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The effects of electronic health records on triage and closing times: A continuous observation time motion study in an academic dermatology department

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Statement of the Problem: Electronic Health Record (EHR) technology has been rapidly adopted across hospital systems to improve health care delivery.¹⁻³ Despite the technology's promise, EHR adoption has been cited as a source of physician dissatisfaction due to lost productivity.³⁻⁶ The purpose of this study was to determine the impact of EHR adoption on time requirements for clinical documentation in an ambulatory dermatology practice.

Methodology: A continuous observation time-motion study was conducted at two dermatology practices that are part of an academic hospital in an urban setting. The time required to triage patients, patient status (new or follow-up), and the time required to close patient charts were recorded. Using Welch's t tests, the relationship between charting system (paper vs EHR) and time spent triaging patients and closing charts was examined.

Findings: Dermatologists and medical assistants were observed across 358 patient visits. A decrease in time spent triaging new patients (-17.8 seconds per visit, $p = 0.34$) and follow-up patients (-10.9 seconds, $p = 0.24$) was observed when the EHR system was used, but this decrease was not statistically significant. The decrease in time spent closing patient charts was non-significant for new patients (-3.5 seconds per visit, $p = 0.65$), but was significant for follow-up patients (-22.1 seconds, $p = 0.00021$).

Conclusion & Significance: EHR technology adoption may marginally increase productivity by decreasing clinical documentation time. Limitations include that a single EHR system was used and this was a single academic center study. Further research is needed to determine if a time-saving effect is reproducible in various settings and if the effect is correlated with physician and patient satisfaction and quality of care.

Biography

Beth Anne George is a member of the Program of Liberal Medical Education, which combines an undergraduate degree from Brown University with a professional medical degree from the Warren Alpert Medical School. Through this program, she received her B.A. with departmental honors in Public Health in 2017 and is expected to receive her M.D. in 2021. She is pursuing a scholarly concentration in Medical Technology, Innovation, Entrepreneurship.

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