

Electronic Medical Record Use in Pediatric Primary Care

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OBJECTIVES: To characterize patterns of electronic medical record (EMR) use at pediatric primary care acute visits.

DESIGN: Direct observational study of 529 acute visits with 27 experienced pediatric clinician users.

MEASUREMENTS: For each 20 s interval and at each stage of the visit according to the Davis Observation Code, we recorded whether the physician was communicating with the family only, using the computer while communicating, or using the computer without communication. Regression models assessed the impact of clinician, patient and visit characteristics on overall visit length, time spent interacting with families, and time spent using the computer while interacting.

RESULTS: The mean overall visit length was 11:30 (min:sec) with 9:06 spent in the exam room. Clinicians used the EMR during 27% of exam room time and at all stages of the visit (interacting, chatting, and building rapport; history taking; formulation of the diagnosis and treatment plan; and discussing prevention) except the physical exam. Communication with the family accompanied 70% of EMR use. In regression models, computer documentation outside the exam room was associated with visits that were 11% longer ($p=0.001$), and female clinicians spent more time using the computer while communicating ($p=0.003$).

LIMITATIONS: The 12 study practices shared one EMR.

CONCLUSIONS: Among pediatric clinicians with EMR experience, conversation accompanies most EMR use. Our results suggest that efforts to improve EMR usability and clinician EMR training should focus on use in the context of doctor-patient communication. Further study of the impact of documentation inside versus outside the exam room on productivity is warranted.

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