

# Right Care at the Right Location: Retrospective Review

## BACKGROUND

- Through ECU Tele-ICU services, providers at regional hospitals in the ECU Health system can seek intensivist guidance on management of ICU patients, improving patient care and decreasing unnecessary transfers.
- Consultation rate for patients meeting inclusion criteria for Tele-ICU consultation is suboptimal, and many patients receiving consultation could receive it sooner.
- The purpose of this project is to demonstrate benefit of early Tele-ICU consultation to regional hospitals and patients by demonstrating reduced ventilation length-of-stay in patients receiving early Tele-ICU consultation.

## PROJECT AIM

- To decrease the ventilator length-of-stay of regional ICU patients receiving Tele-ICU consult by 5% by Jan 15, 2024.

## PROJECT DESIGN/STRATEGY

Mechanical ventilation data collected via retrospective chart review and data screening tool was analyzed comparing ventilator length-of-stay, or “vent-days,” of patients receiving early Tele-ICU consult and than those receiving late Tele-ICU consult.

\*Early consult = consultation within 48 hours of ICU admission. Late consult = consultation after 48 hours of ICU admission.



## LESSONS LEARNED

- Early consult with the Tele-ICU program drastically lowers the amount of time patients spend on mechanical ventilation, lowering risk of ventilator-associated issues such as diaphragmatic dysfunction, ventilator associated pneumonia, sepsis, and others.
- Consultation also lowers probability of unnecessary transfer to ECUHMC, as mechanical ventilation can be adequately managed at regional hospitals through utilization of Tele-ICU services.

## NEXT STEPS

- Continue analyzing data on efficacy of Tele-ICU consultation, especially regarding management of patients meeting inclusion criteria for consult.
- Determine if data continues to demonstrate improvements in intensive care management at community hospitals resultant of consult.
- Promote further adoption and utilization of Tele-ICU services within the ECU Health System, given its direct improvement of patient care and prevention of unnecessary transfers.

## ACKNOWLEDGEMENTS

- ECU Health Tele-ICU consult team

## Results (n=29)

|                        | Late Consult (n=17) | Early Consult (n=12) |
|------------------------|---------------------|----------------------|
| Average Vent-Days      | 7.58                | 3.59                 |
| Vent-Days Post Consult | 2.42                | 3                    |

## RESULTS/OUTCOMES

- Early Consult patients were on mechanical ventilation for an average of 3.99 days less than Late Consult patients.
- This demonstrates a **52.64% reduction in vent-days for Early Consult patients vs. Late consult patients**, achieving and surpassing our goal of 5% reduction.
- On many occasions, patients were taken off mechanical ventilation as a direct consequence of Tele-ICU consult.
- Given the Late-Consult group’s average vent-days of 7.58 days and average “vent-days after consult” time of 2.42 days, **our data suggests early consultation could have saved ~3-4 days of mechanical ventilation per patient.**