

A Grass Roots Electronic Medical Record (EMR) To Improve Housestaff Efficiency, Compliance With Duty Hours And Patient Care.

Keith B. Armitage, M.D. and Rahul Rathod, M.D.

STATEMENT OF PROBLEM OR QUESTION: The ACGME duty hour rules implemented in July 2003 requires more efficient approaches to resident education and patient care.

OBJECTIVES OF PROGRAM/INTERVENTION: We identified housestaff progress note writing and the creation of a daily signout to be areas that provided an opportunity for improved housestaff efficiency. Our hospital is an 850 bed academic medical center without an EMR. We implemented an electronic note writing and signout system for our residents, and then surveyed the residents regarding the time saving of the new system and compliance with ACGME duty hours.

DESCRIPTION OF PROGRAM/INTERVENTION: In October 2003 we instituted a computer based note-writing and signout system that was created by a current PGY2 in Pediatrics at Case. This resident was an IT consultant prior to attending Case Medical School, and prior to his internship created a electronic database system for use by his fellow residents. The system (RECS for Resident Electronic Centralized Signout) works by creating a database for each patient that can then be used to create progress notes and a standardized, formatted signout. Daily progress notes are created by updating patient information from the previous days note and are printed and placed in the patient's chart. Signouts are created using the updated information with little or no additional input. While not strictly an EMR, the data is stored on the hospital's server and is available when patients are readmitted. RECS is an EMR product that may be unique as a system specifically designed to make housestaff more efficient.

FINDINGS TO DATE: We surveyed our interns and residents via email to find out the estimated time savings gained from RECS. Interns on average report time savings of 1.6 hours/day. Residents use the system primarily when interns have the day off and reported time savings of 1.8 hours/day. Based on our informal reporting system, RECS has improved compliance with ACGME duty hours, particularly the "24/6" rule. Nurses and consultants have commented that the notes are legible and clearly identify the patient's service and the houseofficer's pager number. Interns surveyed noted that standardized signouts have improved off-hour coverage.

KEY LESSONS LEARNED: A resident-created EMR system was successfully adopted by our housestaff. RECS creates efficiencies that improve compliance with duty hours and patient care.

From the Department of Medicine, Case Medical School/University Hospitals of Cleveland, Cleveland, OH and the Department of Pediatrics, Case Medical School/Rainbow Babies and Children's Hospital, Cleveland, OH.