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Enhanced Recovery After Cardiac Surgery (ERACS) to Improve Quality of Recovery of Patients: A Patient-Centered Approach

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Introduction

The Enhanced Recovery After Cardiac Surgery (ERACS) program follows **evidence-based practice** to enhance patient outcomes by minimizing post-operative complications and improving patients' quality of recovery. It follows a **multimodal** and **multidisciplinary** framework, encompassing pre-operative education, intra-operative opioid-sparing analgesia and drain minimization, and post-operative early mobilization.

Research has shown that early mobilization had positive effects on mortality, length of stay, functional status and adverse events. Ambulation promotes lung perfusions and decreases the risk for post operative pulmonary complications, which in turn can reduce readmissions and length of stay.

Target

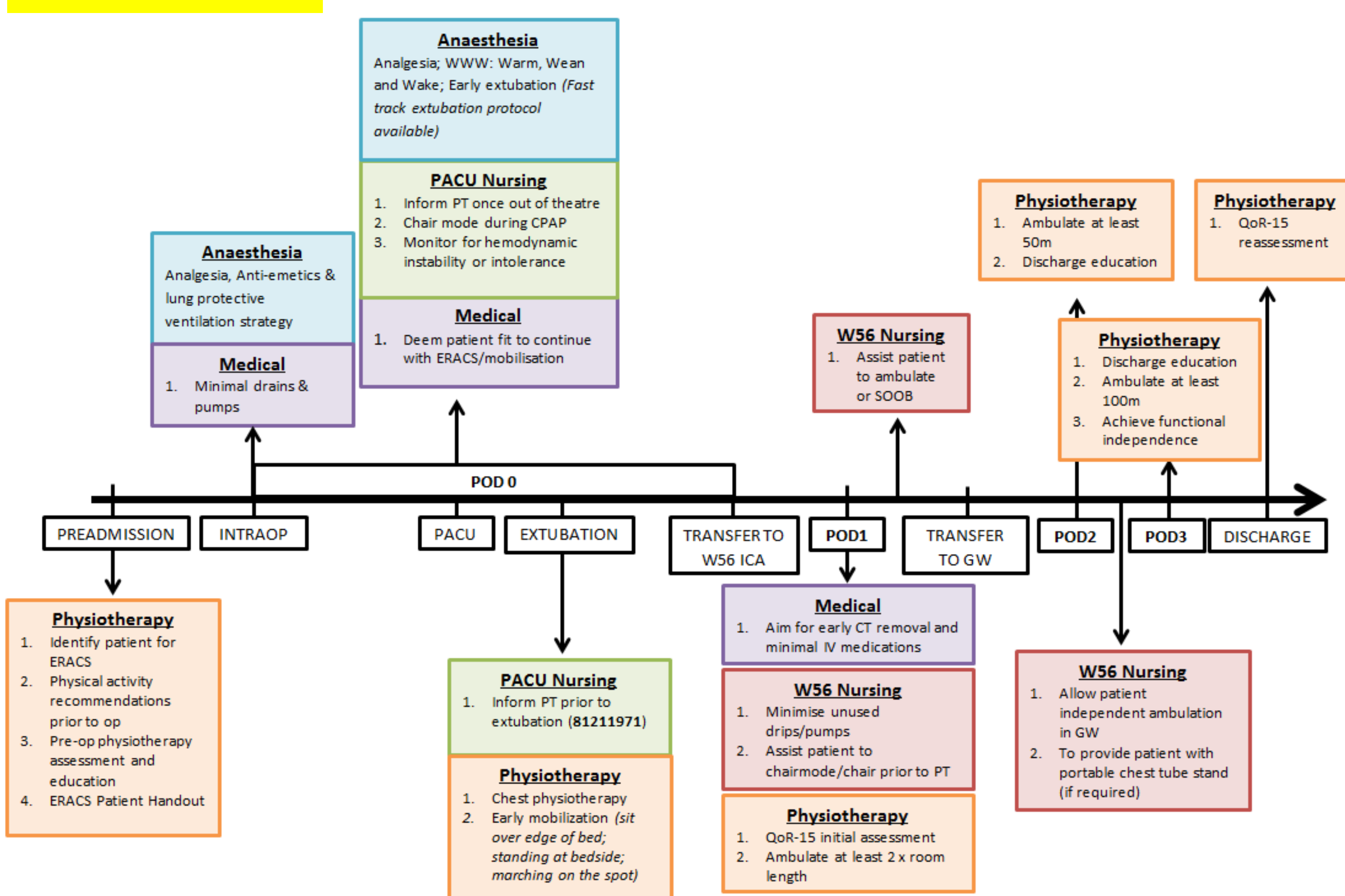
To target fast track patients who are admitted to the Post-Anaesthesia Care Unit (PACU) to further pursue the possibility of early mobilization on day of surgery.

The project aims to enhance early recovery and minimize re-admission.

Methodology

From the period July 2018 – January 2019, patients undergoing elective cardiac surgery, who fit our selection criteria, are recruited from the pre-admissions testing.

A **multi-disciplinary approach** is applied and recruited patients are mobilized post operatively after they are extubated in the PACU setting. These patients will be followed up by the physiotherapists till they are **functionally independent** and discharged.

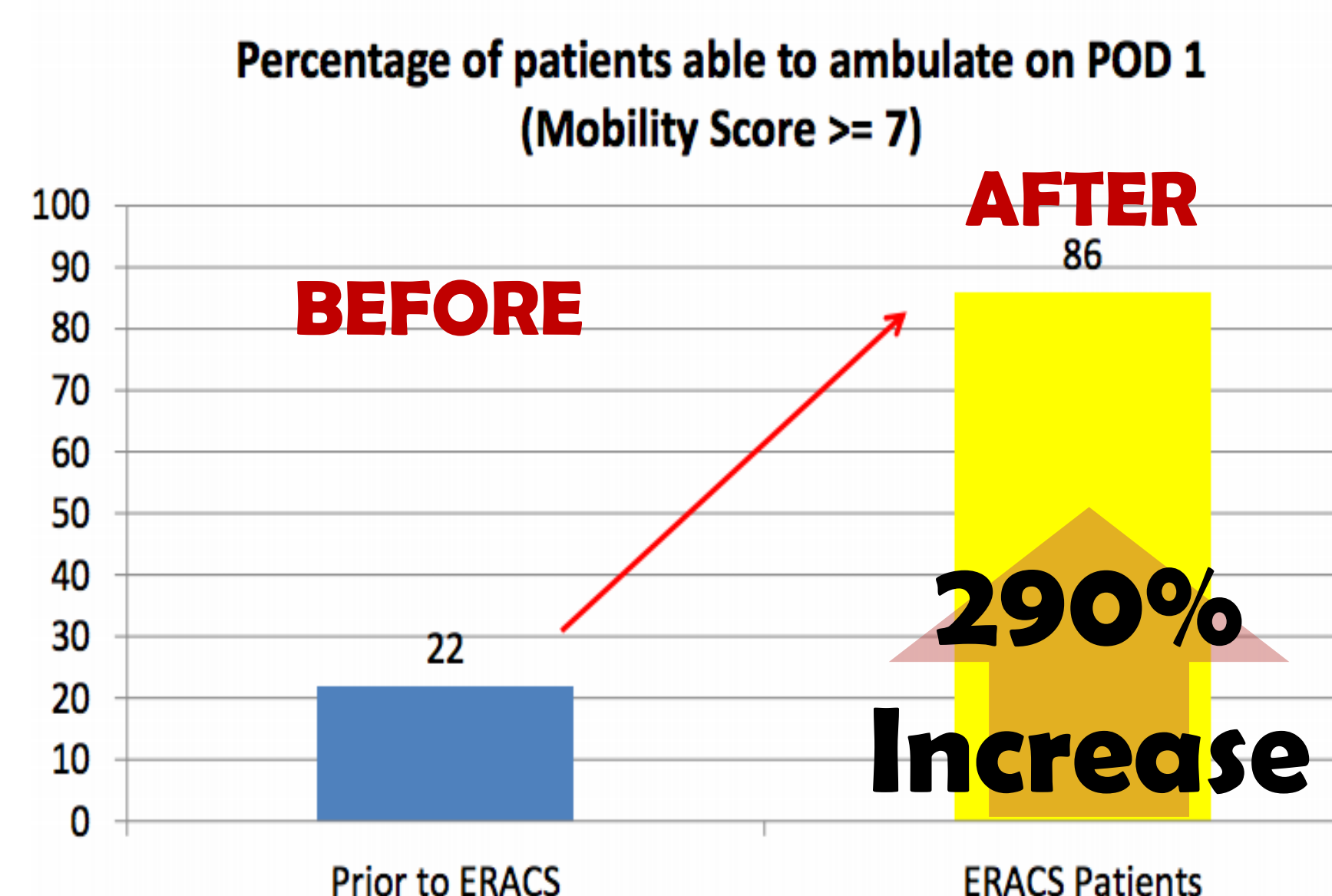


The primary outcome would be percentage of patients in the ERACS pathway who are able to ambulate by Post-Operative Day (POD) 1.

The secondary outcomes are the hospital length of stay, duration to functional independence, quality of recovery, and 30 day hospital readmission.

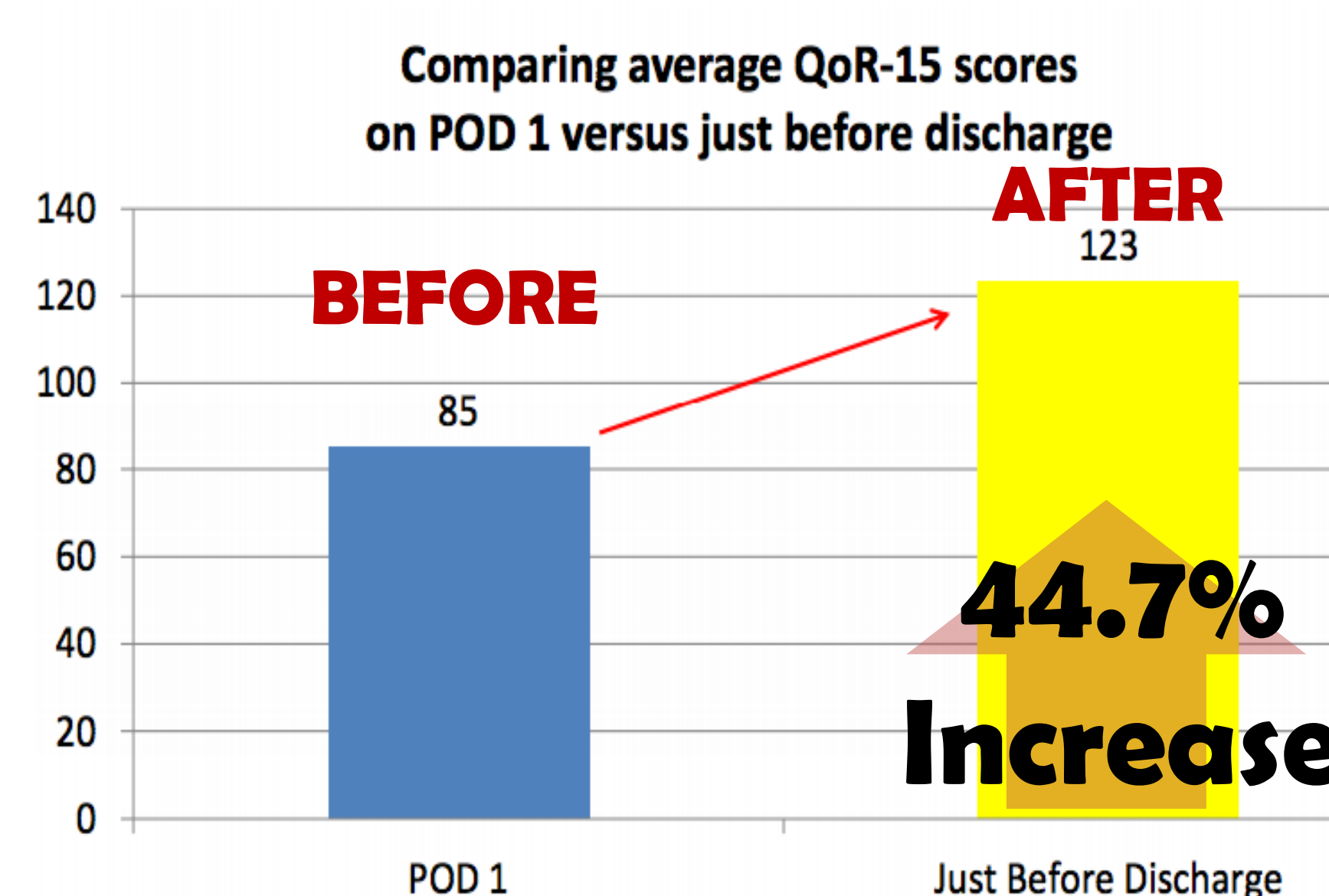
Results

Increased in Early Ambulation



86%
patients were able to ambulate on POD 1 after ERACS implementation.

Improved Quality of Recovery



Quality of Recovery	Total Score
Excellent	136 – 150
Good	122 – 135
Moderate	90 – 121
Poor	0 - 89

There is an average of **44.7% improvement in recovery** from POD 1 to pre-discharge, as obtained from the Quality of Recovery (QoR) questionnaire.

The average duration to functional independence was 3.29 days, while the average length of stay was **6.29 days**. **None** of the patients were readmitted for cardiac-related issues.

INTANGIBLE BENEFITS

- Enhanced Teamwork for Holistic Patient Care
- Improved Patient and Care Giver Experience
- Reduced Unnecessary Complaints
- Maintain Professional Image of Hospital
- Improved Safety for Patients
- Greater Staff Satisfaction
- Better Image for NHCS



Conclusion

Patients on the ERACS pathway would benefit from early mobilization at PACU on POD 0, as evident by the increase in patients who were able to ambulate on POD 1 as compared to pre-ERACS. Further research can be done to bridge the gap between the duration at which patient is functionally independent to time of discharge.