and step on toes any more than they would make disinfectant recommendations without the Environmental Protection Agency (EPA) on board or payment recommendations without CMS on board. He thought HICPAC would be in a safe zone responding to the question by stating that HICPAC thinks this is important and could be included, but would require discussion with the appropriate counterparts.

- A HICPAC member said that while HICPAC certainly could make a recommendation that OSHA should explicitly change their masking guidance to allow HCP to wear whatever mask they think is appropriate, it is a double-edged sword because once a regulatory agency opens up a regulation for change, they could change it to what HICPAC suggests or could eliminate any requirement for masking.

- Dr. Lin made the following additional edits to the voting language for the response to CDC:

Question 3
Is the current guideline language sufficient to allow for voluntary use of a NIOSH approved® N95 (or higher-level) respirator? Should the document include a recommendation about healthcare organizations allowing voluntary use?

Response:

- The current guideline language may not be sufficient to allow for voluntary use of a NIOSH-approved® N95 (or higher-level) respirator, because current Federal Regulations make voluntary use at the discretion of the employer.
  - HICPAC supports changes at the Federal Regulations level to make voluntary use available to healthcare personnel, independent of employer choice.
- The guideline should not include a recommendation about healthcare organizations allowing voluntary use, because the current narrative language clearly supports the concept of voluntary use of N95 or higher-level respirators for HCP when not otherwise required for Routine Air Precautions.

- A HICPAC member emphasized the importance of capturing that "voluntary use" is said a lot, but members of this committee have identified that that is potentially problematic if interpreted in the other direction, such as voluntarily choosing not to wear anything.

- A HICPAC member did not think the sub-bullet under the first bullet should be included because it does not answer the question, it is a complex issue, and it is not going to happen. The two choices without that bullet to support Federal Regulations are fine.

- Dr. Lin indicated that the sub-bullet was editorial and was not critical to answer the CDC question. HICPAC members did not object to removing the sub-bullet.

- A HICPAC member stressed that when they say "voluntary use" and "voluntary discretion" they meant to dial it up not down.

- Recognizing that a tremendous amount of work goes into creating narratives, a HICPAC member noted that the vast majority of people do not read them.

- Other HICPAC members emphasized that a lot of institutions do use the narrative to advocate and reference the rationale when they are dissecting and using the guidelines to create facility policies.

- A HICPAC member suggested an amendment to include "when not otherwise required for Routine Air Precautions" in the first bullet to make it explicitly clear that they are not talking about stepping down.

Question 2: Transmission by Air Categories

Moving to Question 2c, "Can you also clarify what constitutes a severe illness?" Dr. Lin recapped the discussion from the previous day indicating that there was general agreement from HICPAC members to replace "severe illness" in the narrative Transmission-Based Precautions for Pathogens that Transmit by Air with a broader term. Both of the following options garnered support:

1. A) using the phrase “morbidity and mortality” alone
2. B) using the phrase “adverse outcomes” (defined as inclusive of morbidity and mortality and other adverse outcomes including lost workdays due to infection and onward transmission to other patients, workers, and others outside the health care facility).

HICPAC members were asked to consider whether they would support the wording of “morbidity and mortality and other adverse outcomes” as part of the HICPAC response to Question 2 Alternative Narrative A, which was the prevailing sentiment of the HICPAC membership in terms of just the narrative changes. The way this phrase would be used is shown below in the modified version of Alternative Narrative A below, with the proposed modifications highlighted in yellow:

Alternative Narrative A (Modified)

- ❑ Pathogen-specific recommendations for categories of Transmission-Based Precautions to prevent transmission through the air are applied based on an assessment of risk of infection and associated adverse outcomes. Important considerations include:

  (1) **Transmissibility** (i.e., ease of spread as determined by factors related to pathogen, contact patterns, and environmental conditions).

  (2) **Burden of morbidity and mortality and other adverse outcomes associated with infection among patients, healthcare personnel, visitors, and others.** Morbidity and mortality are affected by factors such as level of protective immunity in the population from vaccination or previous infection, the availability of effective treatment, and prevalence of risk factors that increase the risk of infection.

  (3) **Whether a pathogen transmitted via air is observed to spread efficiently over long distances**, such as through ventilation systems.

- ❑ **Routine Air Precautions** are focused on reducing transmission of common, often endemic, respiratory pathogens for which individuals and their communities are likely to have some degree of immunity, and for which masks have been observed to be effective at reducing risk of transmission of infection.

- ❑ **Special Air Precautions** are focused on reducing transmission of respiratory pathogens for which infection confers substantial risk for severe morbidity or mortality and other serious adverse outcomes in the general population, and where effective immunity (via prior infection or vaccine) or effective treatment are not available. Pathogens to which Special Air Precautions may be applied are typically, though not exclusively, new and emerging.

- ❑ Extended Air Precautions are focused on reducing transmission of respiratory pathogens that are observed to spread efficiently across long distances and over extended times, such that additional engineering controls are needed (e.g., special air handling and ventilation).

The voting language for the response to CDC would be as follows:

Question 2c
Can you also clarify what constitutes a severe illness?

Response:

- **The narrative of the draft guidance will be updated to include key concepts including:**
  1. “Severe Illness” will be clarified as “morbidity and mortality and other serious adverse outcomes” to more clearly encompass a variety of pathogen-related adverse outcomes that are not limited to hospitalization or death.

Discussion Points: Question 2a (Transmission by Air Categories)

- HICPAC members supported the change to Alternative Narrative A in response to Question 2c.

Votes

The votes were taken following the Public Comment session but have been included with their respective session for ease of reading. As a reminder, the votes taking during this meeting regarding the draft *Isolation Precautions Guideline* focused on the HICPAC response to the 4 CDC questions. No specific recommendations within the draft *Isolation Precautions Guideline* were voted on.

Vote #1: 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?

Response:
- Among multiple approaches, there should be a category of Transmission-Based Precautions that includes masks for pathogens that spread by air.
- N95 respirators should not be recommended for all pathogens that spread by air.

HICPAC voted to approve the language as proposed above for CDC Question 1.
Disposition of the vote was as follows:
- **10 Approved: Ellingson, Evans, Kraft, Kwon, Lin, Luper, Shenoy, Steed, Weber, Wright**
- **1 Opposed: Baum**
- **0 Abstained**

Vote #2: 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?

Response:
- The narrative of the draft guidance will be updated to include key concepts including:
  1. Listing of important pathogen considerations as (a) transmissibility, (b) burden of morbidity and mortality and other adverse outcomes, and (c) efficiency of spread over long distances, such as through ventilation systems;
  2. Routine Air Precaution recommendations for specific pathogens will be based on observed effectiveness of masks in reducing risk of transmission of infection;
  3. The category of Special Air Precautions might also include other pathogens that are more established; and

4. “Severe illness” will be clarified as “morbidity and mortality and other adverse outcomes” to more clearly encompass a variety of pathogen-related adverse outcomes that are not limited to hospitalization and death.

HICPAC voted to approve the language as proposed above for CDC Question 2.
Disposition of the vote was as follows:

- **10 Approved: Ellingson, Evans, Kraft, Kwon, Lin, Luper, Shenoy, Steed, Weber, Wright**
- **1 Opposed: Baum**
- **0 Abstained**

Vote #3: Question 3
Is the current guideline language sufficient to allow for voluntary use of a NIOSH-approved® N95 (or higher-level) respirator? Should the document include a recommendation about healthcare organizations allowing voluntary use?

Response:

- The current guideline language may not be sufficient to allow for voluntary use of a NIOSH-approved® N95 (or higher-level) respirator, because current Federal Regulations make voluntary use at the discretion of the Employer.
- The guideline should not include a recommendation about healthcare organizations allowing voluntary use, because the current narrative language clearly supports the concept of voluntary use of N95 (or higher level) respirators for healthcare personnel when not otherwise required for Routine Air Precautions.

HICPAC voted to approve the language as proposed above for CDC Question 3.
Disposition of the vote was as follows:

- **9 Approved: Evans, Kraft, Kwon, Lin, Luper, Shenoy, Steed, Weber, Wright**
- **2 Opposed: Baum, Ellingson**
- **0 Abstained**

Vote #4: Question 4
Should there be a recommendation for use of source control in healthcare settings that is broader than current draft recommendations? Should source control be recommended at all times in healthcare facilities?

Response:

- A recommendation for use of source control in healthcare settings that is broader than current draft recommendations is not indicated.
- HICPAC recommends that source control decisions be determined by local risk of pathogen transmission and epidemiology, rather than at all times.

HICPAC voted to approve the language as proposed above for CDC Question 4.
Disposition of the vote was as follows:

- **10 Approved: Ellingson, Evans, Kraft, Kwon, Lin, Luper, Shenoy, Steed, Weber, Wright**
- **1 Opposed: Baum**
- **0 Abstained**

Healthcare Personnel Guideline Workgroup Discussion Continued

Connie Steed, MSN, RN, CIC, FAPIC
Chair, HCP Workgroup

David Kuhar, MD
Division of Healthcare Quality Promotion
Centers for Disease Control and Prevention

Ms. Steed reminded everyone that the findings and conclusions being presented during this session were draft, had not been formally disseminated by CDC, and should not be construed to represent any agency determination or policy. She conveyed that none of the WG members reported financial or intellectual interests related to the topics in this guideline update except for the following:

- ❑ Speaker and consultant for Pfizer; speaker for Sanofi Pasteur; consultant for Medscape; speaker and workgroup member of the Gerontological Society iCAMP workshop committee; recipient of research award from Pfizer and research subaward from CDC (via Catholic Charities).
- ❑ Scientific advisor for Seres Therapeutics; consultant for Rebiotix, Inc.; and participant on a scientific advisory board for Vedanta Biosciences.
- ❑ Consultant for Global Life Technologies, which includes education.
- ❑ Spouse receives research support from Sanofi Pasteur, Medimmune, and Gilead and serves on advisory committee for Novartis.
- ❑ Consultant and speaker for Pfizer and Merck.
- ❑ Liaisons to the HICPAC committee for:
  - The SHEA, but on this WG, serves as an SME and does not represent the views of SHEA.
  - The ACOEM, but on this WG, serves as an SME and does not represent the views of ACOEM

Based on the discussion from the previous day, Ms. Steed indicated that she and Dr. Kuhar had made some revisions to the proposed draft and addressed some of the requests, including having a definition for “viral respiratory infections” and to consider addressing viral respiratory infections more generally.

Dr. Kuhar pointed out that the WG’s understanding is that there is a sense of urgency to update recommendations for viral respiratory infections, and to do everything the WG can do to have that section proceed after this meeting. In terms of immunocompromised HCP, the Narrative Section would include a reference to the Immunocompromised HCP section that is already posted and published in the guideline that provides a lot of details on degree of immunocompromise, how some of those can actually affect the accuracy of testing among other things, and that Occupational Health Services sometimes has to adjust durations of work restrictions as people may be infectious for longer with some types of immunocompromise and perhaps not for others. There also was a proposal to indicate strategies in the narrative to address the duration of work restrictions as they might need to be adjusted. Considerations could include consultation with an expert in pathogen transmission and immunosuppression and use of patient testing to assist with return-to-work decisions. For severe to critical illness in HCP with viral respiratory infection, the proposal was for the Narrative Section to address that HCP with severe to critical illness may be infectious for longer and to include potential strategies to

address that. The Narrative Section also could address masking for source control and implementation, such as breakroom behavior and not eating or drinking around others. In addition, a proposal was made for the Narrative Section to include a definition of viral respiratory infection, including symptoms, to help the Occupational Service program better understand what to pay attention to or not.

Reviewing the most recent influenza and SARS-CoV-2 guidance, neither had clearly defined symptoms of viral respiratory infections. However, on the CDC website, there are some relevant definitions from which the WG can draw to put this together with discussion. The first is the surveillance definition for ILI. "ILI is a nonspecific syndrome defined as fever (temperature over 100^0 F or greater) and cough and/or sore throat." This definition is used worldwide for influenza; however, this definition does require fever. A minority of influenza cases actually have fever. This is somewhat less clear for SARS-CoV-2, which changes depending upon the severity of disease and the year, but fever seems to be present in a good portion. However, with fever included in the definition, many cases would be excluded. The ARI definition on the CDC website had some factors that might allow for more sensitive detection of viral illness. ARI is defined as the "presence of 2 or more signs or symptoms, such as fever, cough, runny nose or nasal congestion, or sore throat." The idea is fever plus another symptom, but fever does not have to be one of the symptoms to be included. This would allow for more sensitive detection. The CDC website also provides examples of respiratory virus symptoms, all of which can be worked into the narrative to help with precision.

Based on the input and these proposed changes, Dr. Kuhar presented the following updated proposed draft recommendations for discussion:

- ❑ For asymptomatic healthcare personnel who have a known or suspected exposure to a respiratory virus not addressed elsewhere in this guideline:
  - ─ Work restrictions are not necessary
  - ─ Wear source control from the day of first exposure through the 5th day after last exposure
  - ─ Monitor for development of signs or symptoms of a viral respiratory infection for 5 days after their last exposure

- ❑ For healthcare personnel with a suspected or confirmed viral respiratory infection not addressed elsewhere in this guideline:
  - ─ Restrict from work until
    - ▪ At least 3 days have passed from symptom onset* (or from their first positive respiratory virus test if asymptomatic throughout their infection) AND
    - ▪ They are fever free for at least 24 hours without the use of antipyretics, AND
    - ▪ Symptoms are improving, AND
    - ▪ They feel well enough to return to work
  - ─ Wear source control upon return to work until the end of day 7, where the first day of symptoms (or first positive test if asymptomatic throughout their infection) is day 0

*Where the last day of exposure is day 0, making the first possible day of working while unmasked day 6.

Discussion Points

- In general, HICPAC members appreciated the changes and found these proposed draft recommendations to be much clearer than the previous day.

- Under the first sub-bullet under “restrict from work,” a HICPAC member asked whether there would be utility in including “other positive test results,” recognizing that SARS-CoV-2 testing is the most common and over-the-counter testing, but people may have positive testing for other respiratory virus infections. Perhaps it could state, “First viral test for a viral respiratory pathogen.” On the second bullet point, the narrative section would follow this with the guidance about source control etiquette at work (break room, masking, et cetera).

- Ms. Steed confirmed that the narrative would follow with all of the details. Specific to being more general in the testing wording, there is a concern about not mentioning SARS-CoV-2 in some way.

- Dr. Kuhar added that the WG discussed viral testing and other respiratory viruses. The feeling was that for SARS-CoV-2, asymptomatic disease and risk for transmission are reported. The WG was not aware of that being done for other viral respiratory disease, and that this may be venturing into an uncertain area.

- A HICPAC member reported that UNC uses a 4-plex test. All HCP who come in with viral respiratory symptoms are tested for COVID, influenza A and B, and RSV. They often pick up influenza or RSV. One reason for doing the 4-plex test is because the guidelines for COVID and influenza are different, but if they are harmonized, except if there is an indication for treatment of either influenza or COVID, they probably will drop the testing.

- A HICPAC member suggested using “SARS-CoV-2 test or other viral respiratory test” but is glad to be getting away from testing as a parameter.

- A HICPAC member expressed appreciation for how responsive the WG was to everything that was discussed the previous day, and would favor removing SARS-CoV-2 and saying, “first positive viral respiratory test.” That covers everything and there are now home influenza tests and there could be other tests. If someone develops symptoms but tests 2 days later, it is not clear which would be Day 0. That needs to be specified because the math will be different. If there is a test and symptom discrepancy, people will need to know what their Day 0 is in that case. “Well enough to work” is a general principle across the board. If it is called out here but is not in any of the other HCP return to work specific guidance that already has been done, it is not clear whether it makes sense to call it out here. For asymptomatic HCP, there is mention of “exposure” in the first language, but it is not defined.

- Dr. Kuhar indicated that every section of the guideline has an occupational exposure section where information is provided that the WG feels is appropriate, which often depends upon the literature. Sometimes there is very little evidence available, and that section might be vague. The data for Day 0 was based upon symptom onset. If someone has a positive test and then begins to have symptoms, they were caught by testing when they were pre-symptomatic.

- A HICPAC member noted that it was not clear that this was concordant with other guidance that uses symptom onset or test, whichever is earlier.

- Dr. Kuhar indicated that the WG showed all of the CDC guidance they are aware of related to this.

- A HICPAC member emphasized the importance of being crystal clear about where the counting starts. If HICPAC is confused, this will be very confusing for others. The 3-day return to work and 5-day masking are not adequate and should be extended. There are RSV shedding data that show 11 to 14 days. While there are pros to including a range of respiratory illnesses in one category, there are also problems in that this may fit for some and not others.

- If asymptomatic HCP are monitoring for development of signs or symptoms of any viral respiratory infection for 5 days, it might be helpful to state what would happen if they become symptomatic. It would be good to keep the return to work here and then edit the main HCP guideline, because this probably will be the most often used and will provide some extra protection. In addition, the narrative statements say “patient testing”, but this is about HCP.

- Dr. Kuhar indicated that everything would be adapted to apply to HCP. Perhaps a footnote could be added that if someone with a positive respiratory virus test subsequently develops symptoms, work restrictions should default to symptom onset as the determiner of the duration of work restrictions rather than a positive test in that case.

- Ms. Steed recapped that the suggested revisions to this iteration of the proposed guidance would be to replace “SARS-CoV-2” with “respiratory virus.”

- A HICPAC member noted that some of the older CDC guidance states “patients who are asymptomatic throughout their infection.” That should cover it.

- A HICPAC member suggested including a footnote on the respiratory virus math. There also is the concept of rebound for which someone whose symptoms return would need to flip back and start counting again or treat it like a new respiratory virus and reset the clock, regardless of testing. This could be covered in the narrative.

- The AEH liaison requested clarification for where the definition of “exposure” is located and what it would be. Influenza season has already begun in some places, so HCP will be exposed in EDs, urgent care clinics, and primary care offices. The way this reads it is that HCP might as well put a mask on now and keep it on for 6 months out of the year.

- Dr. Kuhar indicated that the definition of "exposure" would be in the narrative and the WG would have to define it. The intent of the WG is not to use this recommendation for universal masking. There would be a different recommendation for universal masking.

- A HICPAC member observed that if this is created and approved, it would be helpful to have a calculator or graphic online like the one for the community setting. Since everybody is going to be doing this math on their own, why not help them out?

- In terms of “exposure” which seems squishy, a HICPAC member pointed out that there is CDC guidance about close contacts (e.g., 15 minutes within 6 feet) that might be helpful.

- Dr. Kuhar indicated that for the recommendations during this meeting, if voted on and approved, the section draft would be fully developed, go into public comment, the comments would be returned for adjudication in a session with HICPAC, and then there would be an opportunity to vote again on the recommendations. Following incorporation of the suggestions, Dr. Kuhar shared the revised recommendations to be put forward for a vote with the edits highlighted in yellow:

  - ❑ For asymptomatic healthcare personnel who have a known or suspected exposure to a respiratory virus not addressed elsewhere in this guideline:
    - — Work restrictions are not necessary
    - — Wear source control from the day of first exposure through the 5th day after last exposure*
    - — Monitor for development of signs or symptoms of a viral respiratory infection for 5 days after their last exposure
      - ▪ Any HCP who develops signs or symptoms of a viral respiratory infection should be restricted from work as described in recommendation XX

  *Where the last day of exposure is day 0, making the first possible day of working while unmasked day 6.

  - ❑ For healthcare personnel with a suspected or confirmed viral respiratory infection not addressed elsewhere in this guideline:
    - — Restrict from work until
      - ▪ At least 3 days have passed from symptom onset* (or from their first positive respiratory virus test if asymptomatic throughout their infection) AND
      - ▪ They are fever-free for at least 24 hours without the use of antipyretics, AND
      - ▪ Symptoms are improving, AND
      - ▪ They feel well enough to return to work
    - — Wear source control upon return to work until the end of day 7, where the first day of symptoms (or first positive test if asymptomatic throughout their infection) is day 0^

  *Where the first day of symptoms is day 0, making the first possible day of return to work on day 4
  ^Making the first possible day of working while unmasked day 8

- Dr. Kuhar acknowledged that further edits might be needed before the vote.

- Dr. Lin emphasized that the intent is to harmonize the language as much as possible.

Votes

All votes were taken following the Public Comment session but have been included with their respective session for ease of reading.

Vote #1: Viral Respiratory Infections *DRAFT* Recommendation Options

- ❑ For asymptomatic healthcare personnel who have a known or suspected exposure to a respiratory virus not addressed elsewhere in this guideline:
  - ─ Work restrictions are not necessary
  - ─ Wear source control from the day of first exposure through the 5th day after last exposure*
  - ─ Monitor for development of signs or symptoms of a viral respiratory infection for 5 days after their last exposure
    - Any HCP who develops signs or symptoms of a viral respiratory infection should be restricted from work as described in recommendation XX

*Where the last day of exposure is day 0, making the first possible day of working while unmasked day 6.

HICPAC voted to approve the Vote #1 language as proposed above. Disposition of the vote was as follows:

- **10 Approved: Ellington, Evans, Kraft, Kwon, Lin, Luper, Shenoy, Steed, Weber, Wright**
- **1 Opposed: Baum**
- **0 Abstained**

Vote #2: Viral Respiratory Infections *DRAFT* Recommendation Options

- ❑ For healthcare personnel with a suspected or confirmed viral respiratory infection not addressed elsewhere in this guideline:
  - ─ Restrict from work until
    - At least 3 days have passed from symptom onset* (or from their first positive respiratory virus test if asymptomatic throughout their infection) AND
    - They are fever-free for at least 24 hours without the use of antipyretics, AND
    - Symptoms are improving, AND
    - They feel well enough to return to work
  - ─ Wear source control upon return to work until the end of day 7, where the first day of symptoms (or first positive test if asymptomatic throughout their infection) is day 0^

*Where the first day of symptoms is day 0, making the first possible day of return to work on day 4
^Making the first possible day of working while unmasked day 8

HICPAC voted to approve the Vote #2 language as proposed above. Disposition of the vote was as follows:

- **10 Approved: Ellington, Evans, Kraft, Kwon, Lin, Luper, Shenoy, Steed, Weber, Wright**
- **1 Opposed: Baum**
- **0 Abstained**

Public Comment

Overview

Angela Driver, MA
Zoom Coordinator
Centers for Disease Control and Prevention

Ms. Driver explained that when a speaker's name was called, their microphone would be unmuted. She requested that speakers clearly state their full name and organization for the record before providing comment, and indicated that a countdown timer would be displayed to specify how much time remained. As a reminder, this was not a Q&A session.

Public Comment

Yaneer Bar-Yam
President, New England Complex Systems Institute
Co-Founder, World Health Network

Hi. My name is Yaneer Bar-Yam. I am President of the New England Complex Systems Institute and a Co-Founder of the World Health Network. I'm here not to address HICPAC directly, but to speak to those listening healthcare professionals, patients, and advocates who are committed to public health and safety. Let me highlight several critical concerns. Members of HICPAC and the organizations they represent have significant financial conflicts of interest. This issue, documented in a complaint submitted to the HHS Office of the Inspector General, raises serious questions about the integrity of their guidance. Additionally, HICPAC has operated in secrecy with work group meetings closed to public scrutiny. This violates the Federal Advisory Committee Act, which mandates transparency. Such closed-door decisions erode trust and undermine accountability. HICPAC also lacks the legally required number of voting members, further undermining the legitimacy of its recommendations and decision-making process. Most importantly, the science of airborne transmission, essential for understanding diseases like COVID-19 and tuberculosis, is glaringly absent from HICPAC's guidance. Ignoring this science compromises the safety of both patients and healthcare workers. Compounding this issue, the voting members of HICPAC lack the necessary expertise in airborne transmission. While they may consider themselves infection control experts, their opinions on this critical topic cannot be treated as expert input. Science must drive policy. It provides the essential necessary evidence for informed decisions about safety and prevention. When science is sidelined, lives are put at risk. One actionable step is for CMS to add COVID-19 and other airborne infections to the list of healthcare-acquired infections for which treatment is not reimbursed. This would align with existing policies and create a powerful incentive for hospitals to implement necessary precautions. Far too many who have suffered illness acquired in healthcare become disabled with long-COVID or died from preventable infections. Far too many have avoided necessary care due to these risks. Every preventable case is a tragedy and a failure of the system. Please

call the HHS Office of the Inspector General and ask them to investigate our complaint against the HHS Secretary, CDC Director, and HICPAC Designated Federal Officer for gross misconduct regarding HICPAC's violation of the law. The Inspector General's Office is very interceptive. The direct phone number is 202-619-3148. 202-619-3148. The HHS Inspector General, Christi Grimm, operates independently of political administrations. Her office will continue to oversee investigations regardless of the change in leadership. It's time to restore "first, do no harm." Every provider, institution, and policymaker must prioritize safety based on the best available science. Anything less is a disservice to those who trust the healthcare system with their lives.

Michelle Gutierrez Vo, RN, President
California Nurses Association / National Nurses Organizing Committee

Good morning. My name is Michelle Vo. I am a Registered Nurse and President for the California Nurses Association/National Nurses Organizing Committee, a state affiliate of National Nurses United. NNU is the largest labor union and professional association for Registered Nurses in the US. NNU commends the CDC for responding to our concerns about HICPAC's process to update the *2007 Isolation Precautions Guidance*, including by ensuring HICPAC hears from the public prior to voting, posting meeting recordings, adding additional experts to HICPAC and its Isolation Precautions Guideline Workgroup, and most recently, ensuring that both oral and written public comments are solicited for each meeting as required by law. We commend the CDC for sending back HICPAC's November 2023 draft updates for further work in response to some of our 4 concerns. I strongly encourage you to ensure that HICPAC's response recognizes the following: As the World Health Organization acknowledged earlier this year, the droplet airborne paradigm has been disproven. Extensive research indicates that aerosol or inhalation transmission can occur at both short and long distances. CDC guidance must recognize this science, including recommending that multiple layers of protections are necessary to prevent transmission in healthcare settings, including ventilation, screening, isolation, PPE, contact tracing, masks for source control, and more. Respirators are essential, yet preliminary results from NNU's *Infectious Disease Survey* found that less than two-thirds of RNs have access to a sufficient supply of N95s or other kinds of respirators on their units. Nurses and other healthcare workers must be able to utilize N95s or more protective respirators when and where we need them because we assess that we need a higher level of protection than is recommended or because we or someone we live with or care for is at higher risk of severe outcomes if infected. It would be deadly and irresponsible for healthcare employers and the CDC to deny us access to the PPE we need to care for our patients safely. Working as a nurse in a clinic setting for 26 years, I have witnessed so many infections, hospitalizations, and even deaths that could have been prevented if we had had access to the necessary precautions. Moving forward, it is essential that the CDC continues to expand the perspectives represented on HICPAC and its workgroups to ensure that a balance is created that includes direct care healthcare workers, unions, patients, and scientific experts in addition to infection prevention management. Thank you.

Vasser Bailey
Person with Long-COVID
Activist, Long-COVID Action Project

Hi, thank you. I'm Vasser Bailey. I'm a person with long-COVID and an activist with the Long COVID Action Project known as LCAP. LCAP is a non-partisan, diverse group of individuals taking action to end the long-COVID crisis. We demand urgent treatment and support for the long-COVID community through public awareness and government accountability. I've had

long-COVID since my first infection in 2022. I caught Omicron even though I was vaccinated and masking. I wore a surgical mask because I didn't know respirators offer stronger protection. I'm not unique. According to NIH data, approximately 10% of the population, that's 33 million Americans, are living with long-COVID. Currently, there are zero effective treatments for long-COVID. Since HICPAC is aware of the transmissibility of COVID even during asymptomatic and presymptomatic illness, why haven't you mandated respirators be worn in medical settings at all times? One-way protection is not enough. People caught COVID from medical appointments despite wearing N95s and eye protection. One friend has caught COVID 4 times for medical visits, despite wearing an N95. Her care providers either refused to mask or would only wear a surgical mask. Patients are frequently met with hostility by healthcare workers if we ask for respirator use during appointments. Problems like this start at the top. Everyone has seen photos of the CDC Director visiting various healthcare settings without any PPE. COVID transmission has occurred in rooms that have been unoccupied for 4 or more hours. Medical offices and hospitals are now one of the best places to catch an illness. NIOSH clearly states that respirators should be used, not flimsy surgical masks. We need N95s or better to be worn at all times by all who can in healthcare facilities. CDC's infection control guidance for SARS-CoV-2 does nothing but confuse. That's easily fixed simply by setting forth 2 rules: 1) everyone in healthcare settings must wear a respirator; and 2) facilities must clean the air. Numerous studies have demonstrated correlations between COVID and subsequent diseases, where the virus remains in the body for most people with long COVID, as proven in studies showing viral persistence alongside continuing health problems, the most alarming of which are immune changes. T cell dysfunction is occurring in more and more patients. This is now being referred to by the World Health Network as “COV-AIDS.” We're in the fifth year of the pandemic and protections have become more lax. Your mandate is to “first, do no harm.” LCAP is watching. Thank you.

Eric Stein
Concerned Individual

I'm Eric Stein. I have no conflicts of interest to declare. I've had less access to healthcare for the last 4 years, historically less, because CDC infection control standards are insufficient. The absence of unambiguously pro-respirator means patients like me get pressured to remove our masks inappropriately and ignorant questions from healthcare workers about why I wear a respirator. I have the privilege to have diagnoses and know I'm high-risk for COVID complications. Plenty of people lack a diagnosis but have an underlying high-risk condition. Should they be placed at high risk? There's constant pressure to senselessly unmask coming from healthcare workers who may have a COVID infection. The less privilege someone has, the more compliant they will feel they must be. Every infection with COVID comes with the risk of long-term complications, even for healthy people. These are the equity issues at hand. CDC's *Standard Precautions* already say to use PPE whenever there is an expectation of possible exposure to an infectious material. The significant possibility of aerosol transmission from patients or staff, even without symptoms, in the ongoing pandemic makes this true always. Now this committee is considering moving us further in the wrong direction. Many pathogens spread by aerosols, in particular SARS-CoV-2, measles, flu, and many others. There's a reason CDC is the parent org of NIOSH, which sets PPE standards. Surgical or procedure masks are not rated for airborne particulate contaminants. Everyone here knows this. So why discard respirator use—a common sense precaution to address this major transmission pathway of the most consequential pathogens we face every day? Doctor Fauci was right when he said, “Bottom line, there's much more aerosol than we thought.” People go to hospitals, pharmacies, and other facilities because they trust it will benefit their health, not harm it. The cited evidence in the draft Isolation Workgroup slides is a mixed bag. For instance, Radonovich et al. 2019 was

clearly a poor study design. It uses a 6-feet guideline, which is nonsense for an aerosol spreading pathogen like flu. Aerosolized virus doesn't die at a magical 6-foot distance. Respirators can provide a much higher level of production and source control than surgical or procedure masks when actually used appropriately. The evidence for that is clear if you set aside the many problematic comparison studies that undermine respirator performance by implying it's fine to remove respirators in many known risky spaces. To separate the same pathogen into pandemic phase for special precautions and seasonal is a false dichotomy. We don't stop wearing seat belts when car accidents go down. Just because *E. coli* has been here forever doesn't mean we take risks with it. We do food recalls if an average of 70 people fall ill. Far more people have fallen ill and have indeed died because of ongoing use of, in essence, crisis standards of infection control. Long-term practices should be safer, not even more unsafe. There is no shortage of respirators and there hasn't been in years. Only a grim calculus that subsumes health to short-term profits and the comfort of people who believe themselves to be low-risk can explain the impetus to accept high transmission risk. We need a full reckoning with the risks of the layered system of controls, including ventilation, respiratory PPE at all times, case tracking and tracing, etc. Patients like me need progress. We need you to make healthcare a safe, accessible fixture of our lives, not a grim risk calculus we must live with.

Ardis Smith
Immunocompromised Patient
Advocate, Pan End It!

Hello. My name is Ardis Smith. I advocate with the disability organization, Pan End It! Please employ guidelines that protect patients from infection in the work of both workgroups. I cannot emphasize enough the sheer difficulty it is as an immunocompromised patient to try to access healthcare, set up disability accommodations, including mask or N95 wearing by providers, and share common spaces with patients who are visibly sick and not masking. Source control should be recommended at all times in healthcare and N95s used. Please choose Narrative B for Questions 4,1, and 2. With the proposal to weaken healthcare worker isolation. HICPAC is making it much more difficult for patients to access care. Patients should not have to worry whether their provider is infectious. Many workers deny masking requests from patients, which emphasizes that a short isolation period and then source control will not be followed by many. It is important to make policy for the most at-risk patients in order to protect all patients. For example, imagine suggesting, which this change does, that it's okay for a still infectious provider in a surgical mask to meet with a cancer patient. From the slides presented yesterday, it was written that at least 80% of transmissions are estimated to have occurred by end of Day 5. But this means that HICPAC is saying it's acceptable for up to 20% of workers, or 1 in 5, to return infectious—a high rate of HAI exposure. This committee is meant to advise on best practices for infection control. It is outside of this mandate to advise based on staffing issues. These guidelines will increase staff absences and levels of long-COVID and decrease paid sick leave. Don't contribute to higher levels of HAIs, serious illness, and death for patients. Studies show that patients who get COVID-19 in healthcare die at a higher rate. A more precautionary period of isolation is needed because workers who may be infectious have a higher risk of injuring patients. The committee should instead adopt recommendations shown to reduce staffing HAIs. Studies show that universal staff use of N95s reduces sick days and saves hospitals money. It is also essential for language to explain that providers are responsible for accommodations like wearing N95s and explicitly recommend that hospitals make N95s plentifully available for workers to use. The healthcare personnel recommendations also do not describe source control type. N95s should be required through Day 10. It is clear that patients' needs and comments are not being represented in HICPAC. From a May workgroup meeting the meeting summary says, "A discussion ensued on whether all the key stakeholders are included. Members expressed

that as clinicians working in various healthcare settings, they do represent patient interests." This statement is concerning. Clinicians and healthcare systems do not adequately represent patients, as has been seen from the committee's recent discussions. HICPAC should add representation from a patient advocate and from a disability organization to ensure that infection control issues for patients, not just workers, are considered because patients have been asking HICPAC for better infection control approaches for a long time. Thank you.

McClain (Mickey) White
Long-COVID Patient
Founder, Community Group Taking COVID Precautions

Hi. My name is McLean White. Last year, I started a community group in my city for people who are still taking COVID precautions—mostly people who are immunocompromised or have a high-risk condition or have long-COVID like myself. I just want to share some of the risk calculations we make when considering whether or not to get healthcare. When people have to go in for procedures that require the patient to be unmasked, they're relying on their healthcare providers to mask to protect them. But they usually have to be asked to wear mask, and sometimes they refuse. So, we have to weigh whether that procedure is worth the risk of an infection. A lot of the time, people decide it is not. People who live with high-risk loved ones have to weigh whether getting their own healthcare is worth the risk of bringing COVID home to someone on chemo or on another immunosuppressive medication who would have to stop that treatment if they got an infection. This is not the way that it should be. Patients shouldn't have to make these risk calculations because public health has failed at infection control. Hospitals shouldn't be a main source of COVID infections for hospitalized people. Voting against recommending N95 respirators for all pathogens spread by air will be going backwards and will show that you have learned nothing from the COVID pandemic. It's shameful that there is apparently only one person on this committee who believes that people should be able to safely access healthcare.

Kate Nyhan, MLS
Caregiver
Public Health Librarian, Yale University
Board Member, Community Access to Ventilation Information

I'm Kate Nyhan. I'm a Public Health Librarian at Yale University, but I am not speaking on behalf of my employer. I'm also a Board Member of the non-profit Community Access to Ventilation Information, and likewise, not speaking on their behalf. I'm also a caregiver. I'd like to thank HICPAC members in advance for considering my public comment, which is relevant to both the Isolation Precautions Guideline Workgroup and the Healthcare Personnel Guideline Workgroup. First, as a medical librarian and evidence synthesist, I'd like to comment on the meta-analysis produced last fall on healthcare personnel use of N95 respirators. The conflation of continuous use respirator interventions and respirator interventions that involve donning the respirator after already having breathed shared air that may contain infectious respiratory aerosols exhaled by patients or indeed workers or families, is not justified. In the words of the *Cochrane Handbook*, "Differences in intervention characteristics across studies occur in all reviews . . . In general, differences that alter decisions about how an intervention is implemented or whether the intervention is used or not are likely to be important." The conflation of targeted and continuous use of respirators reflects a heavy reliance by HICPAC on the outdated model of transmission through either large ballistic droplets or small aerosols. More broadly, HICPAC's decision to engage with only probabilistic evidence from randomized controlled trials is not justified and doesn't comport with the EBM+ approach which tells us that, "Evidence of mechanisms should be integrated with evidence of correlation to better assess causal claims." To the extent that HICPAC is concerned about the acceptability of respirators and other interventions to reduce through the air transmission, you could and should commission realist reviews to learn what works, how, why, for whom, to what extent, and in what circumstances. Second, my real-world experience with transmission of disease through the air in a healthcare setting. I care for an elderly person who is vibrant and engaged in the community who also has comorbidities and disabilities. Where she got COVID is impossible to say for sure, but it was likely during an

outpatient visit to a physician at a health system whose infection prevention program is led by a HICPAC member whom I won't name. Nosocomial cases like hers exist. They are not detected by surveillance programs to the extent that surveillance still exist at all, but they have negative effects on patients' health and on patients' willingness to seek care for other conditions. The Isolation Precautions Guideline Workgroup's final list of shared interests says that the workgroup wants to "protect patients and healthcare personnel from infection that is transmitted via infectious particles in the air," but I fear that your responses to the CDC letter will not reflect that goal. Thank you.

Maeve Sherry
Long-COVID Patient
Representative, Pan End It!

Good morning. My name is Maeve Sherry, representing the organization Pan End It! and I'm a long-COVID patient from Albany, New York. I'm providing public comment today because it concerns me how many decisions around airborne disease precautions are constructed around staffing and employee comfort rather than protecting patients. I've had long-COVID since 2020. In 2023, the year that universal masking mandates were listed in healthcare, I acquired a reinfection at a primary care doctor appointment. I developed mast cell activation syndrome and have become allergic to all foods. I have needed emergency healthcare repeatedly for severe allergic reactions, dehydration, and malnutrition due to this condition and I've often gone without care because I couldn't justify the risk of another infection. Requiring that healthcare workers wear masks upon request only is not sufficient. I was masked, my primary care doctor was masked, but since COVID is airborne, the transmission was likely from a patient who was in the room earlier in the day. I was a 22-year-old kickboxing instructor when I became disabled from long-COVID. To all of you unmasked faces I saw on the other side of my screen earlier, I ask, if it could happen to me, why do you think it won't happen to you? Why do you think it won't happen and hasn't already happened to the healthcare workers who are exposed to COVID every single day without PPE? What would it take for you to link staffing concerns to the reality that healthcare workers are getting COVID multiple times a year and not always recovering? What would it take for you to reckon with the likelihood that someday you or someone you love will need emergency healthcare and a COVID HAI might be the reason you leave in a body bag? In 1850, a European doctor suggested that healthcare workers wash their hands in between patients because he suspected that physicians were transmitting diseases. He was ridiculed, ignored, and ultimately died in a mental institution. It was decades before mainstream medicine finally conceded that he was right and implemented hand washing mandates in healthcare. Now it would be unfathomable for a physician not to wash their hands. Someday, physicians not masking will be regarded in the same way. You have control of how many patients need to die before that becomes the standard. These a-scientific decisions around airborne disease precautions shape the future that will confront you and your family someday. You may be disinterested in preventing COVID, but COVID is not disinterested in you. When you say that masking is optional, you say that patients have the onus of preventing infection rather than the people whose job it is to ensure our safety. When you say that healthcare workers will only mask upon request, you open up patients to hostility and harassment. We have been working overtime to protect ourselves in healthcare. It's your turn.

Naomi Bar-Yam, PhD, MSW, ACSW
Representative, World Health Network
Founder & Executive Director, Mothers' Milk Bank Northeast

Thank you. My name is Naomi Bar-Yam. I'm with the World Health Network. I hold a PhD in Social Policy, and I've worked for many years in maternal and child health, focusing on improving outcomes for our most vulnerable, including pre-term babies. As the Founder and Executive Director, now Emeritus, of America of Mothers' Milk Bank Northeast, I have dedicated my career to ensuring the health and safety of newborns and their families. Over the past year, I have attended and followed HICPAC's proceedings on isolation precautions and I've been deeply disheartened by the lack of scientific rigor, transparency, and expertise in airborne transmission on this committee, which is charged with creating guidelines that healthcare settings across the country rely upon. At each meeting, however, I have been profoundly moved and buoyed by the community of commentators. They have eloquently shared their expertise, lived experience, wisdom, pain, and compassion. It has become clear that HICPAC has its own set of considerations and priorities. Unfortunately, protecting the public and healthcare workers is getting lost in other considerations and does not seem to be at the top of that list. I understand that healthcare is complex and expensive, with seemingly infinite competing priorities. But that is the challenge for the hospitals and healthcare institutions, including those where many of you work, to solve within the essential imperative of caring for patients' health and ensuring the safety of healthcare workers. Those institutions look to HICPAC to provide up-to-date, accurate, evidence-based, scientific guidelines. These guidelines should empower them to make sound decisions that protect their patients, healthcare providers, and staff. Each of you on this committee wears multiple professional hats. Some of you are administrators and leaders in some of the most esteemed healthcare institutions in the country. While your knowledge and institutional roles bring value to this committee, they also present a challenge. You must separate your institutional priorities from your role on HICPAC. Your task is to provide the best safety guidelines for healthcare institutions everywhere, so that those institutions, including yours in your other roles, can make decisions rooted in science. I urge you to do 2 things. First, step back and set aside your institutional roles. Focus instead on your HICPAC responsibility to healthcare facilities, patients, and providers across the country. Two, reflect on the gaps in this group's collective knowledge. Identify what expertise is missing, particularly in airborne transmission science, to ensure that HICPAC brings in the necessary voices to support the development of the most effective evidence-based recommendations possible. Thank you.

Scott Squires
Concerned Individual

Hello. I'm Scott Squires. I have no conflict of interest. COVID is a terrible disease that can lead to long-COVID and death. Fortunately, it can be prevented with respiratory masks. It's been clearly established that COVID is airborne and acts like invisible smoke that can hang in the air for hours. This is true for all airborne illnesses. Simply breathing produces over 1000 copies of the virus every minute. It is not spread as droplets. 60% of those with COVID don't know they have it and are spreading it. The notion of using fever or symptoms alone to determine if someone or yourself has COVID is of little value. N95 respirator masks are designed specifically to prevent tiny airborne particles, including viruses like COVID, from being breathed in or breathed out. It's proven science and numerous real studies confirm the effectiveness of the N95 masks to prevent COVID in real world examples, including hospitals. Even an unfitted N95 is at least 85% effective. Surgical masks are designed to prevent splatter. They are not designed to prevent airborne illnesses, and their effectiveness is much inferior to respiratory masks. Looseness of surgical masks not only allows the air to easily leak out the sides, but also

have the tendency to droop below the nose and encourage users to pull them down below their mouths, as is commonly seen by healthcare workers. That makes them worthless. What I'm puzzled about is what is the objective of this committee? Because based on the discussions and preliminary votes, it has nothing to do with preventing healthcare workers or patients and protecting them. Science and facts such as asymptomatic spread have been ignored. You voted "no" on the question "Should N95 respirators be recommended for all pathogens spread by air?" You ignore N95s at every opportunity where airborne is discussed. There's a saying, "Use the right tool for the right job," yet you are choosing to use the wrong tool—the inferior tool for protection. That's like not using an airbag and seatbelts in the car, which are proven to save lives and replace them with a foam pillow and a piece of rope in the hope it might provide some protection. The idea that healthcare workers can evaluate whether they need to mask and what type is silly. COVID is always here because it's not seasonal. As long as you have many untested people, there will be COVID. The vaccine alone does not prevent COVID or long-COVID. Those looking for care should not be subjected to a deadly virus in healthcare settings. We need universal masking in hospitals and medical facilities, and they should always be required. Right now, we have hospitals which are masking on and off willy nilly. We need the latest air standards to protect people. We need to stop sending infected healthcare workers back to spread COVID. Do your part to prevent the next pandemic.

Closing Remarks

Michael Lin, MD, MPH
HICPAC Co-Chair

Dr. Lin thanked everyone for their hard work and thoughtful discussions that brought the proposed language from the Isolation Precautions Guideline WG and the Healthcare Personnel Guideline WG to votes. During the second day of the meeting, HICPAC discussed aspects of the *Isolation Precautions Guideline* related to the 4 CDC questions. This was followed by a discussion related to the *Healthcare Personnel Guideline*. These discussion sessions were followed by a public comment period. HICPAC then voted on responses to the 4 CDC questions and approved language that will be included in the response from HICPAC to CDC regarding these 4 CDC questions, and which will provide direction to the Isolation Precautions Guideline WG moving forward. The votes did not change any specific draft recommendation language in the *2023 Draft Guideline* that previously was approved. HICPAC also voted on 2 recommendations regarding the *Healthcare Personnel Guideline* pertaining to asymptomatic HCP who have had an exposure to respiratory viruses and the HCP with suspected or confirmed viral respiratory infection. These recommendations will be sent to CDC in preparation for a public comment period. In closing, Dr. Lin thanked the HCIPAC members, *Ex Officios*, liaisons, CDC staff, and the general public for their attendance during this 2-day HICPAC meeting.

Adjourn

Alexander J. Kallen, MD, MPH
HICPAC Designated Federal Officer

Dr. Kallen thanked everyone for attending the meeting and for their participation. The next HICPAC meeting will be March 6-7, 2025. With no additional business raised or comments/ questions posed, he officially adjourned this HICPAC meeting at 12:32 PM on November 15, 2024.

Certification

I hereby certify that, to the best of my knowledge and ability, the foregoing minutes of the November 14-15, 2024 meeting of the Healthcare Infection Control Practices Advisory Committee (HICPAC), CDC are accurate and complete.

_____ _____

Date **Michael Lin, MD, MPH**
Chair, HICPAC / CDC

Attachment #1: Acronyms Used in this Document

Acronym	Expansion
ACIP	Advisory Committee of Immunization Practices
ACOEM	American College of Occupational and Environmental Medicine
AEH	America's Essential Hospitals
AFL-CIO	American Federation of Labor and Congress of Industrial Organizations
AHE	Association for the Healthcare Environment
AHRQ	Agency for Healthcare Research and Quality
AI	Artificial Intelligence
AIIR	Airborne Infection Isolation Room
ANA	American Nurses Association
AORN	Association of periOperative Registered Nurses
APIC	Association of Professionals of Infection Control and Epidemiology
ASN	American Society of Nephrology
ASTHO	Association of State and Territorial Health Officials
ASU	Arizona State University
BS	Bachelor of Science
CCHCF	Chinle Comprehensive Health Care Facility
CCTI	Cambridge Communications & Training Institute
CDC	Centers for Disease Control and Prevention
COI	Conflict of Interest
CMS	Centers for Medicare and Medicaid Services
CNDH	Chickasaw Nation Department of Health
CMV	Cytomegalovirus
COI	Conflicts of Interest
COVID	Coronavirus Disease
CSG	Clinical Standards Group
CSTE	Council of State and Territorial Epidemiologists
DCACP	Division of Continuing & Acute Care Providers
DFO	Designated Federal Official
DHQP	Division of Healthcare Quality Promotion
DNP	Doctor of Nursing Practice
DNS	Division of Nursing Services
ED	Emergency Department
ET	Eastern Time
FACA	Federal Advisory Committee Act
FDA	(United States) Food and Drug Administration
FFR	Filtering Facepiece Respirator
FORHP	Federal Office of Rural Health Policy
GRADE	Grading of Recommendations, Assessment, Development and Evaluation
HAI	Healthcare-Associated Infection
HCP	Healthcare Personnel/Professionals
HCP WG	Healthcare Personnel Workgroup
HCW	Healthcare Workers
HHS	(United States Department of) Health and Human Services
HICPAC	Healthcare Infection Control Practices Advisory Committee
HIV	Human Immunodeficiency Virus
IDSA	Infectious Disease Society of America

Acronym	Expansion
IHS	Indian Health Service
IP	Infection Preventionists
IPC	Infection Prevention and Control
LCAP	Long COVID Action Project
LTCF	Long-Term Care Facilities
MRSA	Methicillin-Resistant *Staphylococcus Aureus*
MS	Master of Science
NACCHO	National Association of County and City Health Officials
NCEZID	National Center for Emerging and Zoonotic Infectious Diseases
NECSI	New England Complex Systems Institute
NIOSH	National Institute for Occupational Safety and Health
NNT	Number Needed to Treat
NNU	National Nurses United
OHS	Occupational Health Services
OSAP	Organization for Safety, Asepsis and Prevention
OSHA	Occupational Safety and Health Administration
PA	Physician Assistant
PCR	Polymerase Chain Reaction
PEP	Post-Exposure Prophylaxis
PECOS	Population, Exposure, Comparator, Outcome, and Setting
PHAC	Public Health Agency of Canada
PHE	Public Health Emergency
PIDS	Pediatric Infectious Disease Society
POC	Point-of-Care
PPE	Personal Protective Equipment
PRB	Prevention and Response Branch
PRISMA-ScR	Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Scoping Reviews
PSAN	Patient Safety Action Network
QSOG	Quality, Safety, and Oversight Group
RN	Registered Nurse
RSV	Respiratory Syncytial Virus
SARS	Severe Acute Respiratory Syndrome
SCCM	Society for Critical Care Medicine
SHEA	Society for Healthcare Epidemiology of America
SME	Subject Matter Expert
SUDs	Substance Use Disorders
TB	Tuberculosis
TJC	The Joint Commission
UNC	University of North Carolina
UNM	University of New Mexico
US	United States
USFC	University of California, San Francisco
USPHS	United States Public Health Service
WG	Workgroup
WHN	World Health Network
WHO	World Health Organization

Attachment #2: Written *Ex Officio* / Liaison Reports

Ex Officio Member Report
HEALTHCARE INFECTION CONTROL PRACTICES ADVISORY COMMITTEE (HICPAC)
Centers for Disease Control and Prevention

Meeting Date: November 2024
Meeting Location: Centers for Disease Control and Prevention, Atlanta, GA
Ex officio member name: Leyi Lin, MD
Agency represented: Agency for Healthcare Research and Quality (AHRQ)

The AHRQ Safety Program for MRSA Prevention
The AHRQ Safety Program for MRSA Prevention is a 5 year implementation project led by Johns Hopkins Medicine and NORC at the University of Chicago aimed to prevent MRSA infections in ICU and non-ICU patients in acute care hospitals, patients undergoing surgeries in which the risk of MRSA infection is particularly high, and residents of long-term care facilities. The program promoted the use of evidence-based infection prevention strategies and strengthening the culture of safety and teamwork by adapting the Comprehensive Unit-Based Safety Program (CUSP) method to each setting. The 18-month ICU and non-ICU cohort completed implementation in 193 ICUs and non-ICUs in 2024, with preliminary data (presented at ID Week 2024) demonstrating significant reductions in hospital-onset MRSA bacteremia, hospital-onset all-cause bacteremia, and MRSA cultures on or after hospital day 4. An educational implementation toolkit, developed during the project and informed by the experiences of the participants, was launched on the AHRQ website in October 2024 - https://www.ahrq.gov/hai/tools/mrsa-prevention/toolkit/index.html
The high-risk surgical services cohort completed implementation in the summer of 2024. This cohort focused on decolonization, pre-operative skin antisepsis, antimicrobial prophylaxis, and perioperative methods to prevent surgical site infections. The long-term care cohort completed implementation activities in November 2024. The emphasis in this setting is on skin protection, high-touch environmental surface cleaning and disinfection, reducing MDRO transmission, and using antibiotics appropriately. Data and toolkits for these cohorts are anticipated in 2025.

AHRQ Safety Program for Telemedicine: Improving Antibiotic Use

The AHRQ Safety Program for Telemedicine: Improving Antibiotic Use has adapted the Comprehensive Unit-based Safety Program (CUSP) and the Four Moments of Antibiotic Decision Making to improve antibiotic prescribing in the telemedicine setting. CDC, CMS, and HRSA have provided support through their active engagement on the Technical Expert Panel. Over 500 primary and urgent care practices began implementation in June 2024 and are now submitting data. The program includes webinars and tools to aid in appropriate antimicrobial prescribing for a variety of infectious conditions commonly encountered in the outpatient setting. Webinars can be viewed live or asynchronously. This program facilitates a culture of patient safety and aims to improve communication and teamwork between healthcare providers, staff, and patients, using common infections seen in the telemedicine setting as case studies. More information is available on the AHRQ website at:
https://www.ahrq.gov/hai/telemedicine/index.html

AHRQ Safety Program for HAI Prevention
In 2024, the AHRQ Safety Program for HAI Prevention was awarded to reduce central line-associated bloodstream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), and ventilator-associated events/ventilator-associated pneumonia (VAE/VAP).

Recruitment begins in early 2025 for three cohorts - CLABSI, CAUTI, and VAE/ VAP - in ICU and non-ICU units in acute care hospitals in the 10 HHS regions to represent a diverse range of hospitals. The project includes an environmental scan, informed by subject matter experts, who will refine and update the existing AHRQ toolkits to be consistent with current evidence and recommendations. Using quality improvement coaches to provide technical assistance in the implementation period, the project aims to improve HAI rates and infection prevention (IP) processes. The program also strengthens the culture of safety and improves teamwork by adapting the Comprehensive Unit-Based Safety Program (CUSP) method to each setting. Updated toolkits based on the content shared in the project and refined by participants' experience in the project will be made available on the AHRQ website after the program is completed. More information is available on the AHRQ website at: https://www.ahrq.gov/hai/tools/safety-hai-prevention/index.html.

AHRQ Grant Funding Opportunities:
AHRQ continues to fund innovative research through its Notice of Funding Opportunities aimed to reduce healthcare-associated infections and antibiotic-resistant bacteria. Specific funded areas of research pertinent to HICPAC include improving appropriate antibiotic use, decreasing the spread of HAIs, more effective environmental cleaning, and addressing gaps in diagnostic stewardship.

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HEALTHCARE INFECTION CONTROL PRACTICES ADVISORY COMMITTEE (HICPAC)
Centers for Disease Control and Prevention

Meeting Date: November, 2024
Meeting Location: Centers for Disease Control and Prevention, Atlanta, GA
Ex officio member name: CDR Scott Steffen, PhD
Agency represented: FDA

Interim activities and updates:

- CDRH completed their year-long 15-event Sterilization Town Hall (TH) series. The series began as industry was facing challenges with switching from EtO to alternatives for medical devices sterilization. The TH series was an integrated medical device sterilization communications effort that spanned a range of topics from microbiological testing to considerations in selecting alternative sterilization modalities to a mock presubmission event that explored sterilization changes. Additionally, the series provided potential activities to advance innovation in the field of sterilization.

Guidelines and Guidance:
Please include products that are in progress and planned for the coming year. Include Web links if appropriate.

- CDRH recently published their Transitional Enforcement Policy for Ethylene Oxide Sterilization Facility Changes for Class III Device on 11/25/24. The guidance discusses the policy regarding sterilization site changes for ethylene oxide (EtO) sterilized PMA and HDE devices in situations where those devices are affected by the potential, actual, or temporary operation reductions at sterilization facilities that may affect the availability of those sterile medical devices.
- CDRH revised their Guidance document titled, "Submission and Review of Sterility Information in Premarket Notification (510(k)) Submissions for Devices Labeled as Sterile." The revision has moved vaporized hydrogen peroxide from an Established Category B sterilization method to an Established Category A sterilization method.

Campaigns and related activities:

- CDRH recently recognized several Sterilization standards this year. Of note are the ISO standard for vaporized hydrogen peroxide (ISO 22441:2022) and the Technical Information Reports (TIR104:2022 and TIR17:2017/(R)2020. More information can be found here.

Other items of note:

- CDRH recently granted two De Novo applications. DEN230007 was granted for a Whole Room Microbial Reduction Device. DEN230067 was granted for an Ultraviolet Radiation Disinfection Chamber.

Ex Officio Member Report
HEALTHCARE INFECTION CONTROL PRACTICES ADVISORY COMMITTEE (HICPAC)
Centers for Disease Control and Prevention

Meeting Date: November 2024
Meeting Location: Centers for Disease Control and Prevention, Atlanta, GA
Ex officio member name: Shavonna White, DNP, RN, CIC
Agency represented: Indian Health Service (IHS)

Interim activities and updates:

- CDC's Health Systems Resilience and Training Branch and IHS partnered during the summer of 2024, bringing Infection Control Training for Healthcare Professions to IHS staff. This was done by offering a weekly webinar series in July and August on a variety of topics including germ spread, hand hygiene and PPE, blood-borne pathogens, environmental cleaning and disinfection, and the newly released Indian Health Manual Chapter 3-33 on Infection Control and Prevention.
- CDC/IHS collaboration continues to include staff training and medical facility assessment activities across IHS. During CY 2025, there are 5 planned visits to IHS medical facilities nationwide. Each visit will consist of a 2-day in person training of IHS facility and Tribal organizational staff conducted by CDC and IHS, followed by a day onsite at one of the area's IHS medical facilities. Infection Control and Prevention topics will be the focus of the training, followed by an Infection Control Assessment and Response (ICAR) conducted by CDC at the IHS medical facility. The goal is to improve Patient Safety by increasing Infection Control and Prevention related knowledge, and for CDC to provide feedback and recommendations for improving Infection Control practices in the medical facility. The current training and visit schedule includes: California Area (Jan. 28-30), Bemidji Area (Mar. 25-27), Navajo Area (May 13-15), Albuquerque Area (Aug 25-27), and Phoenix Area (Nov 4-6).
- CDC and IHS partnership continues regarding the National Health Safety Network (NHSN) data entry. The IHS facilities providing inpatient care are required to report HAI data to NHSN monthly, and respiratory data weekly. CDC assists in improving IHS compliance by providing regular compliance updates to leadership and supporting the opportunity for IHS to assess the Service Unit's gaps by reviewing the Service Unit's reporting activities in NHSN.

Liaison Representative Report
HEALTHCARE INFECTION CONTROL PRACTICES ADVISORY COMMITTEE (HICPAC)
Centers for Disease Control and Prevention

Meeting Date: November 14-15, 2024
Meeting Location: Centers for Disease Control and Prevention, Atlanta, GA
Liaison Representative name: Karen deKay
Organization represented: AORN

Interim activities and updates:

- Worked with industry and association partners to develop a "*Periop Nurse Emergency Resource Center*" on our website to address shortages of medical supplies. Information on IV fluid shortages went live October 9, 2024. https://www.aorn.org/guidelines-resources/clinical-resources/Periop-Nurse-Emergency-Resource-Center
- Final approval and release of "*Performance Standards for Healthcare UV Germicidal Light Whole Room Surface Disinfection*", which we participated in the development of. https://webstore.ansi.org/standards/ansi/ansihsi20002023
- New "opt-in" feature now available to receive notifications when Guidelines and Position Statement are open for public commenting. https://www.aorn.org/events/public-commenting
- Completed one-day Fall Guideline Implementation Workshops in six cities on Patient Temperature Management, Prevention of Retained Surgical Items, ERAS, Surgical Smoke, and Wound Healing for 370 participants

Guidelines and Guidance:

- AORN guidelines are available in print and through electronic access. Information on how to obtain the guidelines can be found at www.aorn.org.
- Guidelines are posted for a 30-day public comment period at www.aorn.org
- Preordering has begun for the 2025 *Guidelines for Perioperative Practice* which includes 1 new guideline and critical revision of 6 guidelines: Implementation for Enhanced Recovery After Surgery (new), **Surgical Attire**, Sterile Technique, Patient Temperature Management, **Sterilization**, Packaging for Sterilization, and Sharps Safety.
- Guidelines in development for 2026 print publication
    - **Transmission-Based Precautions**: to be released electronically January 16, 2025
    - Pneumatic Tourniquets: to be released electronically April 17, 2025
    - **Instrument Cleaning**: public comment June 6-July 7, 2025
    - Autologous Tissue: public comment May 28 – June 28, 2025
    - Electrosurgical Safety: public comment July 30- August 30, 2025
    - Local-only Anesthesia**:** public comment August 18 – September 18, 2025
- Guidelines in development for 2027 print publication
    - **Environmental Cleaning**

Position Statements:

- Available at http://www.aorn.org/guidelines/clinical-resources/position-statements
- Reviewed/Revised and open for public comment:
    - APRNs in the Perioperative Environment (until December 7, 2024)

- Environmental Responsibility (until December 16, 2024)
- Managing Disruptions, Distractions and Noise During Perioperative Patient Care (until December 16, 2024)

Legislation:

- As of November 2024, 18 states have enacted laws requiring surgical smoke evacuation for planned surgical procedures in their operating rooms. (Arizona, California, Colorado, Connecticut, Georgia, Illinois, Kentucky, Louisiana, Minnesota, Missouri, New Jersey, New York, Ohio, Oregon, Rhode Island, Virginia, Washington, and West Virginia)
- The National Fire Protection Association (NFPA) recently adopted a requirement to capture surgical smoke at the source in operating rooms nationwide in its 2024 edition of the NFPA 99, Health Care Facilities Code.
- AORN legislative priorities for 2025 are RN as circulator, preserving and protecting the Perioperative Registered Nurse's scope of practice, supporting workplace safety and patient safety initiatives, health equity, and public health.

Campaigns and related activities:

- Surgical Smoke Safety. Go Clear Award recognizes health care facilities committed to a surgical smoke-free environment for their perioperative team and patients.
- Center of Excellence in Surgical Safety: Prevention of RSI is a complimentary education and recognition program for perioperative teams to prevent near misses and consequences of unintentionally retained surgical items.
- Working on development of a Center of Excellence of Enhanced Recovery after Surgery, for 2025.

Publications:

- 2025 *Guidelines for Perioperative Practice*, AORN Journal, Ambulatory Surgery Center Resources

Other items of note:

- The second annual **AORN Perioperative Nursing Research Symposium** will take place online over two 4-hour sessions, January 15 & 16, 2025 to provide an opportunity for perioperative nurses to present their research, EBP, or QI work and learn about current projects aimed to improve perioperative patient outcomes. https://www.aorn.org/events/perioperative-nursing-research-symposium

- Registration is now open for the **AORN Global Surgical Conference & Expo 2025** to be held in Boston, Massachusetts April 5th to 8th. https://aorn.us/exporeg

Liaison Representative Report
HEALTHCARE INFECTION CONTROL PRACTICES ADVISORY COMMITTEE (HICPAC)
Centers for Disease Control and Prevention

Meeting Date: November 14-15, 2024
Meeting Location: Centers for Disease Control and Prevention, Atalanta, GA and virtual
Liaison Representative name: Karen A. Ravin
Organization represented: The Pediatric Diseases Society of America (PIDS)

Advocacy:
The PIDS Advocacy Taskforce was recently established to work on amplifying the pediatric infectious diseases position on topics such as vaccines and antimicrobial resistance to the public and elected officials across all levels.

PIDS has begun working with the Infectious Diseases Society of America (IDSA) and other societies and partners to inform and enlighten U.S. senators who will be part of the confirmation process for the incoming Trump administration. The goal is to impress upon them the tremendous value of sound public health policy and the need to continue focusing on critical infectious diseases topics such as vaccine hesitancy and pandemic preparedness.

Educational activities:
Pediatric Committee on Antimicrobial Stewardship (PCAS) Global Health Subcommittee hosted this year's World AMR Awareness Week webinar, "Optimizing Healthcare Sustainability Through Antimicrobial Stewardship" on World Children's Day (11/20/2024).

The latest HIV Series webinar on 12/3/2024 focused on "Long-Acting Antiretroviral Use in Adolescents and Young Adults."

A new webinar series, "Virtual Infection Prevention and Control (IPC) and Hospital Epidemiology Webinar," co-sponsored by PIDS and the Society for Healthcare Epidemiology of America (SHEA) was recently launched. The first session on management of a measles case was well received. The second session, "Meningococcal Serogroup B Disease Outbreak" will be held on 12/10/2024.

The Pediatric Infectious Diseases Society-Sharing Antimicrobial Reports for Pediatric Stewardship (PIDS-SHARPS) collaborative will be holding a speaker's series on 12/12/2024. Dr Nadia Qureshi will share "Rise in Inappropriate Antibiotic Prescriptions for Streptococcal Pharyngitis in an Era of Antibiotic Shortages."

Other items of note:
The 2024 ID Fellowship Match took place on 12/4/2024. Forty-three pediatric physicians matched to fellowship programs across the U.S. Twenty-five pediatric ID programs filled this year. This was a slight increase from last year, when 40 physicians matched, and 24 programs filled. This is an encouraging trend but there are still areas of need as more than 80% of counties within the U.S. do not have any ID experts.