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### **Title**

Impact of Electronic Health Record (EHR) Training on Resident Physician Inbox Management Competency and Efficiency

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## Abstract Form

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### Abstract

**Introduction:** Inbox management via the electronic health record (EHR) is a major source of burnout and stress for primary care physicians (PCPs). In the outpatient setting, the growth of EHR use and patient portal messaging have added new inbox related stressors in the primary care practice. There is little to no training that occurs during medical school or residency to prepare physicians for these unique challenges, and more focused time on EHR training in curricula for physician trainees may help to prevent burnout, improve job satisfaction, and overall improve patient care. This study aims to improve overall proficiency and efficiency with inbox management with a comprehensive EHR inbox training session and resource guide for internal medicine primary care residents.

**Methods:** We held a focus session with primary care residents and identified key challenges with EHR inbox management. Using this information developed a comprehensive 1-hour workshop and a reference guide for primary care interns. There were concurrent intervention and control groups, with the intervention group at the Santa Clarita clinic and control group at the Santa Monica clinic. Participants were anonymously surveyed before and after the intervention to evaluate self-rated competencies related to various EHR inbox related tasks. Inbox metrics were also pulled from the EHR regarding total time in the inbox, message turnaround time, and total number and types of inbox messages received.

**Results:** 12 primary care interns completed an eight-question survey before the intervention in September and several months afterward in March. All interns initially rated themselves as "Novice" (needs help when performing the skill) for most inbox tasks, including releasing abnormal lab results, authorizing medication refills, responding to MyChart messages, making telephone calls to patients, re-triaging inbox tasks, and completing tasks in a timely manner). 6 months after the initial intervention, 100% of respondents in both the intervention and control groups reported improvement in their self-rated competencies. On average, 100% of respondents reported themselves as "Intermediate" or "Advanced" (able to complete task without assistance or only occasional assistance). Given the length of time between pre- and post-intervention, there is certainly a multitude of other factors contributing to the improvement in self-rated competencies in the control group as well, such as general growth of medical knowledge and experience through intern year and varying experiences with different inbox attendings across clinics.

Pre-intervention, the intervention group spent on average 15.4 minutes in their inbox per day compared to 14.1 minutes in the control group. Post-intervention, both groups saw improvement in their time spent in the inbox per day (8.6 minutes for intervention group and 6.8 minutes for the control). Pre- and post-intervention, both groups had an average of 4 to 5 inbox messages per day. For turnaround time to completion of each inbox message, the intervention group had an average of 3.4 days pre-intervention and 3.6 days post-intervention, whereas the control group had an average of 2.7 days pre-intervention and 5.9 days post-intervention. This data point may suggest that the intervention group became more efficient with the completion of inbox messages compared to the control group, which had an increase in the number of days to completion of inbox messages.

**Conclusion:** Inbox management is a task that the majority of primary care residents have identified as a challenge in the outpatient setting. We conclude that all residents to a degree feel more confident in managing their inboxes as they progress through intern year, regardless of intervention. However, this study suggests that having a more robust inbox management curriculum may help improve overall efficiency with completion of inbox tasks.