Reviewer's report

Title: Does The Presence of Medical Trainees Affect The Increased Mortality Noted With Weekend Admission?

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Reviewer: Kathryn Andolsek

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BMC Does Presence of Med Trainees Affect the Increased Mortality noted with Weekend Admission?

Provocative article --certainly different from most of the recent literature
Very interesting analysis

1. Is the question posed by the authors well defined? Yes though it would have been extremely worthwhile if authors had discussed in a bit greater detail why they believe their results differed from ref 23, 24, 25; were methods different?

2. Are the methods appropriate and well described? I am unsure whether urban poor and safety net hospitals were over represented in the hospitals with greater resident presence. On the other hand the tertiles are not “educationally significant” I am not at all certain a hospital with 1-26 trainees has much patient care due to their presence

3. Are the data sound? Describe the charlson comorbidity index score Consider analyzing for medicine and surgery “separately” or using Jan 2005 on --fewer years but by then hospitals should have adjusted to duty hours
clarify “ P value for interaction p 9 “tests for interactions” last line.
The median income quarter of 63000 or more is widely variable income.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition? yes

5. Are the discussion and conclusions well balanced and adequately supported by the data? The study would have been stronger if there were any indications the patients in these hospitals. were in fact cared for by residents. Perhaps patients admitted to non -teaching services over the weekend had the increased mortality and not the patients on the “teaching services”..as such, the attribution by hospital would not justify the conclusion ( supervision wasn’t the culprit?)
The lowest quartile of hospitals (with no trainees) typically have some of the lowest acuity patients-- a middle tertile of 1-26 residents may not have much coverage of patients. The highest tertile of 27 trainees still doesn't have “many”
trainees. The time period addressed overlapped the 6 months before ACGME duty hour rules of July 2003 through the first few years of duty hours. Might weekend coverage, even with residents been “leaner” and with more transitions due to work hour restrictions? Were hospitals hiring less experienced clinicians to replace some of the resident hours (lost with duty hours) and these individuals weren’t adequately trained;

are hospitals with higher intensity trainees the same as those that don’t? more urban, poor? Might these be services were greater services reduction and shorter staffing on weekends?

Did hospitals without residents just not admit “ill” patients who didn’t survive to be admitted?

6. Are limitations of the work clearly stated? I believe there are more limitations here than authors acknowledged: I believe a real “leap” to attribute to lack of supervision especially when no way to know whether these residents were actually providing care for the patients

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

8. Do the title and abstract accurately convey what has been found? Might change the title to presence of medical trainees associated with increased mortality noted with weekend admissions good abstract

9. Is the writing acceptable? clearly written, concise

minor edits
abstract remove the word “then” in methods, line 2 and “next” line 3
page 3 second line from bottom, I would remove “thus”

I don’t understand the tables --what do the parentheses mean?
Male 2,651,234 (23.3) 8,747,214 (76.7)
Female 3,321,072 (22.8) 11,228,419 (77.2)
Missing 25,710 (24.8) 78,116 (75.2)

I would think you would want to represent the gender of weekend patients and weekday aptinets there were far greater % of women admitted on weekends than weekdays. Similarly a greater % were missing gender designation

Similar to gender I don’t think the tables are created appropriately

A lot of missing date --up to 24-25%

What percentage of residents train in hospital < 75 beds? < 157 beds?

Declaration of competing interests:
I declare that I have no competing interests.