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Concerns about Pending HICPAC/CDC Proposals

National Nurses United

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Background

HICPAC recently initiated work to update a primary guidance document relied on by the CDC to guide health care facilities in establishing infection control programs, *Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings*, which was last updated in 2007.[1] This foundational guidance directs infection control practices for a wide range of pathogens and is relied on by health care facilities in the United States and around the world. In addition to health care employers, other government agencies frequently reference this guidance document.[2]

We agree that now is an appropriate time to update this guidance, as the scientific research on infectious disease transmission and control in health care settings has developed significantly over the past nearly two decades and issues with current guidance have become clearer during the Covid-19 pandemic. However, HICPAC/CDC is proposing a weakening of existing protections, based on a flawed analysis of the scientific research and a failure to incorporate professional expertise beyond that of infectious disease clinicians such as occupational health professionals and others with relevant expertise.

HICPAC/CDC is Proposing to Weaken Existing Protections for Health Care Workers Caring for Patients with Infectious Diseases

1. HICPAC/CDC is proposing to update the CDC's scientific paradigm on infectious disease transmission in name only, failing to recognize extensive scientific research on aerosol transmission, which sets the stage to weaken existing isolation precautions.

Presentations at HICPAC meetings indicate that HICPAC/CDC is planning to update language on infectious disease transmission, leaving behind the faulty contact-droplet-airborne distinctions and

[1] U.S. Centers for Disease Control and Prevention, "Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings (2007)," Available at https://www.cdc.gov/infectioncontrol/guidelines/isolation/index.html.

[2] For example, see the U.S. Occupational Safety and Health Administration's Emergency Temporary Standard on Covid-19 in Healthcare- incorporation by reference (29 C.F.R. §1910.509(b)(3)), Available at https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.509;

California's Department of Industrial Relations, Division of Occupational Safety and Health's Aerosol Transmissible Diseases Standard (8 C.C.R §5199), Available at https://www.dir.ca.gov/title8/5199.html;

and US Department of Health and Human Services. 2023. CMS Manual System Pub. 100-07 State Operations, Provider Certification. Revisions to Appendix PP, "Guidance to Surveyors of Long Term Care Facilities." Transmittal 55, dated Dec. 2, 2009. Available at https://www.cms.gov/regulations-and-guidance/guidance/transmittals/downloads/r55soma.pdf.

moving to a paradigm with two non-exclusive transmission methods: by air and by touch (Attachment 1). This update certainly moves in the right direction—research has extensively documented that the droplet-airborne distinction is false, based on past scientific errors, and fails to adequately account for transmission of infectious diseases.[3,4] Research has clearly and extensively documented that aerosol transmission is a more accurate category that reflects the dynamics of respiratory aerosols, which are emitted in a continuum of sizes and can transmit through and remain aloft in the air for long distances and periods of time.[5,6]

However, HICPAC/CDC fails to fully recognize the available evidence on aerosol transmission. Instead, proposals shared at the June 2023 meeting indicate that HICPAC/CDC remains focused on short vs long distance transmission (i.e., droplet transmission) and fails to acknowledge research on respiratory emissions and aerosol dynamics. This becomes clear in the proposed recommendations for isolation precautions for the new "by air" transmission category where HICPAC/CDC proposes three tiers: routine air precautions, novel air precautions, and extended air precautions (Attachment 1). Routine air precautions maps onto the existing droplet category, where only surgical masks are recommended (and respirators are not) for pathogens like seasonal coronaviruses and seasonal influenza. Novel air precautions and extended air precautions map onto the existing airborne category, where an N95 respirator is recommended for pathogens like MERS, SARS-CoV-1, "pandemic-phase respiratory viruses," and tuberculosis, measles, and varicella. Thus, these proposals represent a change in language with no corresponding change in PPE practice.

Concerningly, in this proposal for isolation precautions, HICPAC/CDC is failing to acknowledge a vast body of research documenting the aerosol transmission of multiple respiratory viruses, including influenza, SARS-CoV-2/Covid-19, and respiratory syncytial virus (RSV), indicating the need for an N95 or more protective respirator.[7,8,9,10,11]

Further, HICPAC/CDC's proposal indicates that they may be looking to lower protections for health care workers caring for patients with Covid-19 and other respiratory viruses. The distinction between "seasonal" and "pandemic-phase" in the proposals has not been defined and no discussion has been made publicly available as workgroup meetings are closed to the public, according to

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[3] Jimenez, J.L., L.C. Marr, et al., "What were the historical reasons for the resistance to recognizing airborne transmission during the COVID-19 pandemic?," Indoor Air, Aug 21, 2022, https://doi.org/10.1111/ina.13070.

[4] Randall, K., E.T. Ewing, et al., "How did we get here: what are droplets and aerosols and how far do they go? A historical perspective on the transmission of respiratory infectious diseases," Interface Focus, Oct 12, 2021, https://doi.org/10.1098/rsfs.2021.0049.

[5] Jones, R.M. and L.M. Brosseau, "Aerosol transmission of infectious disease," J Occup Environ Med, 2015, 57(5): 501-8.

[6] Wang, C.C., K.A. Prather, et al., "Airborne transmission of respiratory viruses," Science, Aug 27, 2021, https://doi.org/10.1126/science.abd9149.

[7] Bischoff, W.E., K. Swett, et al., "Exposure to Influenza Virus Aerosols During Routine Patient Care," J Infectious Diseases, 2013, https://doi.org/10.1093/infdis/jis773.

[8] Lindsley, W.G., F.M. Blachere, et al., "Distribution of Airborne Influenza Virus and Respiratory Syncytial Virus in an Urgent Care Medical Clinic," Clinical Infectious Diseases, 2010, https://doi.org/10.1086/650457.

[9] Yan, J., M. Grantham, et al., "Infectious virus in exhaled breath of symptomatic seasonal influenza cases from a college community," PNAS, 2018, https://doi.org/10.1073/pnas.1716561115.

[10] Schulman, J.L., "Experimental Transmission of Influenza Virus Infection in Mice: IV. Relationship of Transmissibility of Different Strains of Virus and Recovery of Airborne Virus in the Environment of Infector Mice," J Experimental Medicine, 1967, https://doi.org/10.1084/jem.125.3.479.

[11] See Table 1 in Wang, C.C., K.A. Prather, et al., "Airborne transmission of respiratory viruses," Science, Aug 27, 2021, https://doi.org/10.1126/science.abd9149.

HICPAC/CDC staff.[12] The distinction between "seasonal" and "pandemic-phase" in the proposed precautions is a problematic distinction—there is no difference in a pathogen's transmission modes or the measures necessary to prevent transmission based on whether it has been deemed a pandemic or not.

Discussion at the June and previous HICPAC meetings indicates that at least some committee members and CDC staff desire consideration of factors such as population-level immunity and health care worker vulnerability to severe outcomes in deciding the level of respiratory and other protections provided, especially for pathogens like SARS-CoV-2/Covid-19. But this is an immoral and unscientific manner in which to decide occupational protections. Population-level immunity for many viruses does not equate to protection from infection or negative outcomes for individual health care workers. For example, an investigation into a measles outbreak among health care workers in California concluded that "[health care workers] with unmasked, direct contact with measles patients are at risk for developing disease despite evidence of prior immunity… regardless of immunity status, HCWs should wear N-95 respirators (or equivalent) when evaluating suspected measles patients."[13] Specifically for SARS-CoV-2/Covid-19 there is no widespread population-level immunity.[14] Further, new variants continue to emerge and develop increased immune escape abilities, posing a threat to any remaining immune protection from both vaccines and past infection. Predicating occupational protections for RNs and other health care workers on factors like population-level immunity or health care worker vulnerability only serves to inappropriately downgrade protections, which puts health care workers and their patients at increased risk of infection. This disregard for the health and safety of RNs and other health care workers is a critical factor in the ongoing staffing crisis in health care.

2. HICPAC/CDC is basing its proposals on an evidence review that is inappropriately narrow in its focus and fails to incorporate all the available evidence.

CDC staff performed an evidence review on select questions to inform HICPAC/CDC's guidance updates that was presented at the June 2023 HICPAC meeting. This review concluded that there was no difference between N95s and surgical masks in the protection offered from respiratory infections to health care workers. This review was inadequate, flawed, and biased. Specifically, CDC's evidence review:

- Over relied on randomized controlled trials (RCTs), failing to account for the inability of RCTs to effectively evaluate the effectiveness of respirators and masks due to the lack of

[12] HICPAC Committee Management, personal communication, November 23, 2022.

[13] Gohil, S.K., S. Okubo, et al., "Healthcare Workers and Post-Elimination Era Measles: Lessons on Acquisition and Exposure Prevention," Clinical Infectious Diseases, 2016, 62(2): 166-172.

[14] A recent publication in the CDC's *Morbidity and Mortality Weekly Report* concluded, "As of May 10, 2023, only one in five (20.5%) U.S. adults had received a bivalent booster dose. Among U.S. adults who previously received a monovalent vaccine but had yet to receive a bivalent mRNA booster, most received their last vaccine dose >1 year ago. Results of this analysis indicate that these adults might have relatively little remaining protection against COVID-19–associated hospitalization compared with unvaccinated persons, although might have more remaining protection against critical illness." This study found that bivalent booster protection wanes significantly over a period of about six months. Additionally, a meta-analysis found that protection from past infection and hybrid immunity also wane over time.

Link-Gelles, R., Z.A. Weber, et al., "Estimates of Bivalent mRNA Vaccine Durability in Preventing COVID-19–Associated Hospitalization and Critical Illness Among Adults with and Without Immunocompromising Conditions — VISION Network, September 2022–April 2023," MMWR, May 26, 2023, 72(21): 579-88.

Bobrovitz, N., H. Ware, et al., "Protective effectiveness of previous SARS-CoV-2 infection and hybrid immunity against the omicron variant and severe disease: a systematic review and meta-regression," The Lancet Infectious Diseases, Jan 18, 2023, 23(5): 556-67.

objective measurement of mask/respirator use, lack of consideration of intermittent use of respirators which is known to offer insufficient protection, and often the lack of a true control group.[15]

- Cherry-picked the end point of concern, which skewed results. The CDC inexplicably only examined lab-confirmed respiratory infections while at least one study included in its review found evidence that N95s provided more protection from influenza-like illness than surgical masks.[16]

- Inexplicably omitted inclusion of applicable and important research, such as MacIntyre's 2017 RCT that compared continuous N95 respirator use, targeted N95 respirator use, medical mask use, and a control group.[17] In this study, only the continuous N95 arm saw a significant reduction in lab-confirmed viral respiratory infections; the reduction was not statistically significant for targeted N95 use or for medical masks.

Importantly, by exclusively examining RCTs comparing N95s to medical/surgical masks, the CDC/HICPAC is ignoring over a century of occupational health research into the efficacy, performance, and need for certification of respiratory protection.[18]

3. HICPAC/CDC reports an intention to reframe infection control guidance to create extensive flexibility for health care employers.

Discussions at HICPAC meetings indicate that the Committee and CDC staff are eager to change the entire framework of the existing *Isolation Precautions (2007)* guidance. Instead of clear and explicit recommendations for precautions that are needed when dealing with particular pathogens, discussions at past meetings have indicated that HICPAC and the CDC want the updated guidance to provide a "basement" upon which individual health care employers should build their infection control programs based on individual risk assessments regarding patient population, staff, and facilities.

The CDC adopted such an approach in its Covid-19 infection control guidance early in the pandemic when it implemented crisis and contingency strategies, which directed health care employers to select a level of infection control measures based on their own risk assessment, with no accountability or oversight for whether those risk assessments were accurate. This led to many health care employers implementing fewer or less protective infection control practices inappropriately and without actual need to resort to crisis standards. For example, many health care employers implemented reuse of single-use N95s and restricted when health care workers could access N95s (e.g., only during aerosol-generating procedures on Covid-positive patients),

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[15] Brosseau, L., C.R. MacIntyre, et al., "COMMENTARY: Wear a respirator, not a cloth or surgical mask, to protect against respiratory viruses," University of Minnesota, Center for Infectious Disease Research and Policy, Feb 23, 2023, https://www.cidrap.umn.edu/covid-19/commentary-wear-respirator-not-cloth-or-surgical-mask-protect-against-respiratory-viruses.

[16] Loeb, M., N. Dafoe, et al., "Surgical mask vs N95 respirator for preventing influenza among health care workers: a randomized trial," JAMA, 2009, 302(17): 1865-71, https://doi.org/10.1001/jama.2009.1466.

[17] MacIntyre, C.R., A.A. Chughtai, et al., "The efficacy of medical masks and respirators against respiratory infection in healthcare workers," Influenza Other Respir Viruses, 2017, 11(6): 511-7, https://doi.org/10.1111/irv.12474.

[18] "Lessons Learned from 100 Years of Respiratory Protection," National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Health Sciences Policy; Giammaria, C., O. Yost, A. Nicholson, editors, Dec 22, 2020, Available at https://www.ncbi.nlm.nih.gov/books/NBK567460/.

while also stating that they had sufficient supply.[19] The CDC's crisis and contingency standards allowed and enabled health care employers to race to the lowest standard, which led directly to an uncounted number of Covid infections among patients and health care workers, their families, and their communities.[20,21] Embracing this approach in all infection control programs will have a disastrous impact on health care worker and patient safety.

4. The CDC/HICPAC appears to be eager to adopt a lesser standard of masks to supplant respiratory protection for health care workers exposed to respiratory pathogens.

Discussions at past HICPAC meetings indicate multiple committee members and CDC staff are considering incorporating Workplace Performance and Workplace Performance Plus masks into updated infection control guidance for health care settings. Workplace Performance and Performance Plus masks are new categories designated by the National Institute for Occupational Safety and Health (NIOSH) that must conform to the criteria in the ASTM F3502-21 consensus standard, which was primarily crafted to help the public evaluate face masks available for purchase during initial Covid-19 surges.

The ASTM F3502-21 consensus standard has two primary metrics that masks must meet: they must be designed to cover the wearer's nose and mouth and to fit snugly and they must meet minimum filtration levels (50 percent or 80 percent) and leakage testing on a limited population sample.[22] Notably, there are no fit-testing requirements or recommendations. NIOSH is explicit that Workplace Performance and Performance Plus masks are <u>not</u> equivalent to NIOSH-approved respirators.[23]

While this consensus standard is helpful for the public, it is harmful when applied to the health care workplace. Throughout the Covid-19 pandemic, health care employers have raced to the lowest standard to reduce their expenses, especially when it comes to personal protective equipment (PPE) for health care workers—from locking up N95s and other PPE and preventing health care workers from accessing it to reusing single-use PPE to implementing unproven decontamination procedures to reprocess single-use PPE. Incorporating Workplace Performance and Performance Plus masks into the health care workplace will allow health care employers to use a lower level of protection, putting workers at higher risk of exposure.

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[19] National Nurses United, "Deadly Shame: Redressing the Devaluation of Registered Nurse Labor Through Pandemic Equity," December 2020, Available at https://www.nationalnursesunited.org/sites/default/files/nnu/graphics/documents/1220_Covid19_DeadlyShame_PandemicEquity_WhitePaper_FINAL.pdf.

[20] See National Nurses United, "Covid-19 timeline," Available at https://www.nationalnursesunited.org/covid-19-timeline.

[21] NNU tracked at least 5,752 health care workers, including at least 499 RNs, who died from Covid-19 as of May 19, 2023. This is significantly higher than the CDC's last available report from May 3, 2023 showing only 792 health care worker deaths from Covid-19.

National Nurses United, "Sins of Omission: How Government Failures to Track Covid-19 Data Have Led to More Than 3,200 Health Care Worker Deaths and Jeopardize Public Health," updated March 2021, Available at https://www.nationalnursesunited.org/sites/default/files/nnu/documents/0321_Covid19_SinsOfOmission_Data_Report.pdf.

U.S. Centers for Disease Control and Prevention, COVID Data Tracker, May 5, 2023, Available at https://web.archive.org/web/20230505073928/https://covid.cdc.gov/covid-data-tracker/#health-care-personnel.

[22] https://www.cdc.gov/niosh/topics/emres/pandemic/default.html

[23] National Institute for Occupational Safety and Health, "NIOSH Personal Protective Equipment Information: Barrier Face Coverings and Workplace Performance/Performance Plus Masks," January 27, 2023, available at https://wwwn.cdc.gov/PPEInfo/RG/FaceCoverings.

While it is unclear whether HICPAC/CDC plans to include Workplace Performance/Performance Plus masks in the updates slated for a vote in August 2023, this explicit goal of the Committee is extremely problematic as is the lack of a representative from NIOSH's National Personal Protective Technology Laboratory (NPPTL) on the Workgroup assigned to develop the updated isolation precautions guidance (Attachment 1).

5. HICPAC/CDC is reportedly omitting multiple important measures from the guidance update.

HICPAC/CDC is reportedly not planning to address the essential role of ventilation or other respiratory protective devices (i.e., powered air-purifying respirators/PAPRs and elastomeric respirators) in this update.[24] Concerningly, it is unclear how the updated guidance will address the essential role that safe staffing levels play in infection control and prevention.

Additionally, it is not clear how HICPAC/CDC plans to update its source control recommendations. The 2007 *Isolation Precautions* document provides limited recommendations related to patient placement and cough etiquette.[25] It has become abundantly clear during the Covid-19 pandemic that source control—in combination with other prevention measures—must include wider use of masks and respirators to prevent transmission from infectious individuals who are asymptomatic or presymptomatic.[26,27,28]

The HICPAC/CDC Process is Obscured from the Public and There is a Significant Lack of Transparency and Public Input into the Guidance Updates.

HICPAC's process to make these updates is largely inaccessible to the public. Workgroup meetings regarding the guidance updates are not open to the public. Updates from the workgroup to HICPAC are not publicly posted. Meeting minutes are posted often only after a long delay. The public may submit written comment ahead of HICPAC meetings, but the deadline for written comments precedes circulation of meeting materials, including any specific language that the committee will vote on. The public may make verbal comment during each HICPAC meeting, but the Committee votes prior to hearing from the public (public comment is the last item on the agenda).

It should be noted that simply changing the order of the meeting agendas will not resolve HICPAC's transparency issues. HICPAC's members are primarily infectious disease clinicians and the Committee lacks representation from other fields of practice with expertise in infectious disease transmission and control, workplace protections for health care workers, and patient safety, including industrial hygiene, occupational medicine, aerosol science, respiratory protection, and others—the perspectives of which are essential to formulating effective, protective, science-based guidance. Liaisons to CDC/HICPAC represent health care employers and executives, not direct care

[24] Dr. Michael Bell provided an update on HICPAC's process to update the 2007 *Isolation Precautions* guidance to a March 14, 2023, meeting of the National Institute for Occupational Safety and Health (NIOSH) National Occupational Research Agenda (NORA) Healthcare Sector Council.

[25] ISOLATION PRECAUTIONS

[26] Baker, M.A., C. Rhee, et al., "Rapid Control of Hospital-Based Severe Acute Respiratory Syndrome Coronavirus 2 Omicron Clusters Through Daily Testing and Universal Use of N95 Respirators," Clinical Infectious Diseases, July 2022, 75(1): e296-99, https://doi.org/10.1093/cid/ciac113.

[27] Wang, X., E.G. Ferro, et al., "Association Between Universal Masking in a Health Care System and SARS-CoV-2 Positivity Among Health Care Workers," JAMA, July 14, 2020, https://jamanetwork.com/journals/jama/article-abstract/2768533.

[28] Lan, F-Y., C.A. Christophi, et al., "Effects of universal masking on Massachusetts healthcare workers' COVID-19 incidence," Occupational Medicine, November 2020, 70(8): 606-9, https://doi.org/10.1093/occmed/kqaa179.

health care workers.[29] There is no official mechanism for HICPAC or its workgroups to garner input from frontline health care workers, unions who represent them, or patients who will be impacted by the updated guidance. While public comment is also accepted when the final guidance document is posted in the Federal Register, it is essential for HICPAC/CDC to garner input from direct care health care workers, unions who represent them, and patients prior to finalization of guidance language and votes because they have insights regarding content, implementation, and language that will be key to the guidance being protective and effectively adopted after publication. Moreover, it is their health and safety that are at stake.

NNU Has Essential Input and Expertise

NNU's members work as registered nurses in a variety of health care settings, including hospitals, outpatient clinics, home health, public health, and correctional facilities. We have extensive experience providing care to patients with infectious diseases and implementing the measures needed to protect us and our other patients in those situations. We have the following summary recommendations to HICPAC/CDC in making updates to the 2007 *Isolation Precautions* guidance that we wish to discuss in further detail in a meeting.

1. **NNU urges HICPAC/CDC to fully recognize aerosol transmission of SARS-CoV-2 and other respiratory pathogens.**

HICPAC and the CDC should ensure that updated guidance includes the use of multiple control measures that have been shown to effectively prevent transmission of respiratory pathogens, such as SARS-CoV-2 and others, including:[30]

- Ventilation to remove aerosolized viral particles and other pathogens, including the use of negative pressure isolation and other engineering controls.[31]

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[29] U.S. Centers for Disease Control and Prevention, Healthcare Infection Control Practices Committee Roster (2022), Available at https://www.cdc.gov/hicpac/roster.html.

[30] Baker, M. et al. "Rapid Control of Hospital-Based Severe Acute Respiratory Syndrome Coronavirus 2 Omicron Clusters Through Daily Testing and Universal Use of N95 Respirators." *Clinical Infect Diseases* (Feb. 2022). https://doi.org/10.1093/cid/ciac113

Cheng, V.C.C., J.W.M. Tai, et al., "Prevention of nosocomial transmission of swine-origin pandemic influenza virus A/H1N1 by infection control bundle," J Hospital Infection, 2010, https://doi.org/10.1016/j.jhin.2009.09.009.

Escobar, D. et al. "Mitigation of a Coronavirus Disease 2019 Outbreak in a Nursing Home Through Serial Testing of Residents and Staff." *Clinical Infect Diseases* Vol. 72(9): e394-e396, Jul. 2021. https://doi.org/10.1093/cid/ciaa1021

Inkster, T., K. Ferguson, et al. "Consecutive yearly outbreaks of respiratory syncytial virus in a haemato-oncology ward and efficacy of infection control measures." *Journal of Hospital Infection*, August 2017, https://doi.org/10.1016/j.jhin.2017.05.002.

Liang En Wee and others, Enhanced Infection Prevention Measures Including Universal N95 Usage and Daily Testing: The Impact on SARS-CoV-2 Transmission in Cohorted Hospital Cubicles Through Successive Delta and Omicron Waves, *Clinical Infectious Diseases*, Volume 75, Issue 5, 1 September 2022, Pages 917–919, https://doi.org/10.1093/cid/ciac320

Macartney, K.K., M.H. Gorelick, et al. "Nosocomial respiratory syncytial virus infections: the cost-effectiveness and cost-benefit of infection control." *Pediatrics* 2000; 106:520–526. https://doi.org/10.1542/peds.106.3.520.

Ramzi A. Kilani. "Respiratory Syncytial Virus (RSV) Outbreak in the NICU: Description of Eight Cases." *Journal of Tropical Pediatrics*, April 2002. https://doi.org/10.1093/tropej/48.2.118

[31] Buising, K. et al. "Use of portable air cleaners to reduce aerosol transmission on a hospital coronavirus disease 2019 (COVID-19) ward." *Infect Control & Hosp Epid* (Jun. 2021). https://doi.org/10.1017/ice.2021.284.

- Respiratory and eye protection for health care workers providing care to patients with suspected or confirmed respiratory infections.[32]
- Safe staffing to ensure effective infection control and prevention. Updated CDC/HICPAC guidance must recognize that safe staffing is essential and must not make allowances for health care employers to circumvent measures necessary to protect worker and patient health due to staffing concerns.

2. **NNU urges HICPAC/CDC to maintain an approach in any updated infection control guidance that is clear and explicit on the precautions that are needed in situations where infectious pathogens are present or may be present in health care settings and to reject any crisis standards approaches.**

Butler, M.B., D. Sloof, et al., "Impact of supplementary air filtration on aerosols and particulate matter in a UK hospital ward: a case study," J Hospital Infection, Feb 23, 2023, https://doi.org/10.1016/j.jhin.2023.02.006

Lee, J.H. et al. "Effectiveness of portable air filtration on reducing indoor aerosol transmission: preclinical observational trials." J Hosp Infect Vol. 199:163-69, Sept. 2021. https://doi.org/10.1016/j.jhin.2021.09.012

Lindsley WG, Derk RC, Coyle JP, et al. Efficacy of Portable Air Cleaners and Masking for Reducing Indoor Exposure to Simulated Exhaled SARS-CoV-2 Aerosols — United States, 2021. MMWR Morb Mortal Wkly Rep 2021;70:972–976. DOI: http://dx.doi.org/10.15585/mmwr.mm7027e1external icon

Morris, A.C., K. Sharrocks, et al., "The Removal of Airborne Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Other Microbial Bioaerosols by Air Filtration on Coronavirus Disease 2019 (COVID-19) Surge Units," Clin Infect Dis, July 2022, https://doi.org/10.1093/cid/ciab933.

Pirkle, S., S. Bozarth, et al., "Evaluating and contextualizing the efficacy of portable HEPA filtration units in small exam rooms," AJIC, Aug 11, 2021, https://doi.org/10.1016/j.ajic.2021.08.003.

Thuresson, S., C.J. Fraenkel, et al., "Airborne Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) in Hospitals: Effects of Aerosol-Generating Procedures, HEPA-Filtration Units, Patient Viral Load, and Physical Distance," Clin Infect Dis, July 2022, https://doi.org/10.1093/cid/ciac161.

Ueki, H., M. Ujie, et al., "Effectiveness of HEPA Filters at Removing Infectious SARS-CoV-2 from the Air," ASM Journals, Aug 10, 2022, https://doi.org/10.1128/msphere.00086-22.

[32] Agah, R., J.D. Cherry, et al., "Respiratory Syncytial Virus (RSV) Infection Rate in Personnel Caring for Children With RSV Infections: Routine Isolation Procedure vs Routine Procedure Supplemented by Use of Masks and Goggles," JAMA Pediatrics, June 1987, doi:10.1001/archpedi.1987.04460060111049.

Bischoff, W.E., T. Reid, et al., "Transocular Entry of Seasonal Influenza–Attenuated Virus Aerosols and the Efficacy of N95 Respirators, Surgical Masks, and Eye Protection in Humans," J Infectious Diseases, 2011, https://doi.org/10.1093/infdis/jir238.

Dörr T, Haller S, Müller MF, et al. Risk of SARS-CoV-2 Acquisition in Health Care Workers According to Cumulative Patient Exposure and Preferred Mask Type. *JAMA Netw Open.* 2022;5(8):e2226816. doi:10.1001/jamanetworkopen.2022.26816

Gala, C.L., C.B. Hall et al., "The use of eye-nose goggles to control nosocomial respiratory syncytial virus infection," JAMA 1986 doi:10.1001/jama.1986.03380190076028.

Klompas et al. "Universal Use of N95 Respirators in Healthcare Settings When Community Coronavirus Disease 2019 Rates Are High." *Clinical Infectious Diseases*, Feb 2022, https://doi.org/10.1093/cid/ciab539

Lawton, Butler, and Peters, "Airborne protection for staff is associated with reduced hospital-acquired COVID-19 in English NHS Trusts," J Hosp Infection, Nov 29, 2021, https://doi.org/10.1016/j.jhin.2021.11.018

MacIntyre, C.R., Q. Wang, et al., "A cluster randomized clinical trial comparing fit-tested and non-fit-tested N95 respirators to medical masks to prevent respiratory virus infection in health care workers," Influenza and other respiratory viruses, 2011, https://doi.org/10.1111/j.1750-2659.2011.00198.x.

MacIntyre, C.R., A.A. Chughtai, et al., "The efficacy of medical masks and respirators against respiratory infection in healthcare workers," Influenza and other respiratory viruses, 2017, https://doi.org/10.1111/irv.12474.

3. **NNU urges HICPAC/CDC to maintain and strengthen respiratory protection and other protections for health care workers caring for patients with suspected or confirmed respiratory infections.**

N95 filtering facepiece respirators represent the *minimum* level of respiratory protection available and are essential to protecting health care workers from respiratory infections. HICPAC and CDC should clearly and explicitly incorporate elastomeric and powered air-purifying respirators (PAPRs) into any updated guidance on health care infection control. PAPRs and elastomeric respirators can provide a higher level and more reliable protection than N95s, be more comfortable to wear, and more cost-effective for employers to implement.[33]

4. **NNU urges HICPAC/CDC to actively engage with direct care health care workers, their unions, patients, and community members to provide them with the ability to review and provide essential input into guidance updates.**

Ultimately, HICPAC/CDC creates national guidance that deals with patient and worker health and safety as it pertains to infectious diseases in health care settings. Thus, to create effective guidance, it is essential to have balanced representation from the professional fields and stakeholder groups impacted by the issue, including direct care registered nurses and the unions that represent them and experts in occupational health, industrial hygiene, respiratory protection, and aerosol dynamics.

In Conclusion

CDC's guidance shapes practices in health care facilities across the country, impacting the conditions under which our members care for their patients. RNs provide hands-on, direct patient care and are often the primary clinicians carrying out isolation precautions to protect their patients, themselves, and their coworkers. As such, we feel it is vital that our members' input is incorporated into HICPAC/CDC's updates to the 2007 *Isolation Precautions* guidance. We are concerned about the direction HICPAC appears to be headed and the lack of an effective process to engage stakeholders such as ourselves. We welcome the opportunity to engage with you as you embark in your new leadership role. Please do not hesitate to reach out to schedule a meeting or with any follow up questions.

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