

# The e-PICS Project: How e-Health facilitates early detection and care planning for survivors with Post Intensive Care Syndrome(PICS).

## Research Team

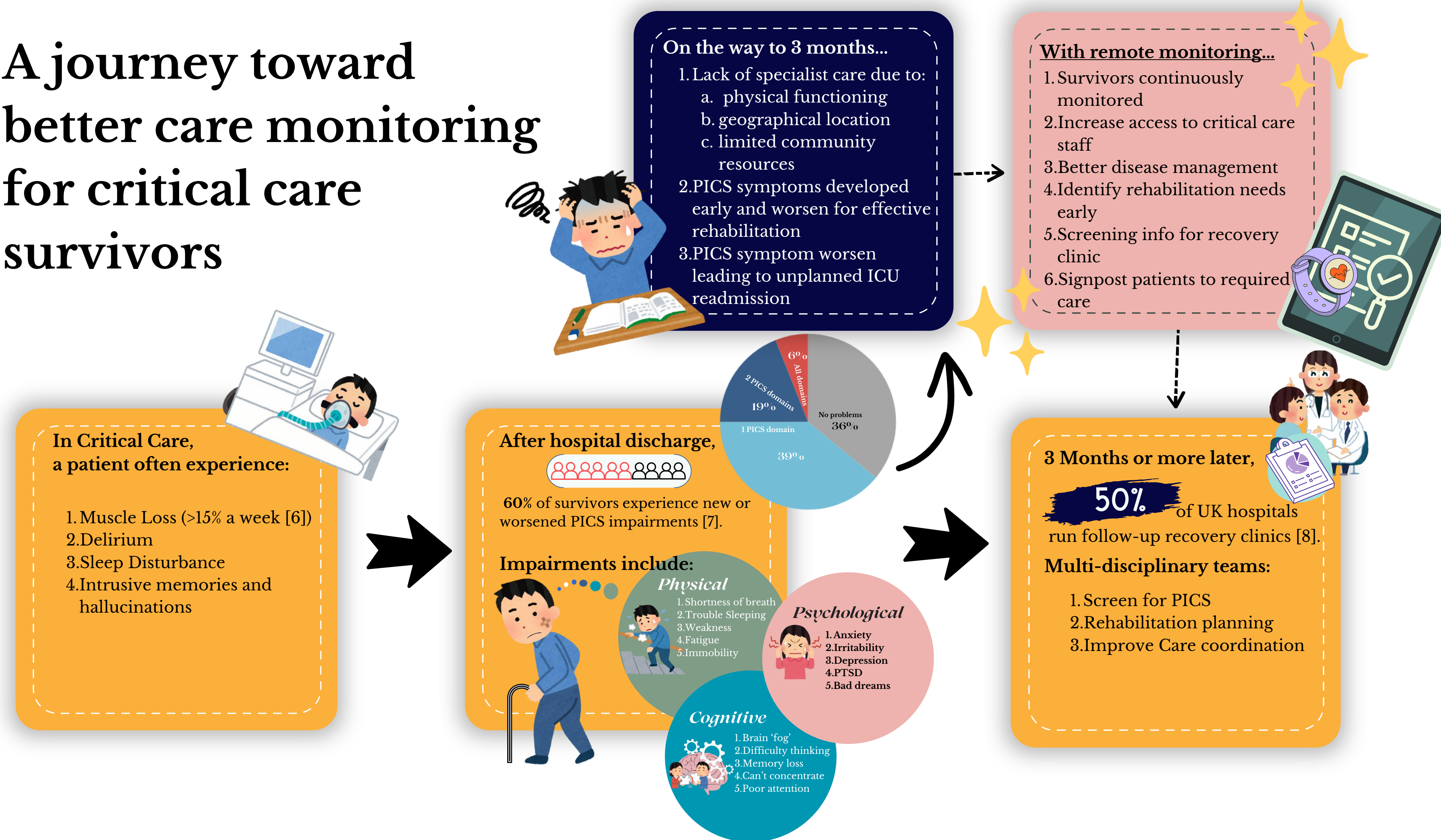
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## INTRODUCTION

- Critical care survivors often experience PICS that negatively impacts functional outcomes, quality of life, return-to-work, and financial security[1-3].
- Lack of early PICS impairment detection may lead to ineffective rehabilitation programs[4].
- eHealth can potentially be the solution to reduce health inequalities and enable opportunities for critical care teams to foster better PICS recovery by starting earlier rehabilitation treatment[5].

## A journey toward better care monitoring for critical care survivors



## OBJECTIVES

- **Feasibility and acceptability** of monitoring critical care survivors during first 3 months.
- Charting **recovery trajectories** of survivors during this period.
- Exploring possible **inter-relationships** between Post-Intensive Care Syndrome Domains.

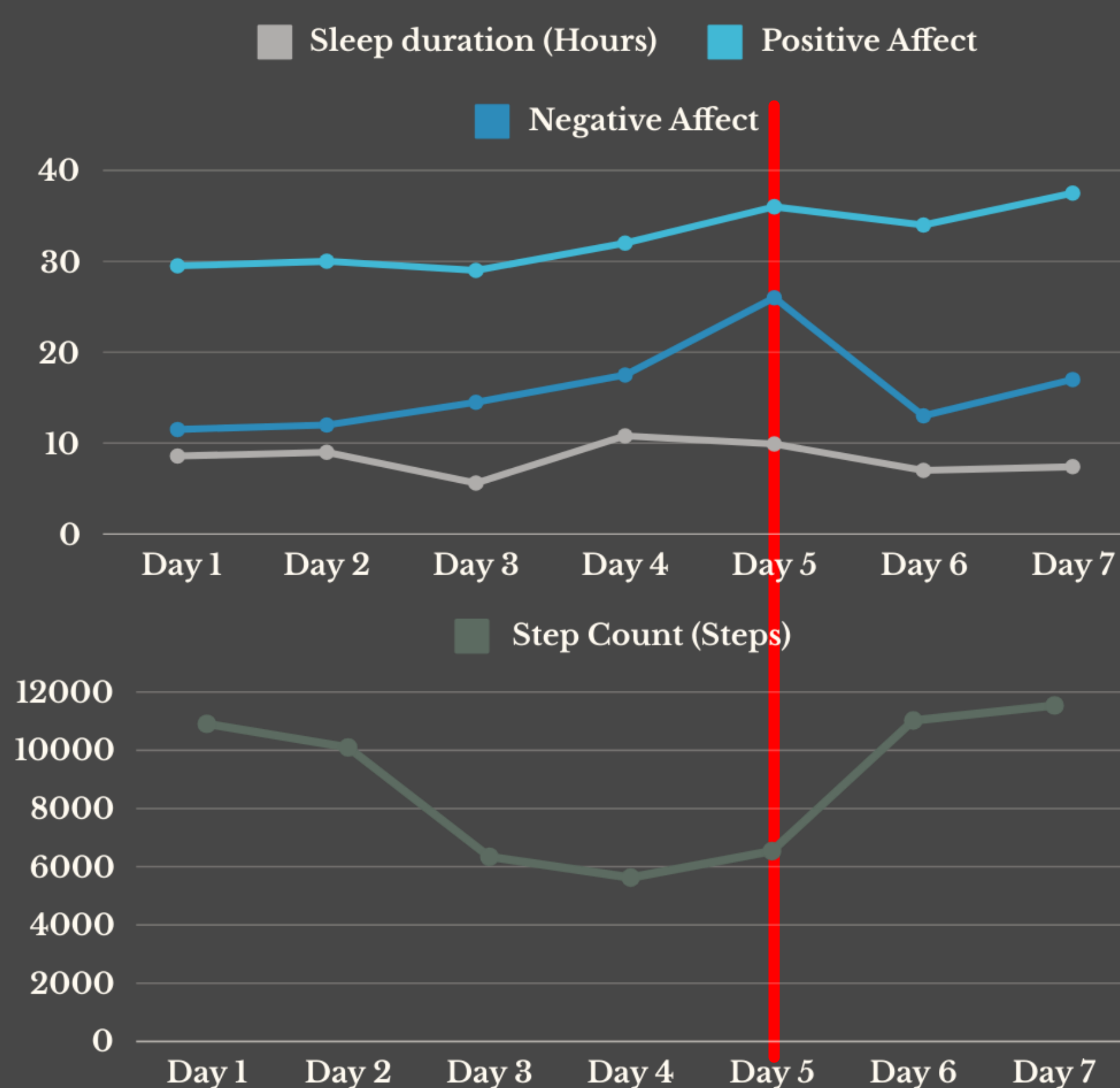
## METHODS

- 2-week remote monitoring at **1st, 8th,** and **12th** week after hospital discharge.
- Physical activity tracked using actigraphy.
- Remote assessments consists of sleep, mood diaries, and cognitive assessments.

## IMPACT (SO FAR)

- Collaborative efforts to contextualise research to local NHS Trusts.
- Capacity building through training recruitment staff about monitoring protocol.
- Institution provided expertise in ethical approval processes and grant application to increase capacity and capability in project implementation.

## Participant 1's monitored outcomes over a week



## EMPOWERING PSYCHOLOGICAL SAFETY

Through remote monitoring, potential markers can be identified to classify patients at risk.

For example, Participant 1 had feelings of anxiety (increased negative affect) and excitement (high positive affect) leading up to an important event on Day 5 (red line).

Participant 1 slept more on Day 4 to feel 'more refreshed' for the event.

- Compared to other days, a great decline of sleep and physical activity from Day 3 to Day 5.
- A gradual to sharp increase in negative affect between Day 4 and Day 5.
- However, specific affect responses indicate participant 1 was anxious and excited at the same time.

Markers can provide insight to aid clinician decision-making like initiating recovery clinics sooner, rehabilitation planning, and earlier rehabilitation.



## FUTURE IMPACT

- A remote monitoring system that provides improved access to specialist care after hospital discharge.
- Provide insight in scaling up intervention in preparation for a real-world evidence study.
- Identify important risk markers that enables clinicians to provide the required care to survivors at risk.
- Use of monitoring system as a self-management and behavioural change intervention for PICS rehabilitation and recovery.

## Poster by Daniel Lai



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