

# Patient mobility and sensory activities in two Paediatric Intensive Care Units

Joanna Dukes (Physiotherapist), Rakhee Mandalia (Occupational Therapist)  
University Hospitals of Leicester

## Introduction and Aims

Paediatric intensive care survivors experience physical, psychological and cognitive morbidities which impact on functional outcomes and quality of life (1). Effective and safe early rehabilitation on PICU, using a collaborative approach with the multidisciplinary team (MDT) has been shown to improve recovery (2).

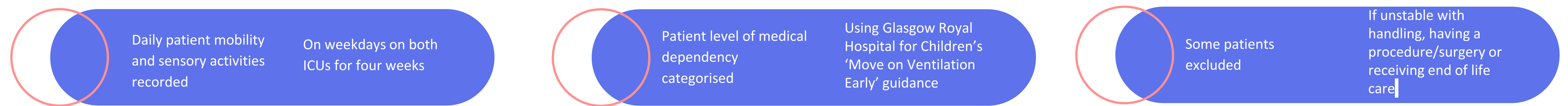
There is research in the adult population demonstrating rehabilitation early in the Intensive Care Unit (ICU) can impact on:

- improved functional outcomes
- shorter delirium duration
- more ventilator-free days (3)

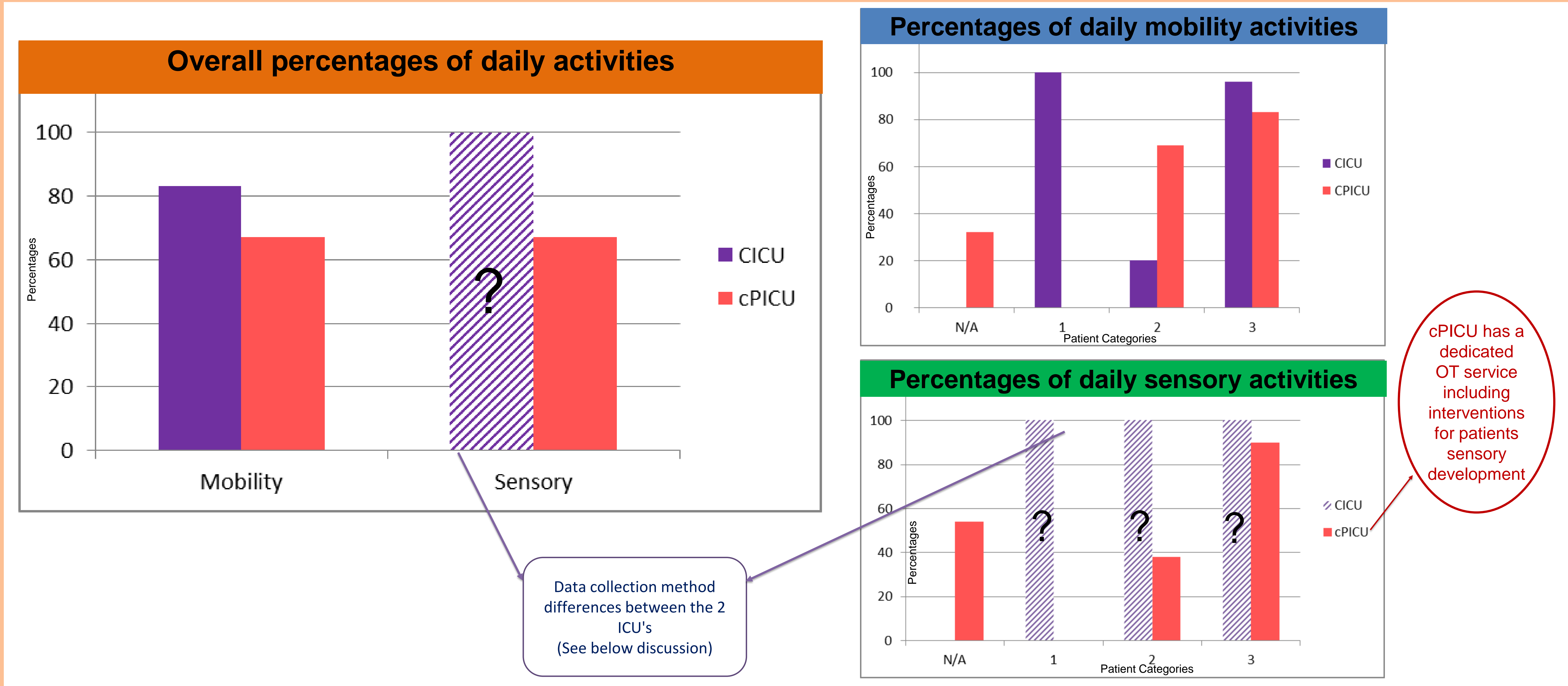
This service evaluation aimed to identify if Children's ICU (CICU) and cardiac Paediatric ICU (cPICU) patients are participating in mobility and sensory activities, to inform the development of guidance and education for staff. The current service was evaluated against the standards of:

- All patients moving daily
- All patients meeting their sensory needs daily

## Method



## Results



## Discussion and Conclusions

The Glasgow Royal Hospital for Children's 'Move on Ventilation Early' guidance was used to categorise patients' medical level of dependency. As part of their contraindications, they had included Extracorporeal membrane oxygenation, open chest, high frequency oscillation, however our clinical practice includes sensory input and in-bed mobility for these patients where appropriate. Therefore, we categorised them into 'N/A' to capture these as a separate category. When looking at the categories, 'Category N/A' would be the more medically dependent patients and 'Category 3' being those with the lower level of medical dependency.

Across both ICUs, it was positive that majority of patients were engaging in early activities where medically appropriate.

Overall, there was least engagement in activities for the higher medical dependency patients, such as Category N/A and Category 1, and more mobility and sensory activities completed with those considered to have a lower level of medical dependency such as Category 3.

There were some limitations when looking at activity levels, as some groups had a small number of patients, for example, Category 1 for CICU mobility activities had 1 appropriate patient, therefore resulting in 100% patients completing mobility activities. Across both units, there may also have been a lack of consistent MDT documentation of patient goals and activities, which could have impacted on the results collected.

There were also questions of validity for the results collected on sensory activities for CICU as there is an inequitable therapy service across the ICU's with only cPICU having a dedicated Occupational Therapy service to identify whether the patients included had sensory processing needs and whether they required appropriate intervention to help meet these needs. This demonstrates that there is a knowledge gap within the wider MDT for identifying specific sensory needs and how to meet these particular needs. This will be addressed in the future of our early activity project, ensuring training is provided to the wider MDT and awareness around sensory interventions and goals. There were also external issues such as staffing that affected the true representation of the sensory data collected on cPICU.

**At the start of the service evaluation we had hoped that 100% of patients would be completing mobility and sensory activities, however the results demonstrated that this is not the case.**

**With clinical practice improving over time, we are completing more earlier activities with patients, therefore by creating our own guidance tailored to our patient population, including those patients within 'Category N/A', we hope to increase the amount and consistency of early activities, especially for those who are classed as more medically dependent.**

**Our Goal → Our own guidance + staff education + collaborative working = striving to achieve better outcomes for our patients**

### References:

1. Morrow B. Building a culture of early mobilization in the pediatric intensive care unit—a nuts and bolts approach. *Translational Pediatrics*. 2021;10(10): 2845-2857.
2. Thompson, J., Menzies, J., Manning, J., McAnuff, J., Brush, E., Ryde, F., Rapley, T., Pathan, N., Brett, S., Moore, D., Geary, M., Colville, G., Morris, K., Parslow, R., Feltbower, R., Lockley, S., Kirkham, F., Forsyth, R. and Scholefield, B., 2022. Early mobilisation and rehabilitation in the PICU: a UK survey. *BMJ Paediatrics Open*, 6(1), p.e001300.
3. Schweickert D, Pohlman M, Pohlman A, Nigos C, Pawlik A, Esbrook C et al. Early physical and occupational therapy in mechanically ventilated, critically ill patients: a randomised controlled trial. *Lancet*. 2009;373(9678):1874-82