

LETTER

A prolonged ICU stay after interhospital transport?

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See related research by Barratt *et al.*, <http://ccforum.com/content/16/5/R179>

Transport of critically ill patients can be complicated [1-3]. Barratt and colleagues studied patients transferred for nonclinical reasons to evaluate the consequences of transportation [4]. There was no difference in mortality but the ICU length of stay (LOS) increased by 3 days, which was explained as a negative impact of the transport on patient physiology. We disagree with this conclusion.

First, by including only transports to level 3 ICUs the received level of care for transported patients will increase, introducing a bias.

Second, the increase in LOS can be interpreted as a result of selection bias, because patients with a short expected LOS would often not be considered eligible for transport. Also, since there was no increase in mortality, which would have been expected with an increased LOS, we might be looking at a mortality reduction as a result of the transfer to a higher-level ICU.

Third, Barrett and colleagues suggest that deterioration of patient physiology during transport is probably responsible for the increase in LOS. However, the reported Intensive Care National Audit and Research Centre scores before and after transport (although not validated for sequential patient assessments) do not support this assumption.

Fourth, the method of transportation should have been included in this study. Specialised transport teams deliver patients with a better acute physiology compared with nonspecialised teams [2,5], making a need for regaining physiological stability unlikely.

In conclusion, we congratulate Barratt and colleagues for their research. However, we think their conclusion is

premature because multiple possible confounders were not taken into account.

Abbreviations

LOS, length of stay.

Competing interests

The authors declare that they have no competing interests.

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References

1. Ligtenberg JJM, Arnold LG, Stienstra Y, van der Werf TS, Meertens JHJM, Tulleken JE, Zijlstra JG: **Quality of interhospital transport of critically ill patients: a prospective audit.** *Crit Care* 2005, **9**:R446-R451.
2. Wieggersma JS, Droogh JM, Zijlstra JG, Fokkema J, Ligtenberg JJ: **Quality of interhospital transport of the critically ill: impact of a mobile intensive care unit with a specialized retrieval team.** *Crit Care* 2011, **15**:R75.
3. Droogh JM, Smit M, Hut J, de Vos R, Ligtenberg JJ, Zijlstra JG: **Inter-hospital transport of critically ill patients; expect surprises.** *Crit Care* 2012, **16**:R26.
4. Barratt H, Harrison DA, Rowan KM, Raine R: **Effect of non-clinical inter-hospital critical care unit to unit transfer of critically ill patients: a propensity-matched cohort analysis.** *Crit Care* 2012, **16**:R179.
5. Bellingan G, Olivier T, Batson S, Webb A: **Comparison of a specialist retrieval team with current United Kingdom practice for the transport of critically ill patients.** *Intensive Care Med* 2000, **26**:740-744.

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