

ATS Highlights 2026: Critical Care Assembly Early Career Professionals



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Tell us about yourself.

I am a critical care nurse and clinician-scientist at Penn. My research, informed by my ongoing surgical ICU practice, focuses on sedation and nursing workforce factors to optimize team structure and improve patient outcomes.

Is your research clinical, basic science, or translational?

Translational. I use mixed methods and EHR data to close the evidence-practice gap by studying sedation workflows and the impact of nursing workforce factors, like assignments and copatient acuity, on critical care.

Tell us about your research.

I study the systemic barriers to implementing evidence-based sedation (like SATs) and how interdisciplinary dynamics shape those decisions. Concurrently, I analyze nurse-patient assignments, continuity, and copatient acuity as system-level levers to enhance ICU quality.

Where do you see yourself in 5 years?

Leading a funded research program focused on advancing nurse-driven, human-centered interventions to optimize ICU workflows. I will also continue mentoring the next generation while maintaining my clinical practice at the bedside.

How has the Critical Care Assembly contributed to your career?

The Assembly has been crucial for my development, providing interdisciplinary mentorship and vital collaborations that directly shaped my research in sedation and nursing workforce science.



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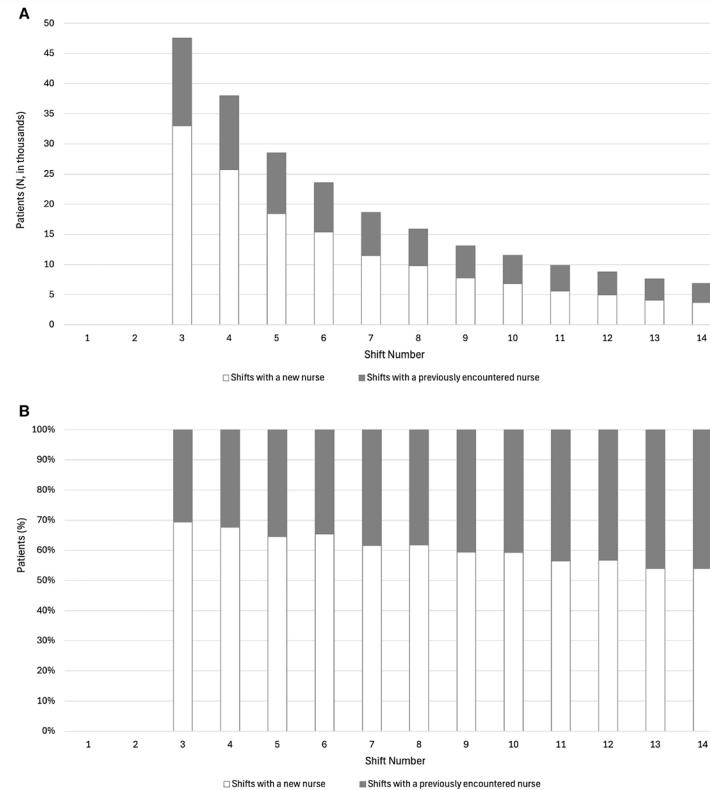


Figure 2. Distribution of nurse continuity by shift.

(A) Number of patients with nurse continuity by shift.
(B) Percentage of patients with nurse continuity by shift.

Association between Nurse Continuity and Mortality in the Intensive Care Unit

Rationale: Continuity of nursing care is highly valued in the intensive care unit (ICU), but its impact on patient outcomes remains unclear.

Objectives: To investigate the relationship between nurse continuity and mortality among ICU patients.

Methods: We performed a retrospective cohort study using electronic health records from 38 ICUs across 18 hospitals between 2018 and 2020. Cumulative nurse continuity was defined at the shift level as the proportion of 12-hour shifts in which the patient received care from a nurse who had previously provided care to them, up to and including the present shift. Employing a landmark analysis framework, we used logistic regression to assess the relationship between in-hospital mortality and cumulative nurse continuity at each shift, adjusting for potential confounders.

Results: The study included 47,564 ICU patients. In-hospital mortality was 10.4%. Average cumulative nurse continuity increased from 10.2% at shift 3 to 34.2% at shift 14. In the regression models, increasing cumulative nurse continuity was associated with a modest but statistically significant increase in mortality in some but not all shifts. The results were robust to sensitivity analyses, including limiting the cohort to patients receiving mechanical ventilation, excluding patients admitted during the COVID-19 pandemic, using different measures of continuity, and treating continuity as a time-varying covariate using proportional hazards regression.

Conclusions: Nurse continuity was not associated with lower mortality and may lead to increased mortality in some settings. Further research is needed to understand the mechanisms underlying the association between nurse continuity and ICU outcomes.

Citation: Connell KA, Davis BS, Kahn JM. Association between Nurse Continuity and Mortality in the Intensive Care Unit. Ann Am Thorac Soc. 2025 May;22(5):742-748. doi: 10.1513/AnnalsATS.202406-603OC. PMID: 39965150; PMCID: PMC12051911.