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## Correspondence

## Letter to the editor: NICU costs are not the whole story



Dear Editor,

We read with interest the article of Bonasso and colleagues titled "Timing of enterostomy closure for neonatal isolated perforation" published in the journal online in December 2019 [1]. The authors address a familiar problem. The timing of enterostomy closure is something that lacks sufficient evidence for widespread adoption of a particular strategy, and there are concerns regarding the longer term outcomes in these patients [2,3]. We wish to raise two queries, clarification of which would strengthen the message of the article.

We would appreciate a clarification from the authors on how many of the infants included in their study were actually discharged home, or whether they were simply transferred off the NICU to another ward/hospital while awaiting stoma closure. This is an important question because the costs associated with ongoing inpatient stay are clearly still relevant to the healthcare user if not the specific provider.

Secondly, we have recently published a series documenting severe growth failure in neonates awaiting stoma closure, with many infants meeting the WHO-classification for being severely underweight (z-score <-3) at the time of stoma closure [4]. The time spent with an enterostomy clearly is an at-risk period, and although growth is documented to catch-up in the months following definitive closure [2], there are unknown consequences in terms of long-term neurodevelopmental outcomes. In this recent series, stoma closure was on average nearly 9 weeks after formation in those who remained inpatients and over 19 weeks in those discharged with an enterostomy. The authors provide no data on growth in their series, and we speculate it may be that the short term financial savings they report in babies who were discharged would be outweighed by the long term costs of growth failure.

We as an institution have resolved to close neonatal stomas as early as possible in light of our own findings and would agree with the referenced article of Lucas and Gosain that target weights are not appropriate for defining timing of surgery [3]. In fact, we now routinely close enterostomies for IIP 4 weeks post-creation and have seen no increase in our departmental complications.

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## References

- Bonasso PC, Dassinger MS, Mehl SC, et al. Timing of enterostomy closure for neonatal isolated intestinal perforation. J Pediatr Surg. 2020:1–7. https://doi.org/10.1016/ j.jpedsurg.2019.12.001.
- [2] Bethell G, Kenny S, Corbett H. Enterostomy-related complications and growth following reversal in infants. Arch Dis Child Fetal Neonatal Ed. 2017;102:F230–4. https://doi.org/ 10.1136/archdischild-2016-311126.
- [3] Lucas DJ, Gosain A. Association of comorbidities with adverse outcomes after enterostomy closure in premature neonates. JAMA Surg. 2018;153:776. https://doi.org/ 10.1001/jamasurg.2018.0880.
- [4] Chong C, van Druten J, Briars G, et al. Neonates living with enterostomy following necrotising enterocolitis are at high risk of becoming severely underweight. Eur J Pediatr. 2019;178:1875–81. https://doi.org/10.1007/s00431-019-03440-6.