



# Improving Emergency Department-to-Intensive-Care-Unit Admission Flow

GENELINE BARAYUGA  
CHOKEY MIGMAR  
FRANCELIA THOMAS  
BERNADETTE SPRINGER  
ERIC PETERSON  
JONATHAN NOVER

\*Author affiliations can be found in the back matter of this article

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ABSTRACT



**Problem:** Countless studies conclude that the longer an admitted patient boards in an Emergency Department (ED), the greater the risk for negative outcomes such as falls and hospital-acquired conditions. ED patients waiting for admission to the Intensive Care Unit (ICU) may be at the greatest risk as they are categorized as critical. However, transporting critical patients from the ED to the ICU requires coordination of multiple clinicians from both units, which can lead to delays.

**Objective:** The ED and ICU teams at Mount Sinai Queens, a 165 bed hospital with 70,000 annual ED visits in Queens, NY, performed a quality improvement project by developing a collaborative approach between the ICU and ED charge nurses to reduce the median boarding time below 40 minutes.

**Approach:** In February 2023, we piloted a practice change for escorting patients from the ED to the ICU. Prior to the pilot, an ED nurse and ICU provider would escort the patient. During the pilot, an ICU nurse and ICU provider would present to the ED when the ICU bed was clean and escort the patient.

**Methods:** A retrospective review was conducted of all ED-to-ICU admissions, analyzing electronic medical record time stamps for “Bed Ready” to “Bed Occupied” status. We compared median boarding times in the pre-pilot period from January 2022 to January 2023 (N = 650) with the pilot period from February 2023 to July 2023 (N = 319).

**Results:** The pre-pilot average of the monthly median boarding times was 64 minutes. During the pilot period, the average of the monthly median boarding time was 49 minutes, outperforming the 40 minute goal in May (37 min) and July (39 min). ICU and ED patient volumes were similar during the pilot and pre-pilot periods.

**Conclusion:** This quality improvement project found that an ICU nurse and provider response to the ED to escort ICU patient admissions had a positive impact on reducing ED boarding time for ICU admissions. A newly added ICU Charge Nurse role was a key factor that enabled the ICU team

**CORRESPONDING AUTHOR:**  
**Geneline Barayuga**

Mount Sinai Queens, United States

[geneline.barayuga@mountsinai.org](mailto:geneline.barayuga@mountsinai.org)

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to perform this additional task. The ED nursing team expressed feeling less pressure since they did not have to leave other patients under their care to transport ICU admissions.

## COMPETING INTERESTS

The authors have no competing interests to declare.

## AUTHOR AFFILIATIONS

**Geneline Barayuga**

Mount Sinai Queens, United States

**Chokey Migmar**

Mount Sinai Queens, United States

**Francelia Thomas**

Mount Sinai Queens, United States

**Bernadette Springer**

Mount Sinai Queens, United States

**Eric Peterson**

Mount Sinai Queens, United States

**Jonathan Nover**

Mount Sinai Queens, United States

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