

Use of a Novel Presentation Approach to Improve Teaching Rounds on Inpatient Medicine Teams

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ABSTRACT

Changes in graduate medical education (GME) have led to an increased number of handoffs, and a phenomenon of new internal medicine patients being presented on morning rounds by trainees who were not involved in the patient’s admission process. We performed a pilot study examining the educational and workflow implications of implementing a clinical reasoning-focused presentation during morning rounds for patients admitted overnight by a night float resident, in hopes that this would improve efficiency while maintaining educational quality.

The intervention requested that the attending and supervising resident review admission documentation prior to rounds, streamlined the presentation by the daytime resident, and shifted the discussion of overnight admissions towards a critical review of earlier clinical reasoning in the plan of care. In this crossover study four groups of residents and attendings (12 residents and 4 attendings in total) were asked to carry out the traditional presentation approach for the first week and the new presentation approach for the following 2 weeks of their 3 week general medicine ward rotation. 93% of invitees returned surveys, and 75% of the attendings performed the requested changes.

The new approach was rated as superior to the traditional approach by all team members and was time neutral, or time saving if considering only the 3 attendings who implemented the intervention.

INTRODUCTION

Duty hour restrictions have lead to increasing numbers of internal medicine patients being admitted by an overnight resident, and then presented by the day team intern after minimal time to review the data and meet the patient. Dhaliwal and Hauer (2013) proposed a new model of presenting night float admissions that aims to challenge the trainee’s clinical reasoning abilities and improve efficiency in patient care during morning rounds. Their approach hinges upon all parties reviewing the EHR prior to teaching rounds, and a shift towards having the presenting resident provide both patient information as well as a critical perspective of the initial assessment and plan using all available data. Our pilot study aimed to test the educational and workflow implications of implementing a version of this model on the general medicine teams at an urban academic medical center.

METHODS

This study was conducted at a 496-bed urban academic medical center. Medicine teams included an attending physician, one PGY-2 or PGY-3 resident, two PGY-1 interns, and varying numbers of medical students.

Patients admitted overnight by a night float resident were passed off to the team residents at 7am; supervising residents then had conference from 7:30-8:30am, while interns pre-rounded. Morning rounds started at 8:30am. All team members had 3 week rotations; attendings and interns started the same week, with the start of supervising residents’ offset by one week.

Our study had a crossover design, with teams using the usual approach for patients admitted by night float residents during the first week and the new approach, an abbreviated nocturnal admission presentation, for the subsequent 2 weeks of the intern’s 3-week rotation (Figure 1).

For the traditional presentation interns were expected to present night float admissions from the overnight H&P. No further guidance was given.

Before the period using the abbreviated nocturnal admission presentation, all team members were sent an email detailing the intervention protocol. **For the intervention period:**

- 1) Attendings and supervising residents were asked to review the H&P and other relevant data prior to morning rounds, with especial attention to clinical reasoning (no change to intern prerounds)
- 2) During rounds, interns were asked to provide abbreviated presentations of overnight admissions, focusing on what they felt to be the pertinent aspects of the history and physical. They were asked to summarize the clinical reasoning of the admitting resident and then to build upon those conclusions by discussing how subsequent information impacted the differential diagnosis and the treatment plan.

We sought to test effectiveness rather than efficacy of the new approach, so adherence to the suggested approach was entirely at the discretion of the attending and supervising resident.

This study was approved by the Boston University’s Institutional Review Board. All participants provided informed consent.

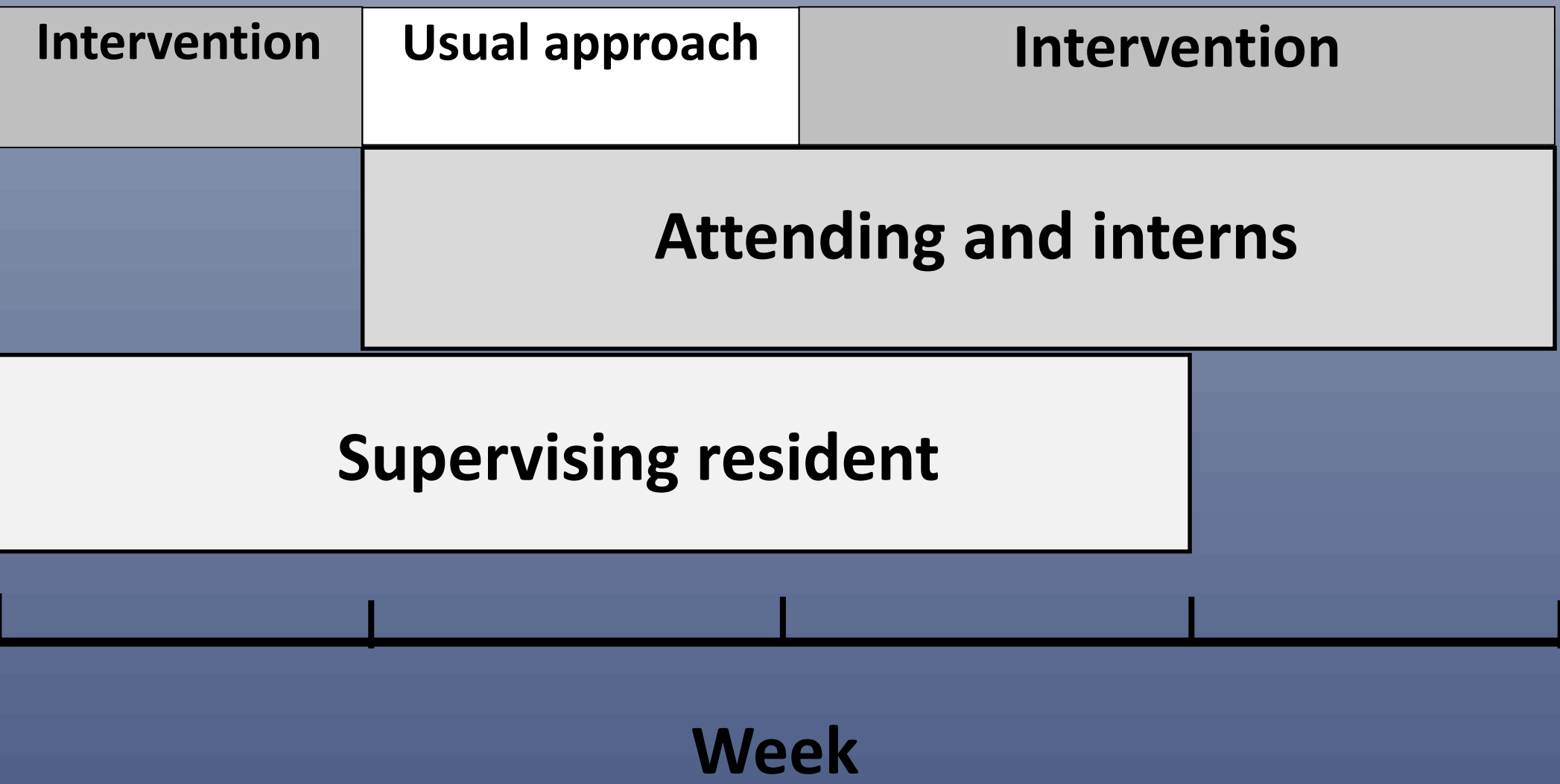


Figure 1: Individual team member schedules compared with the rounding approach used

	Intervention Presentation	Traditional Presentation	P-value
Number of person days	40	20	n/a
Average morning census \pm SD	12.7 \pm 2.3	12.1 \pm 3.0	0.42
Number of night-float admissions \pm SD	2.5 \pm 2.0	2.2 \pm 1.8	0.59
Average rounding time (min) \pm SD	198.5 \pm 41.1	196.3 \pm 44.0	0.85
% of days rounds finished by noon	55%	65%	0.45

Table 1: Census and rounds information in the intervention and traditional periods

RESULTS

A total of four attendings, four supervising residents, and eight interns were invited to take part in the trial, with a total of 20 person-days in the traditional model and 40 person-days in the modified model. One attending did not employ the intervention during her time on service, and did not return her survey; all other surveys were completed (93% of those sent out), and all other attendings reported following the trial protocol. Team and rounding data is summarized in Table 1.

From a workflow perspective, the duration of rounds during the intervention versus the routine approach was not significantly different. When data from the attending who did not perform the intervention was excluded, rounds during the intervention period were significantly shorter by an average of 18.5 minutes (CI 1.8-35.1 minutes).

Multivariate analysis found that both a higher morning census and an increased number of night float admissions were associated with increased amounts of time in rounding. The individual attending and resident did not impact the duration of rounds significantly.

All participants who returned surveys preferred the new model to the traditional model as a general approach, and all rated it as more educationally valuable and more efficient. There was felt to be no impact on pre-rounding efficiency or on patient safety between the two approaches.

Qualitative comments from all levels of staff noted the efficiency benefits when attendings and supervising residents had reviewed the EHR before rounds, and the educational utility in shifting the intern’s role towards clinical reasoning rather than simple recitation.

CONCLUSIONS

We believe that the nature of inpatient teaching rounds needs to evolve in response to three broad trends:

- 1) duty hour restrictions of residents (leading to more passoffs and the new class of night float admission presentations)
- 2) relatively ubiquitous electronic health records (making recitation of easily accessed information less necessary)
- 3) an increased recognition of the importance of fostering clinical reasoning in residency (medical knowledge is important, but its appropriate application supersedes rote memorization as a GME goal)

We demonstrated that a new model of presenting night float admissions aiming to challenge the trainee’s clinical reasoning abilities and to improve efficiency in patient care during morning rounds was associated with perceptions of improved efficiency and education from participants. The rounding time was shorter with the new approach when it was appropriately implemented, and was time-neutral if considering all data.

We are working to standardize this approach across teams at our institution, and are considering how to expand it to medical students as a next step.

Selected References

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