

## Promoting PPE Education Safely Through In-Person and Virtual Simulation in the Midst of a Pandemic

### Introduction/Background

The COVID19 pandemic led to limitations in student and resident exposure to bedside teaching opportunities. Additionally, the pandemic incited fear of contamination, need for continuous personal protective equipment (PPE), and the desire to find ways to increase provider safety. While providers use gowns, gloves, and masks in the clinical setting, PPE as used for contagions was not a part of the staffs normal operating procedure.

### Curricular Design

Our goal was to provide PPE education and practice to our staff to promote safety, increase comfort with application of PPE, and emphasize the importance of the steps in the process. Additionally, we wanted to provide opportunities for medical students and residents to be involved in the educational process. Our group quickly mobilized to create simulation-based training. We utilized already recorded videos on application of PPE and created a checklist, PPE picture flow chart, and frequently asked questions form to enhance the educational process. During the sessions, staff viewed a PPE video, questions were answered and then each staff simulated donning and doffing PPE in front of the group. To conserve PPE, props were used to simulate PPE equipment (robes for gowns, gloves from home for latex gloves, cloth masks for N95 masks, sunglasses for goggles). Steps were emphasized as each learner watched the other learners don and doff. The check list was used by instructors to provide feedback to the staff and to assure that everyone was following the PPE process accurately. Medical student and resident instructors were paired with a faculty instructor for the sessions. There was a faculty instructor (Physician, Nurse, or Office of Education PPE Expert) available for every session. For new intern orientation the process was adjusted to accommodate zoom simulation. The interns watched videos prior to their simulation session. Each session was scheduled for 15 minutes. The session started with answering questions and a reminder of the different steps of donning and doffing. Then the learner walked through the steps of placing PPE with props from home or from their zoom site. Adjustments were made through feedback. We used these PPE simulation-based training sessions to train pre-health students, medical students, residents, nurses and physicians from multiple specialties. Additionally, we used simulation to provide opportunity to practice intubation in PPE and to test the practicality of intubating hoods.

### Impact/Effectiveness

The simulations underscored the importance of practice for proficiency in the use of PPE. For high acuity (high stress) processes that providers do not have a lot of exposure to, providing simulated practice is a necessity in order to promote confidence and improve skills. In the future we should do yearly check offs of proper PPE to ensure that we are better ready to protect our health care workers during a pandemic. Additionally, next steps for this curriculum is to add a component of high-fidelity simulation in which providers need to practice proper PPE application imbedded in a case scenario.

