**Funding Source: Self-funded / own sponsor**

**Proposed start date: to be confirmed/negotiable**

**Closing date for applications: open until filled**

**Eligibility: UK/International**

***International Tuition fee: £29,300 per annum (2024/5 entry).***

***Standard UK PhD tuition fees for Home students:*** *full-time £4,786, part-time £2,393 (2024/5 rates). Please note that depending on your area of research there may be additional costs to allow for such as attendance at conferences, travel, training and consumables etc.*

**Department/School: Healthcare**

**Supervisors:**

Prof Joseph Manning; joseph.manning@leicester.ac.uk

Dr Takawira Marufu; takawira.marufu@nuh.nhs.uk

**Project Title:** Reducing pressure injury in critically Ill hospitalised infants, children and young people: An intervention bundle development and feasibility testing study.

**Application link:**

[**https://le.ac.uk/study/research-degrees/research-subjects/school-of-healthcare**](https://le.ac.uk/study/research-degrees/research-subjects/school-of-healthcare)

**Project Description:**

The development and prevention of pressure injuries (PI) is a complex phenomenon, dependent on a wide variety of extrinsic and intrinsic risk factors. Pressure injuries have undesirable consequences, both for healthcare organisations and patients. These include; personal suffering, impaired long-term outcomes and function, financial burden on the organisation, requirement for additional interventions, and increased length of hospital stay (Fletcher et al., 2013, Kronman et al., 2008). The scale of the problem is global with the current prevalence rate of PI in children and young people (CYP) ranging from 1 to 8.2% for more serious PI (grade 2- 4) (Delmore et al., 2019, Marufu et al., 2021). However higher prevalence rates have been reported in paediatric intensive care units (PICUs) (43.1%) (Razmus and Bergquist-Beringer, 2017) and neonatal intensive care units (NICUs) (23%) (Baharestani and Ratliff, 2007). CYP requiring critical care admission form an extremely vulnerable patient group with an exceptionally high risk of immobility-related pressure injuries (Chamblee et al., 2018). Furthermore, these patients are often seriously ill with delicate and immature skin and are attached to numerous medical devices (Willock et al., 2016). Evidence suggests that medical devices are also a leading cause of PI in CYP (Gefen et al., 2020).

In recent years we conducted a point prevalence study (Marufu et al 2021) at a tertiary children’s hospital to understand and quantify the current level of PI cases and management interventions. Subsequently, a systematic review and meta-analysis were conducted, evaluating the effectiveness of preventive interventions aimed at mitigating PI in children and young people (CYP) admitted to the Paediatric Intensive Care Unit (PICU). The findings demonstrated an associated 61% potential reduction in PI post-intervention (pooled OR (95% confidence interval (CI) 0.26 – 0.60) P < 0.0001) (Setchell et al 2023). However, contemporary untility and effectiveness of the budle requires establishing.

This project aims to develop/refine and test the feasibility of a bundled intervention to reduce the risk of pressure injury of critically ill/injured infants, children and young people in the hospital.

**Phase 1:** Develop and refine through review of literature/experience based co-design workshops an evidence-based bundled intervention.

**Phase 2:** Establish feasibility, acceptability and utility of the bundled intervention in PICU through planning and delivering a multicentre feasibility study.

***References:***

*Baharestani, M.M., Ratliff, C.R., 2007. Pressure ulcers in neonates and children: an NPUAP white paper. Adv Skin Wound Care 20 (4), 208, 210, 212, 214, 216, 218-220.*

*Chamblee, T.B., Pasek, T.A., Caillouette, C.N., Stellar, J.J., Quigley, S.M., Curley, M.A.Q., 2018. CE: How to Predict Pediatric Pressure Injury Risk with the Braden QD Scale. Am J Nurs 118 (11), 34-43.*

*Delmore, B., Deppisch, M., Sylvia, C., Luna-Anderson, C., Nie, A.M., 2019. Pressure Injuries in the Pediatric Population: A National Pressure Ulcer Advisory Panel White Paper. Adv Skin Wound Care 32 (9), 394-408.*

*Fletcher , J., Crook , H., Harris, R., 2013. Monitoring pressure ulcer prevalence: a precise methodology. . Wounds U K 9(4):49–53.*

*Gefen, A., Alves, P., Ciprandi, G., Coyer, F., Milne, C.T., Ousey, K., Ohura, N., Waters, N., Worsley, P., 2020. Device-related pressure ulcers: SECURE prevention. Journal of Wound Care 29 (Sup2a), S1-S52.*

*Kronman, M.P., Hall, M., Slonim, A.D., Shah, S.S., 2008. Charges and lengths of stay attributable to adverse patient-care events using pediatric-specific quality indicators: a multicenter study of freestanding children's hospitals. Pediatrics 121 (6), e1653-1659.*

*Marufu, T.C., Setchell, B., Cutler, E., Dring, E., Wesley, T., Banks, A., Chatten, M., Dye, E., Cox, S., Boardman, R., Reilly, L., Manning, J.C., 2021. Pressure injury and risk in the inpatient paediatric and neonatal populations: A single centre point-prevalence study. Journal of Tissue Viability 30 (2), 231-236.*

*Razmus, I., Bergquist-Beringer, S., 2017. Pressure Injury Prevalence and the Rate of Hospital-Acquired Pressure Injury Among Pediatric Patients in Acute Care. J Wound Ostomy Continence Nurs 44 (2), 110-117.*

*Setchell, B., Marufu, T. C., Nelson, D., & Manning, J. C. (2023). Effectiveness of preventative care strategies for reducing pressure injuries (PIs) in children aged 0-18 admitted to intensive care: A systematic review and meta-analysis. Journal of tissue viability, 32(2), 228–241.* [*https://doi.org/10.1016/j.jtv.2023.04.001*](https://doi.org/10.1016/j.jtv.2023.04.001)

*Willock, J., Habiballah, L., Long, D., Palmer, K., Anthony, D., 2016. A comparison of the performance of the Braden Q and the Glamorgan paediatric pressure ulcer risk assessment scales in general and intensive care paediatric and neonatal units. J Tissue Viability 25 (2), 119-126.*

**Entry requirements:**

Applicants are required to hold/or expect to obtain a UK Bachelor Degree 2:1 or better in a relevant subject.

The University of Leicester English language requirements apply where applicable: <https://le.ac.uk/study/research-degrees/entry-reqs/eng-lang-reqs/ielts-70>

**Application advice:**

To apply please refer to: <https://le.ac.uk/study/research-degrees/research-subjects/school-of-healthcare>

With your application, please include:

* CV
* Personal statement explaining your interest in the project, your experience, why we should consider you in addition to confirmation of how you will pay your fees.
* Degree Certificates and Transcripts of study already completed and if possible transcript to date of study currently being undertaken
* Evidence of English language proficiency if applicable
* In the reference section please enter the contact details of your two academic referees in the boxes provided or upload letters of reference if already available.

*In the proposal section please provide the name of the supervisors and project title (a proposal is not required)*

Application and project queries to soh-pgr@le.ac.uk