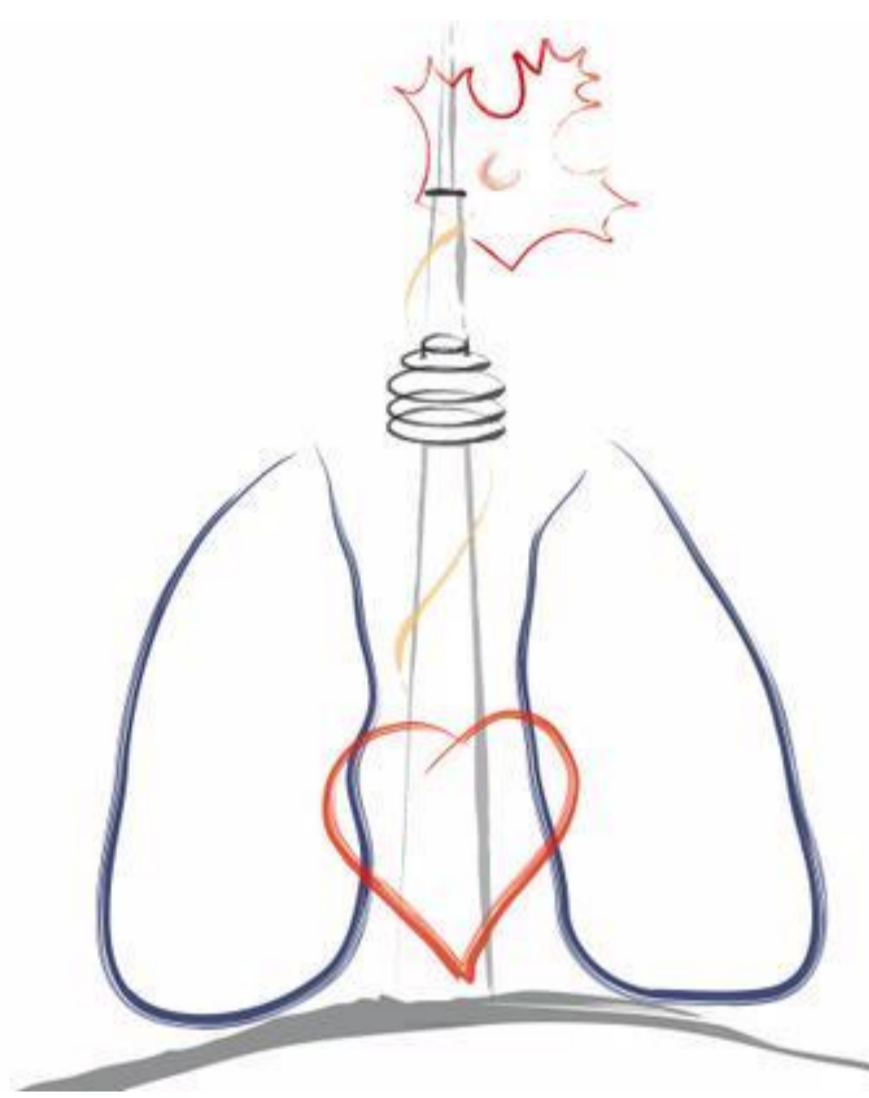


# Improving rates of Spontaneous Breathing Trials. A Quality Improvement initiative



## INTRODUCTION

Spontaneous breathing trials (SBTs) are an evidence-based strategy to facilitate liberation from invasive mechanical ventilation.<sup>1</sup> However, its implementation has been suboptimal.<sup>2-5</sup>

At baseline, 62% of the patients at Toronto General Hospital medical-surgical ICU had an SBT done.

Root cause analysis identified the main causes for not performing SBTs:  
 1. The patient safety screen was not applicable for patients on Extracorporeal Membrane Oxygenation (ECMO)  
 2. Misinterpretation of eligibility criteria.

## OBJECTIVES

We aimed to increase the percentage of SBTs performed in eligible patients at TGH medical-surgical ICU to 90% by December 15, 2023.

## METHOD

An interrupted time series study was completed between September 25, 2022, and October 01, 2023, at TGH medical-surgical ICU.

### Interventions

- We adapted the patient safety screen to include patients on ECMO.
- We implemented an education bundle (education sessions and visual cognitive aids)

**Outcome Measure:** weekly percentage of SBTs performed in eligible patients.

### Process Measures:

- Monthly percentage of SBTs done in patients supported with ECMO.
- Percentage of respiratory therapists (RTs) that attended the education sessions.

**Balancing Measure:** Increase in RTs daily workload (3-question survey assessing multiple domains).

## AUTHORS

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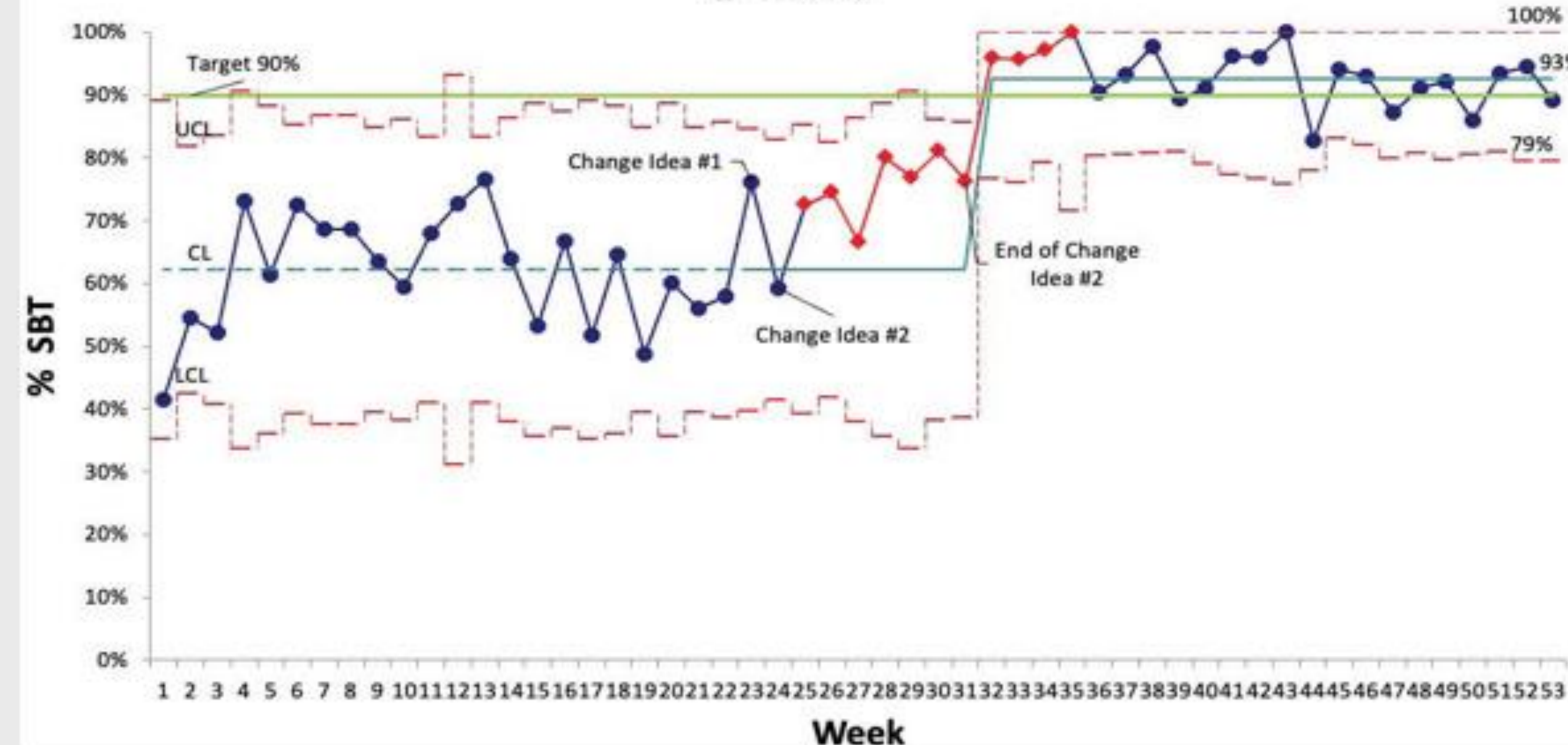
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## CONTACT INFORMATION

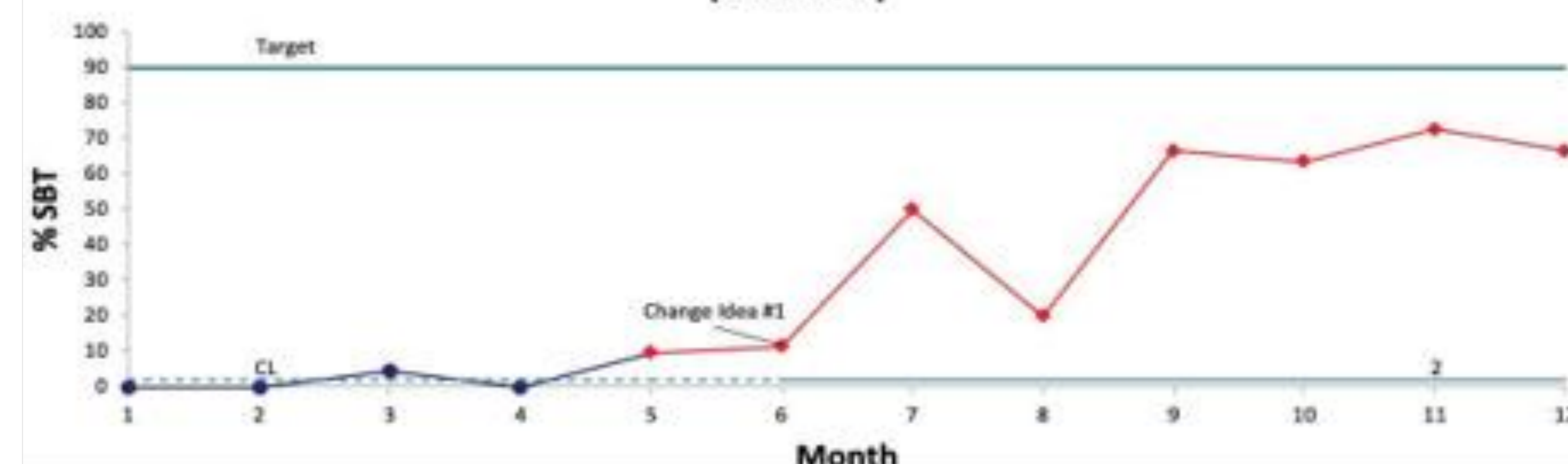
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## RESULTS

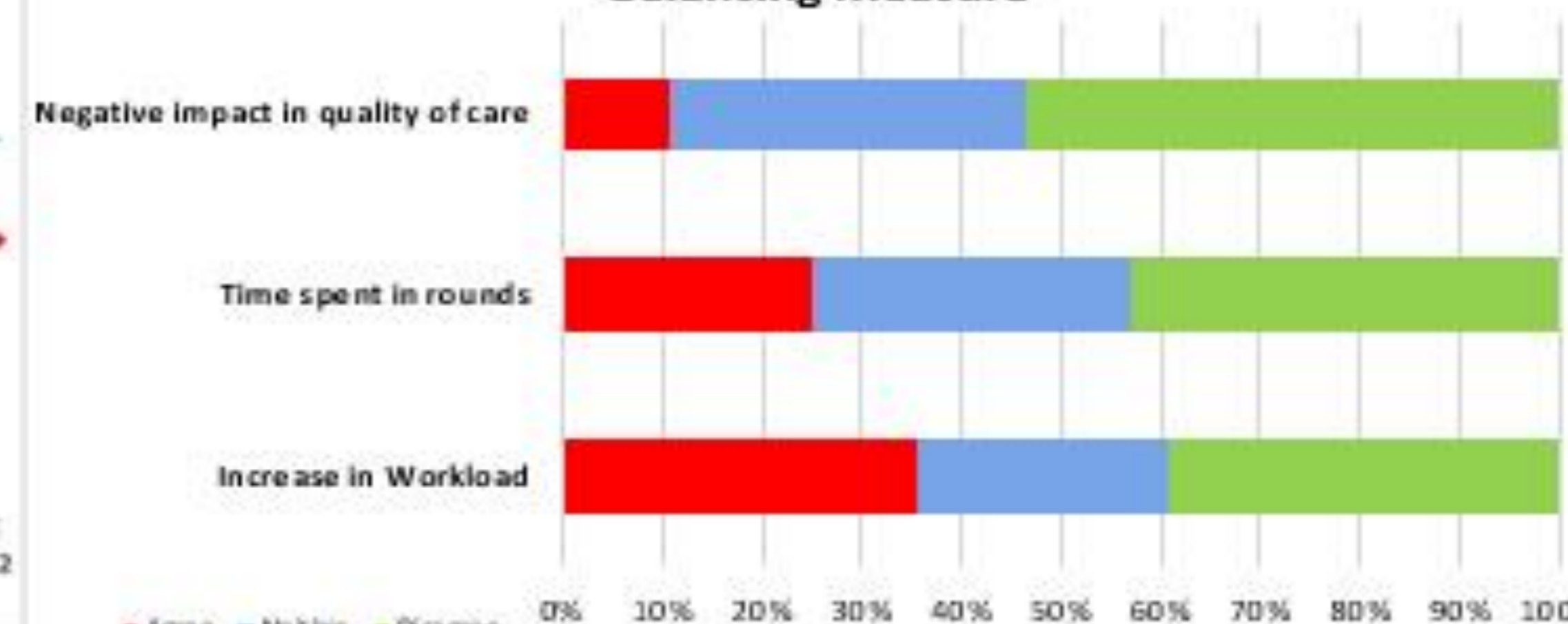
Percentage of SBT done in eligible patients - TGH MSICU (p-chart)



Percentage of SBT done in eligible patients on ECMO (run chart)



Balancing Measure



## CONCLUSION

Interventions aimed at capturing the subgroup of patients supported with ECMO, and standardizing the interpretation of the safety screen, increased the percentage of SBTs done in eligible patients at TGH medical-surgical ICU, without increasing the RT's workload.

### Future steps:

- Impact on patient-centred outcomes.
- Sustainability.

## ACKNOWLEDGEMENTS

We thank Idunn Morris, Irene Wong, Ashley Dunn, Anastasia Johnson, Mikha Alegria, Federico Carini, Bruno L. Ferreyro, and David Mc Alpine for their contribution to this project.

## REFERENCES

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- Angriman F, Pinto R, Friedrich JO, Ferguson ND, Rubenfeld G, Amaral ACKB. Compliance With Evidence-Based Processes of Care After Transitions Between Staff Intensivists. *Crit Care Med*. 2020;48(3):e227-e232. doi:10.1097/ccm.0000000000004201

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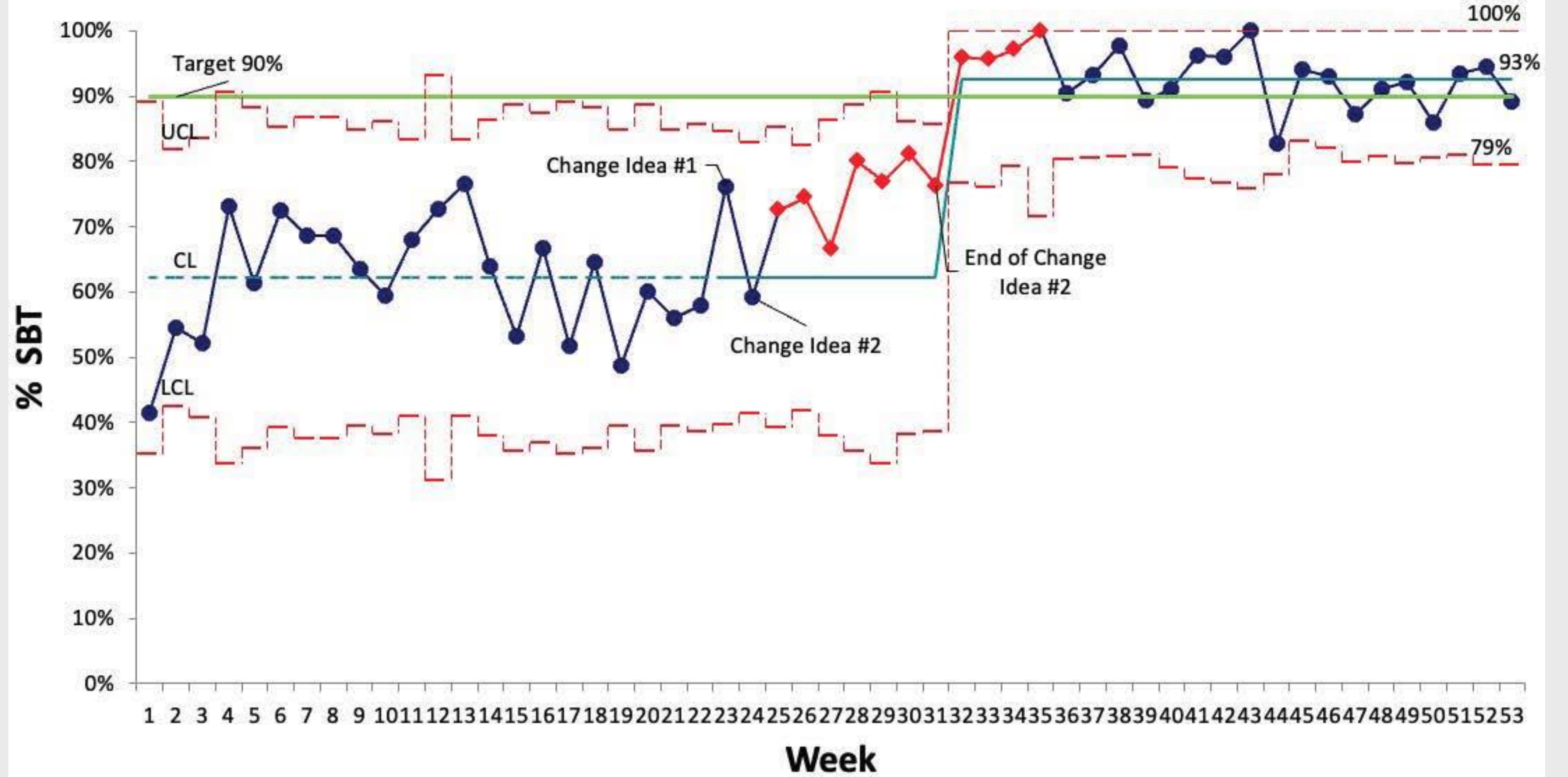
## **Process Measures:**

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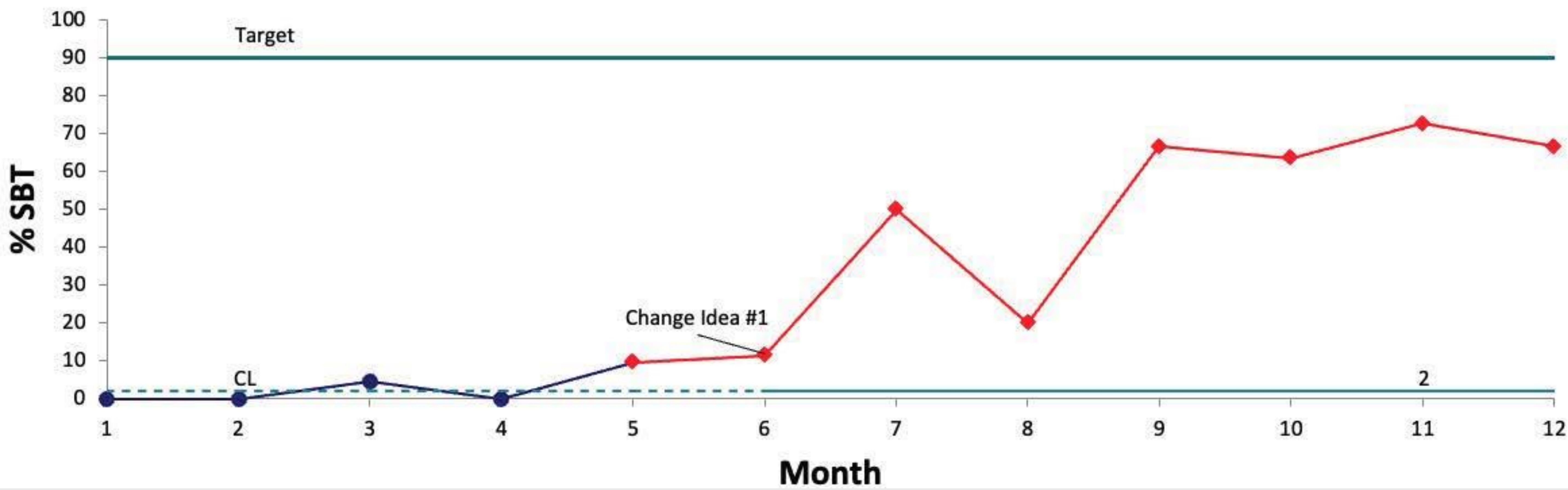
**Balancing Measure:** Increase in RTs daily workload (3-question survey assessing multiple domains).

# RESULTS

## Percentage of SBT done in eligible patients - TGH MSICU (p-chart)



## Percentage of SBT done in eligible patients on ECMO (run chart)



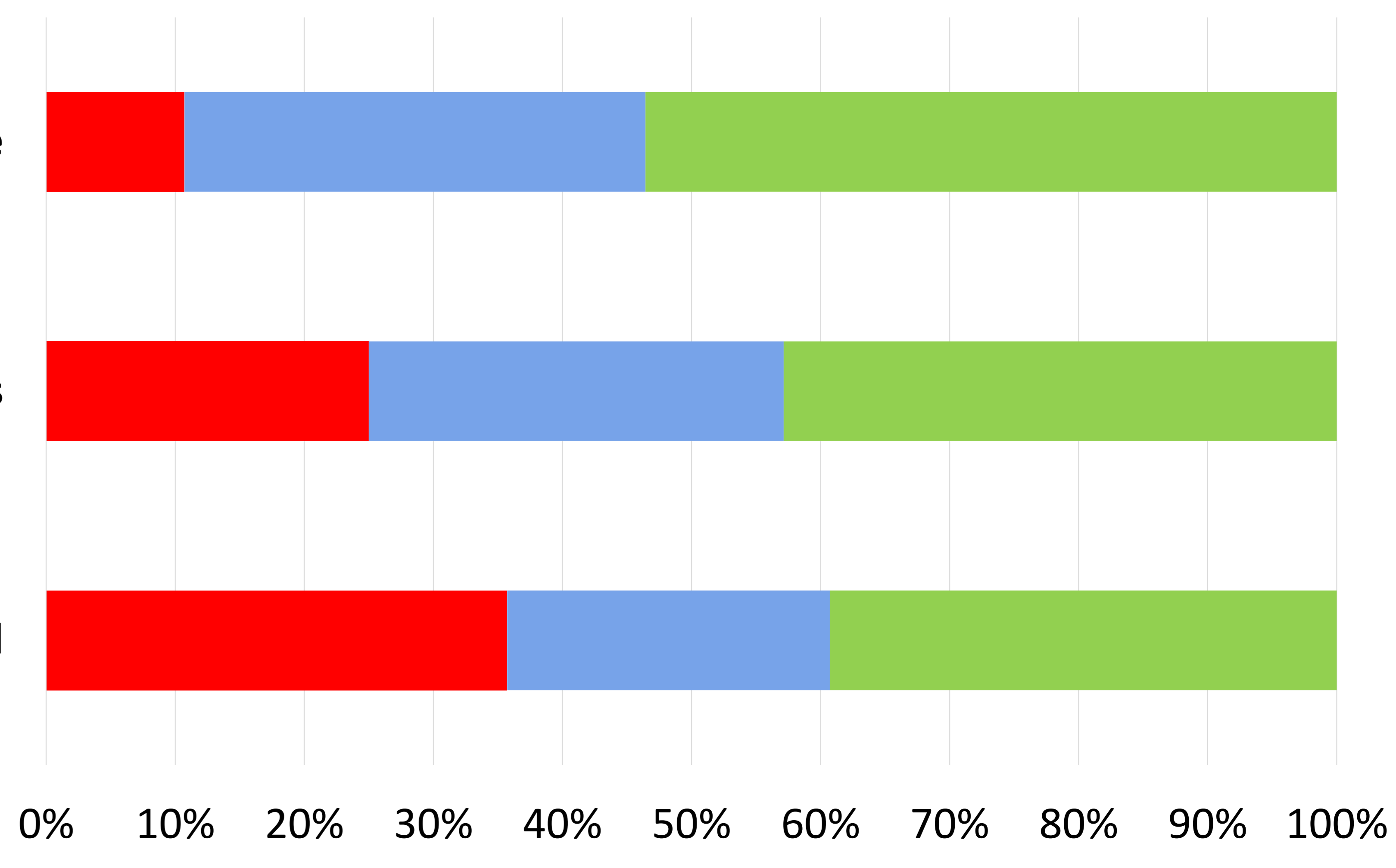
## Balancing Measure

Negative impact in quality of care

Time spent in rounds

Increase in Workload

Agree Neither Disagree



# CONCLUSION

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