

Peer Review File

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Reviewer A

Comment: The article is well written. It covers an extremely important topic - physician burnout. The benefits of trained professionals assisting physicians are significant, and should continue to be emphasized. However.... I do not believe this article adds very much to the existing literature on this topic. Several articles, for example, are listed in the references of this submission. Any assistance to physicians, whether it be RN's, NP's, PA's, residents, or scribes; will all decrease burnout. I believe that is obvious enough without another article stating so. I think the ROI is a little harder to calculate.

Reply: We appreciate this feedback. Respectfully we disagree that this does not add to the literature. As noted by the reviewer, we reference many articles that describe the benefits of scribe utilization. Reference one discusses scribes in the Emergency room, reference two discusses scribes in an ambulatory urology practice, and reference three in a cardiology clinic. As we combed the literature, we found no articles that discussed our particular topic of scribe utilization in a hospitalist shift dedicated to admissions. Overall, the actual published literature around scribe utilization in hospitalist work is extremely small. Because of this we were forced to cite several non-research journal articles in the references from *The Hospitalist* and *Today's Hospitalist*. We note the lack of hospitalist specific research around scribes in the first two paragraphs of the introduction. Since the initial version of the paper, we have found an article that proposes scribe benefits in hospital medicine and we have cited it with some changes to reflect this lack of information more clearly.

Changes in the text: We have modified our text as advised on Page 4, Line 5-7 to add "While addition of a scribe to a hospitalist team utilizing industry data has been suggested as beneficial, we found no data showing actual measurement of outcomes with such an implementation (7)." Note, this changes the citation numbers throughout the rest of the text.

Reviewer B

Comment: This manuscript highlights the effects of a pilot program that pairs medical scribes with hospitalists. I enjoyed reading/learning about the program and its impact. The topic itself is important. However, this manuscript needs substantial revision before it can be considered for publication. In particular, the manuscript does not conform to scientific writing, norms, and details that are expected of an Original Article. It reads more like an organizational report, with many details missing in ways that make it challenging for the reviewer to ascertain the robustness of the pilot program and results.

I detail what I see are the major areas that need improvement below.

Introduction

- The introduction lacks coherence. The authors describe scribes, burnout, hospitalist shift types without context, which make it hard for the reader to follow in terms of the

central argument being made.

- A quick search reveals that there are several peer-reviewed articles on the impact of employing scribes on clinician job outcomes. I would expect the authors to synthesize what is out there for the Introduction to make it compelling.

- What is the main "problem" or "issue" that the pilot program is hoping to address? Is it more related to clinician outcomes (i.e., burnout), or is it more about efficiency/productivity? If it's both, the Introduction should dedicate one paragraph to each problem/issue. Why would scribes help, and how does this impact the design of the pilot program?

- The last paragraph (lines 69-79) contains information that should go into the Methods section.

Methods

- The Methods section does not contain enough details. The Methods section should contain details of the pilot program, AND how the authors approached the analysis of the program/evaluation data in order to arrive at the results.

- For example, it seems like there was quantitative and qualitative data being collected for evaluation. How did the authors collect and analyze such data?

- Was the design of the pilot program based on existing studies? Is there a conceptual model?

- Were there any other programs being introduced at the same time that could have caused contamination? The authors need to describe additional context.

- I would suggest the authors to look into reporting guidelines/frameworks from implementation science to see if they can present the pilot program in a more compelling way.

Discussion

- The discussion section is for the authors to summarize their findings and also integrate them into existing knowledge + mention future research directions. In particular, this section should contain multiple references to previous research. At present I find the contents included in this section to be fairly superficial, with no attempts to link the findings to wider knowledge and to explain them.

Reply: We appreciate the depth and attention that was given to the article by this reviewer. We will break down our response into three sections to match the response above.

For the introduction, we agreed that we could more quickly sum up the direction that the article is taking around a central question before expanding the text. The lack of information around specific hospitalist utilization of scribes led us to cite authoritative articles rather than reviewing them fully in our text.

Methods: We agree that lines 69-79 could be moved to the methods section to make it more robust. We agree that we needed to address the data collection and analysis in the methods design section. We have made these adjustments.

Discussion: As noted, at the time of our trial we had no existing literature to refer to about hospitalist scribe utilization on an admitting service.

Changes in the text: We made many edits to the text. Outlined below:

Page 3, lines 27 – We added the words admitting and physician to the conclusion. “Pairing a medical scribe with an admitting hospitalist physician led to increased clinician”

Page 4, lines 8-10 were added: “Could scribes increase hospitalist productivity while remaining financially feasible? If so, are the other benefits of scribe utilization described in the literature applicable to scribe utilization in a hospitalist admission shift?”

Page 4, Line 17-18 we added - Would addition of a scribe to a hospitalist admission service decrease clinician burnout?

Page 4, Line 23, we removed the word “avoidance”

Page 5, Lines 1-4 were added to clarify the goal “To assess these problems with both workload and provider satisfaction, we attempted to employ a scribe on a hospitalist admission shift for an eight-week pilot. Our goal was to measure both productivity and provider satisfaction to determine both tangible and intangible benefits.”

Page 5, Lines 7-17, the lines were unedited, but the entire paragraph moved to the methods section as recommended.

Page 7, lines 10-20, the lines were added “Data was collected through both quantitative and qualitative measures. Admissions to the hospitalist service were tracked through the electronic health record and billing data. This data allowed us to identify admissions that potentially could have been admitted to a swing shift provider but were passed to another team due to the swing clinician being unable to manage the volume. The electronic health record provided the decision to admit to first order time. Clinician surveys were given both pre- and post-trial to assess their satisfaction and work capacity. Although no other programs were deployed at the same time, the hospitalist team had undergone a recent management change with many new processes implemented that may have continued to improve efficiency. The providers were also aware of the scribe addition to their service and likely suspected more data was being collected than their survey.

Page 14, line 3-5, the line was added “ROI validation of scribe utilization could be furthered through tracking revenue generation, reductions in staffing, increased hospital admissions, or clinician turnover (7).”

Page 14, line 19, we added the words “admitting” and “physician” for clarity. “Pairing a medical scribe with an admitting hospitalist physician led to increased clinician...”

Page 1, line 19 & Page 2, line 9 – added MBA to Dr. Corvini’s credentials.
