Policy Recommendations for Protecting Healthcare Workers from Future Airborne Infectious Disease Threats: Lessons Learned from the COVID-19 Pandemic

Executive Summary

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The United States (U.S.) was slow in responding to the emerging threat of the SARS-CoV-2 (COVID-19) pandemic, at a time when inaction would be consequential for both the health and safety of the public, and the health, safety, and well-being of American frontline healthcare workers[1]. When mitigation strategies to prevent undue death were most desperately needed, the U.S. was woefully and unnecessarily unprepared, lost valuable time, and responded in a manner that fell far short of public health expert expectations.[2] The COVID-19 pandemic created unprecedented challenges for the U.S. healthcare system, and in turn, exposed significant vulnerabilities throughout the healthcare delivery system. Not least among the vulnerabilities was the inability to protect frontline healthcare workers from the risks of death and disease from a novel airborne infectious disease.

It would seem as if the COVID-19 pandemic exposed a threat of which the nation was unaware; but rather it simply exacerbated a well-known risk and exposed the lack of commitment and political will or stamina to make preparing for a pandemic of this nature a top and ongoing national priority. Nurses on the frontlines of the pandemic, adhering to the American Nurses Association (ANA) Code of Ethics[3], placed the needs of America's most vulnerable and critically ill population ahead of their own personal health and safety, while providing care during this extraordinary time in history. Many nurses have found themselves in a quandary conflicted between equal, but competing, obligations of their duty and commitment to serve patients, along with duty to protect oneself. While nurses are accustomed to providing care

1. Frontline healthcare workers refers to any employee, regardless of occupation who may be exposed to a known or potential COVID-19 patient in any facility where health services are provided.
2. Ryan Goodman, & Danielle Schulkin, "Timeline of the Coronavirus Pandemic and U.S. Response," *Just Security* (Reiss Center on Law and Security at New York University School of Law.) May 18, 2021. https://www.justsecurity.org/69650/timeline-of-the-coronavirus-pandemic-and-u-s-response/
3. American Nurses Association, *Code of Ethics for Nurses: with Interpretive Statements*, (Maryland: American Nurses Association, 2015).

in high-risk situations, placing nurses at increased risk due to insufficient personal protective equipment (PPE) and other workplace protections not only jeopardizes the nurse's safety, but also that of their loved ones and the patients whom they serve.

Beginning with the passage of the Occupational Safety and Health (OSH) Act of 1970[4], American workers have been afforded the reasonable expectation of workplaces free from hazards that are detrimental to their health and safety. According to the U.S. Census Bureau, healthcare remains the largest U.S. employer, with more than 20 million Americans employed in the healthcare and social services sector.[5] Of those, according to data from the National Council of State Boards of Nursing (NCSBN), more than 4.3 million are Registered Nurses.[6] Despite it being the largest employment sector and the industry with the highest reported number of workplace illnesses and injuries,[7] the Occupational Safety and Health Administration (OSHA) has historically appeared reluctant to regulate workplace health and safety in the healthcare industry, with the same urgency and vigor as other industries.

Notwithstanding the OSH Act, it became clear early in the COVID-19 pandemic that the current workplace safety standards pertaining to PPE and environmental protections were not robust enough or effective to ensure federal protections for healthcare workers in response to this emerging airborne infectious disease; thus, quickly placing them in grave danger. At the time of this writing, the Centers for Disease Control and Prevention (CDC) reported 896,964 cases of

4. For more information on the OSH Act of 1970 see 29 U.S.C. § 651-678 at https://www.law.cornell.edu/uscode/text/29/chapter-15
5. Earlene K. P. Dowell, "Census Bureau's 2018 County Business Patterns Provides Data on Over 1,200 Industries," United States Census Bureau, October 14, 2020, https://www.census.gov/library/stories/2020/10/health-care-still-largest-united-states-employer.html
6. National Council of State Boards of Nursing, "Active RN Licenses: A Profile of Nursing Licensure in the U.S." Accessed on January 20, 2021, https://www.ncsbn.org/6161.htm.
7. Occupational Safety and Health Administration, "Healthcare," 2017, https://www.osha.gov/healthcare

COVID-19 among healthcare workers, with 3,509 deaths.[8] While this number is vastly underestimated due to limited disease surveillance specific to occupation, it provides sufficient evidence to support the need for improved, enforceable workplace standards.

Despite limited workplace protections[9] from biological hazards in healthcare, OSHA has acted in the past in response to a new and emerging threat. This was demonstrated with the promulgation of the Bloodborne Pathogens Standard that went into effect on March 6th, 1992, in response to a hepatitis B epidemic that was plaguing the U.S. Hepatitis B was dubbed the "healthcare workers disease" by labor unions representing healthcare and service workers.[10] The disease infected hundreds of thousands, severely incapacitated tens of thousands, killed more than 5,000, and resulted in approximately one million chronic carriers of the disease. Despite the prevalence of the disease and threat to healthcare workers, it took decades to enact universal precautions as the healthcare industry workplace gold standard.[11] The Bloodborne Pathogen (BBP) Standard recognized the necessity of mandated regulations and enforcement rather than voluntary guidance. The BBP standard became known as one of the most successfully implemented standards in OSHA history, changing the way healthcare was delivered and in turn, saving the lives of an untold number of healthcare workers.[12] The requirements of the standard combined with the enforcement of compliance by healthcare employers, resulted in a substantial

8. Centers for Disease Control and Prevention, "COVID Data Tracker," Accessed February 2, 2022.
9. OSHA's enforcement of workplace safety and health standards for healthcare workers have historically relied upon the General Duty Clause of the OSH Act, providing that all employers have a general duty to provide a workplace free from known hazards that pose a risk for severe illness, injury, or death. The Bloodborne Pathogen Standard is the only healthcare specific workplace safety standard that gives OSHA enforcement tools beyond the General Duty Clause.
10. William A. Muraskin, "The Role of Organized Labor in Combating the Hepatitis B and AIDS Epidemics: The Fight for an OSHA Bloodborne Pathogens Standard," *International Journal of Health Services* 25, no. 1 (1995): 129-152. https://www.jstor.org/stable/45130196
11. Muraskin, "The Role of Organized Labor in Combating the Hepatitis B and AIDS Epidemics," 129.
12. Robert C. Scott and Alma S. Adams, *Letter to The Honorable Eugene Scalia,* United States House of Representatives Committee on Education and Labor, January 30, 2020, 2.

decline in risk of healthcare workers becoming infected with hepatitis or AIDS in the workplace.[13] Thus the precedent for OSHA to act to protect healthcare workers has been established. The ongoing threat from COVID-19 and future respiratory infectious disease threats cannot be overstated; nurses cannot afford to wait decades for additional workplace protections required by law.

In the aftermath of the 2009 H1N1 pandemic, OSHA began the rulemaking process for an airborne disease standard; however, progress toward this standard was halted in the Spring of 2017 with it being removed from the list of active rulemaking and being placed on "long-term actions" list within the Department of Labor (DOL), ceasing all further activity.[14] (For more on the rulemaking process, see appendix A.) Had OSHA fulfilled its responsibility to complete this standard, the risk to healthcare workers during COVID-19, the most unprecedented, massive workplace health crisis in recent history, could have been mitigated. This standard would have required healthcare facilities to, at a minimum have written comprehensive infection prevention plans for responding to an airborne infectious disease outbreak, in addition to sufficient PPE stockpiles, including N95 respirators, that were readily available and accessible for healthcare workers to safely provide care to these highly infectious patients.[15] (For additional background on methods to mitigate airborne infectious diseases, see Appendix B.)

13. David Michaels and Gregory R. Wagner, "Occupational Safety and Health Administration (OSHA) and Worker Safety During the COVID-19 Pandemic," JAMA 324, no.14 (2020): 1389-1390. https://doi.org/10.1001/jama.2020.16343.
14. Michaels, "OSHA and Worker Safety During the COVID-19 Pandemic," 1389.
15. Michaels, "OSHA and Worker Safety During the COVID-19 Pandemic," 1390.

For all the sacrifices nurses and other healthcare workers have made thus far in the COVID-19 pandemic, legally required workplace protections have failed them; and unfortunately, there does not appear to be substantial advancements toward future protection. While the emergency temporary standard[16] (ETS) issued June 21, 2021, was deemed a positive step forward, it took nearly 18 months into a deadly pandemic to be issued. The ETS was then stripped of all workplace protections, except reporting, six months later in December 2021 without being replaced by a permanent standard and at a time when a new variant of COVID-19 was rapidly spreading across the U.S. once again overwhelming the U.S. healthcare system.

Four possible policy steps for mitigating the risk of COVID-19 and future airborne infectious disease to healthcare workers, based upon an examination of lessons learned thus far in the COVID-19 pandemic are:

1. OSHA should immediately reinstate and enforce the COVID-19 Healthcare ETS until it is superseded with a permanent infectious disease standard.
2. Congress must act in a timely manner to protect the health and safety of healthcare workers.
3. OSHA could revise and expand 29 CFR 1910.134, Respiratory Protection Standard under 1910 Subpart I Personal Protective Equipment, to include specific requirements for the healthcare industry in addressing airborne biological hazards.

16. 16 Under the OSH Act of 1970, OSHA is granted authority to bypass the traditional, lengthy process of rulemaking, to implement an Emergency Temporary Standard in instances where it can be demonstrated that exposures to a newly identified workplace hazard places workers in "grave danger" *and* the standard is necessary to protect them. An ETS is enforceable immediately upon publication in the *Federal Register* and remains in place for six months, until it is replaced and superseded by a permanent standard.

4. Implement airborne infectious disease standards at the state level with oversight and enforcement by State Occupational Health and Safety Plans in all states and U.S. territories.

These recommendations are aimed toward strengthening protections for health and safety of healthcare workers in the workplace throughout the extent of the COVID-19 pandemic, and against future infectious disease threats. These recommendations are prioritized and presented in the order of most to least desirable and are rooted in the theory of evidence-informed health policy. Future airborne infectious disease threats are inevitable. The cost of inaction will be realized in the health and safety risks to all healthcare workers and avoidable workplace illnesses and deaths.

For further rationale on these recommendations, please refer to the full policy paper, *Policy Recommendations for Protecting Healthcare Workers from Future Airborne Infectious Disease Threats: Lessons Learned from the COVID-19 Pandemic.*