Concise Communication

Respiratory protection for health professions students must be addressed in light of lessons from the coronavirus disease 2019 (COVID-19) pandemic

Elizabeth L. Beam PhD, RN
University of Nebraska Medical Center, College of Nursing, Omaha, Nebraska

Abstract

One of the challenges the COVID-19 pandemic put before health professions programs in the United States was how to keep students clinically in patient care. With years of impact from coronavirus and growing numbers of variants, a long-term solution to respiratory protection for health professions students is needed.

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One of the major challenges the coronavirus disease 2019 (COVID-19) pandemic put before health professions programs in the United States was safely keeping students engaged clinically in patient care. The initial reaction was to simply transition to online learning and finish the semester, but that was never a long-term solution, particularly as the pandemic lingered beyond a single semester. With the likelihood of several years of coronavirus impacts and its growing number of variants in clinical care, a long-term solution to respiratory protection for health professions students is needed.

Coronavirus is not the first pandemic airborne transmission challenge in healthcare, and it will not be the last. As recently as 2009, H1N1 challenged our healthcare system and drew attention to healthcare worker safety. Lessons were learned in higher education; however, that challenge did not rise to the need of equipping students with respiratory protection to provide care for H1N1 patients. Historically, few everyday clinical situations have required N95 filtering facepiece respirators for students, and clinical placements could be arranged that did not require the additional respiratory protective equipment. Health professions students existed in a gray area of many organizations’ occupational health arena, and many were not part of their organizational respiratory protection program. Thus, the learning related to respiratory protection in healthcare education was limited to didactic material or literature in many cases. Students might not experience direct respirator education from a competent professional until their first employment experience outside school during the fit-testing process.

A complete fit-testing process includes medical review, respirator education, and the fit-testing process itself. Fit testing should be part of a larger respiratory protection program that includes options if a respirator fit is not achievable. Such a program may include maintaining supplies and equipment for a powered air-purifying respirator option for students. During the pandemic, qualitative fit testing was prioritized to prevent wasting respirators for the fit-testing process, but quantitative fit testing does not rely on the taste of bitter or sweet to determine fit. The quantitative fit test requires pushing a grommet through the respirator material. The expense for quantitative fit-testing equipment is significant for the devices themselves, maintenance, and personnel to run them. Equipment from vendors can be expensive and may not adhere strictly to the Occupational Safety & Health Administration (OSHA) requirements for high throughput.

Airborne and contact precautions are now required in many clinical areas of the hospital with COVID-19 patients or areas of substantial risk, and health professions students are part of these care teams. Frequent use also occurs in settings in which respirators were seldom used previously, such as ambulatory care, nursing homes, and dental clinics. The students in those settings during the pandemic were learning something completely new right along with the clinical care providers, the student’s preceptors. Some health professions students do clinical rotations in multiple health-care facilities depending on their program and the requirements for accreditation, so an institution-based approach to respiratory protection programs for health professions students is difficult.

Depending on the size of the institution and number of health professions programs, the fit testing needs may be significant. Fit testing is a complex process that assures that the student’s face shape fits the OSHA-approved respirator available to them. Supply shortages related to the COVID-19 pandemic meant that many organizations were not able to purchase Food and Drug Administration (FDA)-approved surgical N95 respirators and had to settle for equipment that had an emergency-use authorization. These respirator stockpiles purchased for the pandemic could be wasted when the emergency-use authorizations are no longer valid. With the emergency-use authorization, these nonmedical
respirators could be used but would require a face shield or a surgical mask over them due to the lack of protection from droplets or liquid splash in healthcare environments.

What is the future of respiratory protection for health professions students? Will health professions programs be required to ensure the safety of their students related to respiratory protection? Is this a function for student or occupational health? How do health professions programs create or purchase the health informatics needed to track and record the student medical review, fit test, and appropriate respirator? Can students be charged for their fit testing as a student fee? Do health professions programs have the buying power to acquire appropriate respiratory protection during times of crisis? Are health professions programs expected to fit test annually? How can the health professions program assure and document to an external clinical site that the student’s respiratory protection is adequate for the clinical risk? If teaching faculty are used to provide the technical elements of the qualitative or quantitative fit testing, how do we ensure their continued competency in providing this essential component of health professions student safety? Should there be standards for health professions schools related to respiratory protection programs?

These questions remain a challenge for health professions programs as we consider the extended effects of the COVID-19 pandemic and how they will impact our students’ clinical experiences. Another hospital surge is likely as we continue to see severe illness in patients with exposure to coronavirus variants. Vaccination hesitancy and breakthrough infections will affect our healthcare situation for years to come. These issues need to be acknowledged and addressed by health professions administrators and educators moving forward.

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