

## IN PRACTICE

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**AN INNOVATIVE, SUSTAINABLE PAEDIATRIC KNOWLEDGE AND SKILLS SESSION FOR EARLY-YEAR MEDICAL STUDENTS: BOOSTING STUDENT CONFIDENCE AND CLINICAL KNOWLEDGE****Meherun Rahman**, Emma Vickers, Nicola Watts, Louise Harmer;<sup>1</sup>*George Eliot Hospital NHS Trust, Nuneaton, United Kingdom;*<sup>2</sup>*Warwick Medical School, The University of Warwick, Coventry, United Kingdom***Correspondence:** [meherun.rahman@doctors.org.uk](mailto:meherun.rahman@doctors.org.uk)[10.54531/RFUH6412](#)

**Introduction:** Medical students repeatedly report a lack of confidence in their paediatric knowledge and clinical skills, which can adversely affect their learning experience [1]. Given the complexity and nuances of Paediatrics, coupled with limited placement exposure, creative and accessible teaching interventions are imperative [2]. This service evaluation aimed to assess whether delivering a dedicated Paediatric Knowledge and Skills Session (PKSS) early in training could improve student confidence and knowledge, while remaining sustainable and easily replicable.

**Methods:** This service evaluation was created and delivered by a multi-disciplinary team of clinical educators and immersive technology experts at a teaching hospital. The PKSS included gamification, simulation, interactive quizzes, and lecture-based teaching within a single-day, providing an engaging yet challenging experience. It was designed with sustainability in mind, using existing departmental manikins, donated clinical equipment (e.g., non-rebreather masks, blood bottles), and recycled or reusable materials for games with no ongoing costs. Quizzes were delivered electronically to minimise paper use. Sessions were facilitated by educators experienced in paediatrics or simulation, requiring minimal staff training resources. Students completed digital pre- and post-session MCQs, self-rated confidence surveys, and qualitative feedback forms.

**Results:** Of the 28 participating students, data from 22 were analysed due to incomplete or unmatched responses. The 22 students showed significant improvement in confidence across all items, with 5 questions reaching extreme statistical significance ( $p < 0.0001$ ). Knowledge scores improved in 6 of 8 MCQs, reaching a statistical significance ( $p \leq 0.0423$ ). Simulation performance improved between attempts, as evidenced by checklist assessments. Qualitative feedback described the PKSS as an informative and enjoyable day, with students requesting more sessions like it.

**Discussion:** The PKSS demonstrated significant improvements in both confidence and knowledge, as well as overall enhancement in simulation performance. Importantly, the session was delivered in a low-cost, sustainable format using existing resources, donated materials, and minimal paper. Once developed, it required minimal upkeep, making it an ideal teaching model for other institutions. While long-term impacts of the PKSS need to be reviewed, current results indicate that teaching specialist disciplines like Paediatrics can be revolutionised into an impactful, creative and environmentally conscious model in healthcare education.

**Ethics Statement:** As the submitting author, I can confirm that all relevant ethical standards of research and dissemination have been met. Additionally, I can confirm that the necessary ethical approval has been obtained, where applicable.

## REFERENCES

1. Weinstein A, MacPherson P, Schmidt S, et al. Needs assessment for enhancing pediatric clerkship readiness. *BMC Med Educ.* 2023;23:188. doi: 10.1186/s12909-023-04167-7.
2. Morrissey B, Jacob H, Harnik E, Mackay K, Moreiras J. Simulation in undergraduate paediatrics: a cluster-randomised trial. *Clin Teach.* 2016;13(5):337–342. doi: 10.1111/tct.12442.

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