

Reviewer's report

Title: Hospital mortality among major trauma victims admitted on weekends and evenings. A cohort study.

Version: 1 **Date:** 18 May 2009

Reviewer: Damon Scales

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Laupland and colleagues present a population-based cohort study examining the mortality of patients admitted following trauma hospitals in the Calgary (Alberta, Canada) region on weekends versus weekdays, and during regular working hours versus off-hours. Their main finding was that day or time of hospital admission was not associated with any mortality differences. Mortality depending on time of admission has been studied in multiple areas including critical illness, but the focus on studying outcomes of trauma patients in a region with a highly-developed regional trauma program make this contribution novel, unique, and important.

Strengths of this study include its population-based scope, and the authors' use of appropriate and sophisticated analytical techniques. The main limitation is the restricted focus on mortality, and inability to draw inferences about non-mortality endpoints or complication rates that do not result in death.

The study is well-written, and the discussion and conclusions are balanced and reasonable.

Major Compulsory Revisions: none

Discretionary revisions for authors:

- 1) Have you considered stratifying your cohort according to need for ICU admission? Since others (Wunsch et al) have demonstrated no difference in weekend versus weekday outcomes among patients admitted to ICU, it might be interesting to evaluate whether those trauma patients not requiring ICU admission have different outcomes depending on time or day of admission.
- 2) The authors mention in the discussion that testing and surgical procedures care occur on a 24/7 basis in the Calgary region. Is information available in your dataset to investigate whether procedural or testing volume (and timing) varied substantially depending on timing of admission (especially during the first hours following admission)?
- 3) Please explicitly state in the methods section that only inpatient mortality was measured (if this is indeed the case)
- 4) In the presentation of your results, would you consider presenting odds ratios with confidence intervals for your mortality comparisons?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.