

How Efficient is Telemedicine at QI in the Critical Care Setting?

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INTRODUCTION

Technology use in the healthcare setting gives healthcare providers the tools needed to supplement safe and high-quality patient care.

Telemedicine is a quickly evolving technology that improves access and convenience to healthcare for patients using video and/or audio with smartphones and computers (Hasselfeld, 2022).

Telemedicine is not limited to patients who seek remote care in an outpatient setting. It is also for remote providers who take care of more critical inpatient clients.

“Tele-ICU or e-ICU is the provision of critical care by a critical care provider(s) via a computer and audiovisual or telecommunication system” (Vincent, 2018, p. 691.)

SIGNIFICANCE

- It has been estimated that full implementation of a tele-ICU system in community hospitals nationwide could prevent between 5,400 and 13,400 deaths and potentially save \$5.4 billion annually in the US” (Vincent, 2018, p. 693).
- “Each year, approximately 6 million people in the US are admitted to an intensive care unit, accounting for roughly 30% (67\$ billion) of total hospital costs” (Vincent, 2018, p. 691).

POSITION STATEMENT

The use of Telemedicine in the critical care setting has improved emergency access to intensivists during a time of physician shortages.

The use of telemedicine in the critical care setting has improved care quality, safety, and patient access to physicians, all while remaining as a cost benefit for hospitals that utilize Tele-ICU/e-ICU services.

SUPPORT FOR POSITION

Tele-ICU care has been shown to decrease overall length of stay (LOS) in the ICU (Vincent, 2018, p. 692)

- Reduction of LOS from 1-2 days
- Some studies have found significant improvements in rates of mortality (Vincent, 2018, p. 692)
- Pre-intervention of 7.9% versus Post intervention of 3.9% (Cole et al., 2019, p. 34)

“A study found that prior to implementation, 67% of ICU physicians and nurses believed that tele-ICU coverage could enhance ICU quality of care” (Vincent, 2018, p. 694).

- Post-implementation (of Tele-ICU) 82.3% reported increased quality of care
- 94% (of ICU Nurses) found that collaboration was facilitated by tele-ICU and overall communication between intensivists improved

IMPLICATIONS FOR PRACTICE

“Hospitals that employed the use of telehealth in their ICUs generated substantial return-on-investment and improved clinical quality outcomes” (Cole et al., 2019, p. 34)

“As the US population continues to age, the need for ICU providers has risen significantly, leading to a shortage of critical care providers” (Vincent, 2018). Tele-ICU services allow for 24/7 access to critical care physicians.

ICU-related admissions have accounted for almost \$80 billion annually and for 20% of deaths that occur in hospital settings (Cole et al., 2019, p. 31).

“Several studies have suggested that the initial set up and annual operating costs are offset by approximately \$1–2 million saved annually through overall decreased ICU LOS” (Vincent, 2018, p. 693).

Tele-ICU encourages strict adherence to best practices. These practices include avoiding iatrogenic complications, stewardship of antibiotics, decreasing utilization of blood transfusions. (Vincent, 2018, p. 693).



(Hicuity Health, 2019)

CONCLUSION

Telemedicine has improved the quality of care provided to critical patients in Intensive Care Settings in the United States.

Programs and telehealth services such as Tele-ICU, have decreased length of stay durations of patients in the ICU. Some services have even been able to decrease rates of mortality in the ICU setting. Cost savings have also resulted from decreased lengths of stay.



(Clew Med, 2020)

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