Pilot Study: Structured Pre-Rounding Training to Reduce Stress and Improve Intern Efficiency

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BACKGROUND

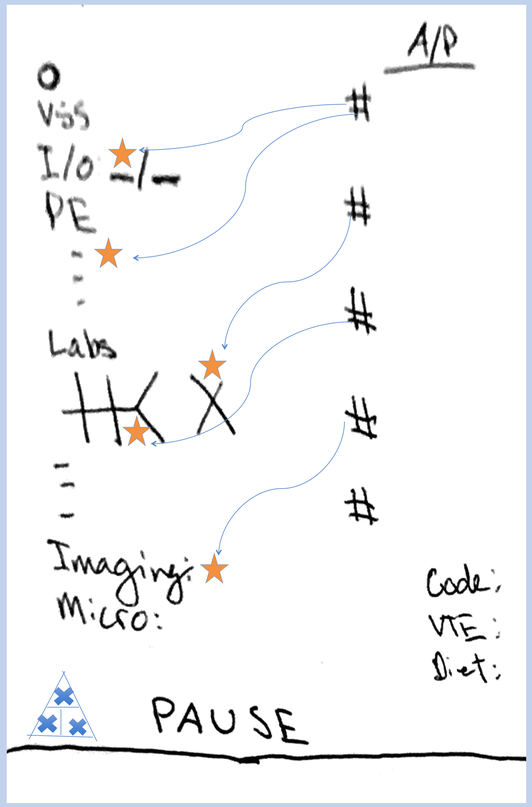
1. Electronic health records (EHRs) have led to massive expansion in documentation
2. EHRs are partially responsible for trainee burnout and depression as more time is spent on indirect forms of patient care and away from the bedside
3. Ways to improve how trainees and physicians interface with EHRs has been recommended
4. We sought to provide structured pre-rounding training and measure its effect on trainee stress, efficiency, organization, and time at the bedside

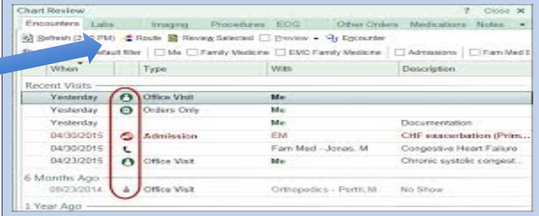
METHODS

- ***Pre-Rounding Training***
  - Defined as training in how to collect, store, and use data to develop a daily assessment and plan prior to rounding with the medical team in the morning
- ***Population***
  - Internal Medicine interns at University of Colorado
- ***Delivery***
  - In person
  - Online Video Conference
- ***Assessment***
  - Pre and post intervention survey data were collected
- ***Outcomes*** included trainee self-perceived level of:
  - Efficiency
  - Organization
  - Stress
  - Time spent pre-rounding
  - Time at the bedside prior to rounds
  - Time to research treatment plans
  - Organization of Oral Case Presentations

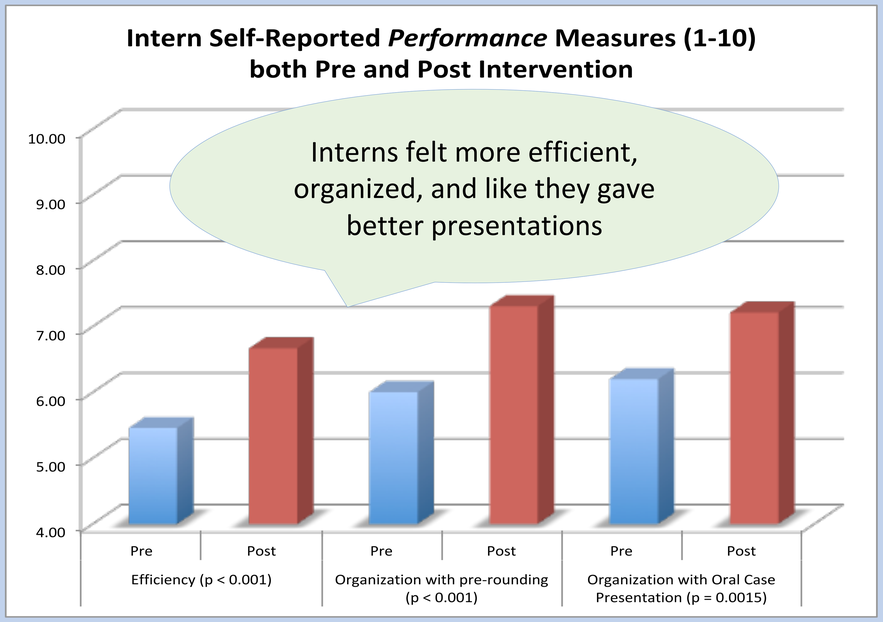
INTERVENTION

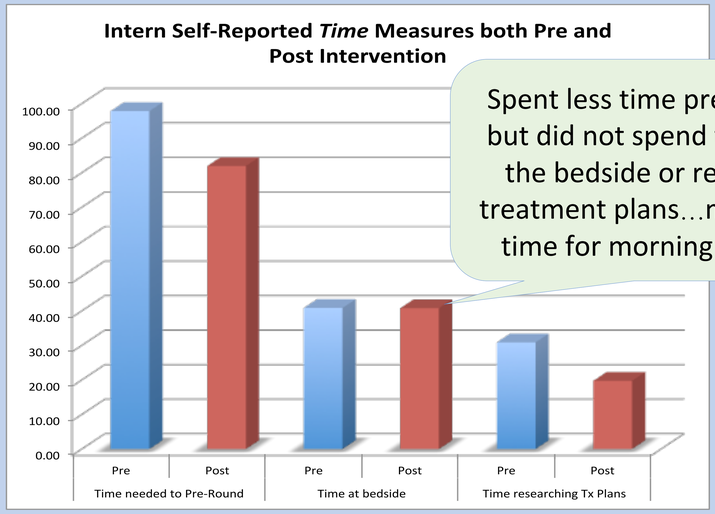
- ***Primary Focus:*** Systematic, targeted data extraction guided by active problems, promoting assessment and plan development
- ***Characteristics:***
  - Abbreviated
  - Comprehensive
  - Problem-based extraction
- ***Innovative Workflow:***
  1. *Repetition*: Use template every time
  2. *Scaffolding*: Template sequence should match OCP sequence
  3. *Less is More:* Leave sections with normal, unremarkable data blank
  4. *Targeted Extraction:* Note *important* data, not all data ★
  5. *Reduce Working Memory:* Copy what you can from *yesterday* (#'s), extracting data from active problems
  6. *Modify EHR:* If possible, match 'tabs' in EHR to template sequence
  7. *PAUSE:* What did I miss? ✖
  8. *Triangle:* Orders, Note, Sign-out





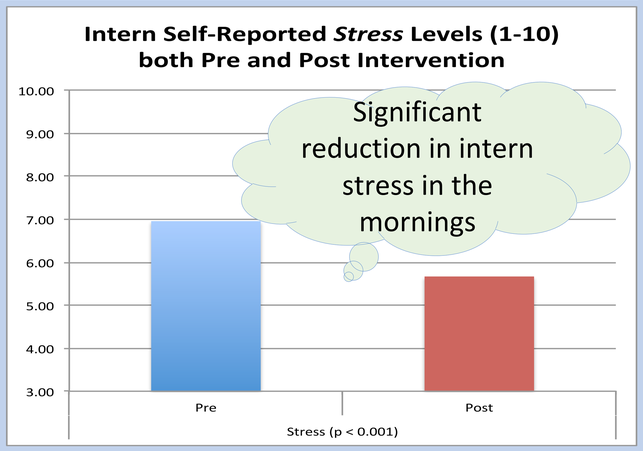
RESULTS





RESULTS

- 91 completed training
- 42 provided post-intervention data
  - 13/91 in person training
- Qualitatively, desired training earlier and in electronic format
- Majority agreed or strongly agreed with the training was useful, and recommended in future



DISCUSSION

- Systematic pre-rounding training led to significant improvements in efficiency, organization, time, and stress
- It did not lead to more time at the bedside or studying treatment plans, potentially due to the COVID-19 pandemic
- Earlier training in an electronic format earlier is desired
- Demonstrates the problem expanding EHRs pose to physician wellbeing and the need for thoughtful interfacing in the future

References:
1. Chaiyachati KH, Shea JA, Asch DA, Liu M, Bellini LM, Dine CJ, et al. Assessment of Inpatient Time Allocation Among First-Year Internal Medicine Residents Using Time-Motion Observations. JAMA Intern Med. 2019;179(6):760-7.