

Injury Prevention

Manuscript Details

Manuscript ID: injuryprev-2015-041833

Article Type: Original article

Keywords: Descriptive Epidemiology < Methodology, Geographical / Spatial analysis < Methodology, Mortality < Outcome of Injury

Date Submitted: 28-Aug-2015

Manuscript Title: Distinctive injury deaths: The role of environment, policy, and measurement across states

Authors:



Please enter your name if you wish to disclose it to the Authors:

req Please provide a competing interest statement:

None.

Are research ethics (eg study design, consent, ethical approval) addressed appropriately?

☒ Yes

No

If not, please supply details below or discuss with the editor.

Do you have any concerns about publication ethics (eg plagiarism, fabrication, redundant publication, undeclared conflicts of interest)?

Yes

☒ No

If yes, please supply details below or discuss with the editor.

Commentary

I would be willing to write a commentary if this article is accepted.

req Recommendation

Accept

☒ Minor Revision

Major Revision

Reject

Comments

Confidential Comments to the Editor

req Comments to the Author

I appreciate the opportunity to review this manuscript entitled "Distinctive injury deaths: The role of environment, policy, and measurement across states". This interesting paper utilizes WISQARS data to identify the most "distinct" causes of injury death, extending previous methodology (e.g., 2015 CDC report on all-cause mortality by state) and

applying this through the novel lens of injury mortality. This is a very interesting and important paper with the potential to be received in the media given the graphical nature of the results and different spin on assessing the burden of injury across states. I think this paper succeeds in the first stated objective, but perhaps falls short of the second objective which is to examine and explore the reasons for these differences through a comparative policy and social lens.

I think this paper would be strengthened by focusing on the novelty of the first objective, rather than explicitly setting out to explore the reasons for these differences across states. By doing this, the authors would have a more focused paper describing the differences, and have a nice setup for future analysis that examines the reasons for these policy differences using a more rigorous or systematic evaluation. I think the second objective warrants a stronger analysis (rather than just exploring this in the discussion section) and the authors could either remove this objective altogether (with a strengthening of the language for the first objective), and/or revisit the analysis with a more rigorous examination of policy and cultural differences across states as future work.

My general comments follow:

- The second paragraph is good as it sets up some reasons for true versus spurious differences in geographic variations. But some additional supporting references could be added to the statements listed here.
- When describing broader geographic patterns using non-compass headings or cultural terms, please include a brief description for international audiences, for example: "...Appalachia region (e.g., stretching from New York to Mississippi..."; or page 7, line 32, "Rural, Western states, such as State X or State Y, tended to have higher rate ratios of...".
- You could add a few more details on the data source and study population, e.g., "age-adjusted rates were calculated using the direct method and standardized to the 2000 total US population... all ages, all races/ethnicities were included...".
- Tables and figures need more descriptive titles. Also, if you decide to describe the tables and map as "outlier maps", you could introduce this term earlier in the background or methods section to avoid any confusion, and/or use this term consistently throughout.
- For Table 2, an alternative presentation would be to display all of the injury categories (similar to Table 1 listing all of the states), and then combine the two sets of columns (i.e., resulting in columns for (1) number of states where most distinctive, (2) injury, (3) national rate, (4) IQR for national rate). In any case, the headings for Table 2 need revision, and I would suggest "Top 5 injury types ranked by death rate and number of states where most distinctive".
- For Table 1, I would suggest adding a note in the title clarifying that the "outliers were calculated by excluding the indeterminate categories, with footnotes indicating states where the outlier injury type changed as a result of the sensitivity analysis". I also see that some of the updated rate ratios are listed in the text, but you could also include these in the table footnotes as well.
- I think the manuscript would be better positioned by focusing on (1) determining the most distinctive cause of death in each state and (2) describing and documenting potential differences in classification, rather than embarking on a broader policy analysis of geographic, physical, policy and cultural factors, which is really only approachable using a different set of methods (i.e., you would have to capture some measure of policy variations across states and include these as analysis variables, and/or rigorously/systematically map these onto the observed differences in distinct injury causes as part of the analysis plan rather than just mentioning these in the discussion). This is perhaps a different research question requiring a different set of tools as well as a qualitative/quantitative scan of policies across states, and so you would be fine to leave the current analysis as is – but just remove this broader policy goal from the stated objectives (e.g., "an additional goal of this analysis is to explore the relative contributions...") given that the paper is not set up to answer these questions.
- If the authors decide to bolster the examination of potential classification issues, it might be interesting to examine how the classification ratios vary over time and whether these patterns are consistent with previous studies examining classification issues (e.g., Rockett IH, et al. Suicide and unintentional poisoning mortality trends in the United States, 1987-2006: two unrelated phenomena? BMC Public Health, 2010;10:705).
- I appreciate that the map displays the injury type as a "more nuanced" view of injury outcomes across states, in comparison to highest death rates or most frequent causes. As you note in the discussion, this type of analysis does not focus on the overall magnitude of the burden of injury. Perhaps this could be taken one step further, with Table 1 displaying a note or flag where the absolute burden is lower despite a higher relative measure, or just by merging in the contents of Table 2 into Table 1.
- Some of the discussion points (e.g., page 12, line 40; page 14, line 25) could be strengthened by adding references.
- Page 15, line 30, could be changed to "while not necessarily the most burdensome..."
- Spelling and formatting for references #1 and #11.

Aside from these comments, this is an interesting paper and would be strengthened by focusing the objectives and cleaning up some of the presentation of results. I'm happy to review any subsequent revisions.