

**Title:** Bringing Virtual ICU Support to the Emergency Department (ED) During Times of Patient Boarding

**Authors:** Kimberley DuBose, FACHE; Stephen Klahn, FACHE; Johnie Leonard; Dr Benjamin Saldana

**Program objectives:**

- Expedite ICU/IMU plan of care for ED patients
- Create capacity in ICU/IMU by downgrading ED patients where possible
- Aligning ICU admit criteria with appropriate bed assignment (right patient, right place)
- Giving support to ED RN with care outside specialty

**Planning/research methods**

A collaborative team consisting of members from the Emergency Department, Telemedicine, ICU/IMU, Centralized Bed Management and Throughput Nurse Practitioners, completed a needs analysis of patients waiting in the ED for ICU/IMU beds. Within this analysis, the group looked at what was needed to best progress the patients plan of care, opportunities for downgrading patients through targeted and resourced progression of care as well as opportunities for partnering ED staff alongside staff with deeper critical care experience in order to better serve the patients boarding in the ED.

**Implementation methods**

The triad of people, process and technology were the focus of implementation efforts. Improvements included a standardized workflow development between all key players along with education of their roles. Work was done to align the EPIC workflow for quick identification of qualifying ED patients (all ICU/ IMU patients with consults) and an EPIC build for data management of the communication and workflow inclusive of consults, notes and reports. Finally, and most critically impactful, was the integration of virtual care carts with extremely robust technology for ICU providers to see, interact and support local ED staff at bedside with a simple click of a button.

**Results**

During the course of a two-month pilot, an estimated net of 75 new ICU case beds were made. Thirty-one of these were from downgrades in care while in the ED and forty-four of these from ICU length of stay reductions resulted from targeted care plan enhancements. Result was that the hospital experienced stable ED to ICU patient volume despite overall higher patient volumes and was afforded an increase in external ICU transfer volume to an annualized estimated net contribution margin of \$4.5M. In addition, from a feedback survey, ED staff reported an 85% top favorability with the added support outside their specialty area in the care their ICU patients.