



Reply to the letter by Dr Meyer et al. 2023

Catia Genna¹ · Kiara Ros Thekkan¹ · Paulien A. M. A. Raymakers-Janssen² · Orsola Gawronski¹

Published online: 23 May 2023

© The Author(s), under exclusive licence to Springer-Verlag GmbH Germany, part of Springer Nature 2023

Sir,

We thank Dr. Meyer S. et al. [1] for their interest in our recent review on the association of nurse staffing with critical deterioration events on acute and critical care pediatric and neonatal wards. Dr Meyer shared the results of their audit pointing out to the importance of medical staffing levels in NICUs.

While our review focused on nursing staffing, we reported that only a few of the studies included ruled out the potentially confounding effect of other staffing variables, including levels and skill mix of physicians in NICUs. In one study, involving 186 NICUs in the UK, risk-adjusted mortality did rise with increasing workload in all types of NICUs [2].

Globally, an adequate level of suitably qualified, competent, skilled, and experienced health care professionals is recommended for the care of newborns and children admitted to critical care units. Current quality care standards recognise the relevance of providing opportunities for medical and nursing professional development and for obtaining appropriate qualifications according to the setting of care. Moreover, staffing levels should be determined according to patients' healthcare needs and evolving severity of illness, through systematic approaches [3].

Recommendations for medical staffing in NICUs are based on the consensus of experts since current evidence suggesting optimal levels of medical staffing is still weak [4]. There is evidence suggesting that mortality is lower for newborns receiving even short-term neonatal intensive care with immediate access to a doctor trained and experienced in advanced neonatal care and resuscitation, present on the ward on a 24/7 basis as opposed to medical staff with other

competing commitments, which would not make them readily available in an emergency [5].

More research and audits, such as Dr Meyer's, are certainly recommended in this domain to establish evidence-based levels of medical and nursing staffing in NICUs, to guarantee quality care and newborn safety.

References

1. Meyer S, Bay JP, Poryo M (2023) Staffing, skill mix, shortage, and survival in the NICU and PICU: pediatrics quo vadis? *Eur J Pediatr*. <https://doi.org/10.1007/s00431-023-04970-w>
2. The UK Neonatal Staffing Study Group (2002) Patient volume, staffing, and workload in relation to risk-adjusted outcomes in a random stratified sample of UK neonatal intensive care units: a prospective evaluation. *The Lancet* 359(9301):99–107
3. Care Quality Commission. Regulation 18: Staffing [Internet]. 2014 [cited 2022 Sep 28]. Available from: <https://www.cqc.org.uk/guidance-providers/regulations-enforcement/regulation-18-staffing#full-regulation>
4. British Association of Perinatal Medicine (BAPM). Optimal Arrangements for Neonatal Intensive Care Units in the UK including guidance on their Medical Staffing [Internet]. SOUTH WEST NEONATAL NETWORK; 2021 [cited 2023 Mar 10]. Available from: https://www.swneonatalnetwork.co.uk/media/182167/bapm_optimal_arrangement_for_nicus_revision_21-4-21.pdf
5. National Health Service England. Implementing the Recommendations of the Neonatal Critical Care Transformation Review [Internet]. NHS England and NHS Improvement; 2016 [cited 2023 Mar 10]. Available from: <https://www.england.nhs.uk/wp-content/uploads/2019/12/Implementing-the-Recommendations-of-the-Neonatal-Critical-Care-Transformation-Review-FINAL.pdf>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

✉ Orsola Gawronski
orsola.gawronski@opbg.net

¹ Professional Development, Continuing Education and Research Unit, Medical Directorate, Bambino Gesù Children's Hospital IRCCS, Rome, Italy

² Department of Pediatric Intensive Care, Wilhelmina Children's Hospital/University Medical Center Utrecht, Utrecht, The Netherlands