

# Health Professions Education Institute (HPEI)

**Title:** The ICU Guide: Made by Residents, for Residents

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## WORKS IN PROGRESS

*Background/Needs Assessment:* Internal survey data of medicine residents at AHWFBH suggests that most feel minimally or not at all confident about ventilator management in the ICU. Similarly, educational curriculum regarding vasopressor and sedation administration is not currently well established within our residency program. The COVID-19 pandemic has helped to highlight the need for better understanding of care surrounding the ventilated ICU patient.

*Objectives:* We seek to create an asynchronous curriculum for internal medicine residents to bridge these knowledge gaps in the care of the critically ill.

*Methods/Description of Program:* This curriculum will include educational cards and videos created by internal medicine residents to prepare colleagues for their rotations in the medical ICU, with a particular emphasis on mechanical ventilation. These resources will address ventilator modes and functions, ventilator weaning, pearls for troubleshooting the ventilator, vasopressor initiation and indications for use, and best practices for sedation/analgesia. Pre- and post-implementation surveys will be used to assess the impact of the new curriculum on resident knowledge and confidence in management of mechanical ventilation and the critically ill patient. Knowledge assessments will use a validated questionnaire developed to assess the education level necessary to provide effective care for ventilated patients<sup>1</sup>.

*Anticipated Results/Evaluation Plan:* Efficacy of the intervention will be assessed by comparing pre- and post-ICU rotation test scores before and after implementation of the asynchronous curriculum. Test results will be further stratified by resident year to determine efficacy across different levels of medical experience. We anticipate higher post-rotation test scores with this new curriculum.

*Next Steps:* These test results will help to establish the effectiveness of new educational materials created and how to guide future revisions. Future testing regarding the efficacy of the vasopressor and sedation curriculum will be planned for the upcoming year to decrease testing burden and increase ventilation survey participation. Ideally, the curriculum will continue to evolve as resident feedback and testing guides how best to present challenging topics for residents to promote effective learning and therefore optimal care for our ICU patients.

1. Cox CE, Carson SS, Ely EW, Govert JA, Garrett JM, Brower RG, Morris DG, Abraham E, Donnabella V, Spevetz A, Hall JB. Effectiveness of medical resident education in mechanical ventilation. *Am J Respir Crit Care Med.* 2003 Jan 1;167(1):32-8. doi: 10.1164/rccm.200206-624OC. Epub 2002 Sep 25. PMID: 12406827.