Submission Id: 3812

Title

Examination of electronic health record efficiency and proficiency across primary care clinicians in community health centers

Priority 1 (Research Category)

Dissemination and implementation research

Presenters

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Abstract

Electronic health record (EHR) tools such as documentation shortcuts and ordering templates are designed to enhance both the efficiency and quality of care delivery. Use of such tools vary widely in primary care. Understanding patterns of use as a means to identify priority areas for improvement are lacking. Objective: This study is designed to identify and understand patterns of EHR efficiency use among primary care clinicians as a means to inform training support needs. Study Design: Retrospective observational study. Setting or Dataset: 340 Community Health Centers (CHCs) across 48 US states from the OCHIN Network. Population Studied: The OCHIN's network and 2033 primary care clinicians engaged in patient care at least 2 days a week during DEC 2019-FEB 2020. Methods: Six EHR efficiency indicators were drawn from the Epic EHR Signal efficiency indicators which are automatically generated monthly for clinicians. Indicators include: use of quick actions, preference lists, level of service and diagnosis speed buttons and chart search functions and notes written with smart tools. A weighted score of these indicators represented overall EHR proficiency with a possible range of 0-10 with higher scores suggesting higher efficiency. Latent profile analysis (LPA) was used to identify clusters of clinicians defined by distinct patterns of efficiency indicators. Results: The median EHR proficiency score was 4 and ranged from 0 to 9.5. The 9 cluster LPA solution the best overall fit. Clusters represented different patterns with notable strengths and deficiencies in EHR use efficiency. Cluster 2 was large (n=518) and characterized by being low on all indicators except for chart search. In contrast, cluster 9 was very small (n=12) and characterized by high scores for 4/6 indicators and low on quick actions. Conclusions: Substantial variation in EHR use efficiency among primary care clinicians was observed and can be represented by nine different patterns of indicators. These patterns show strengths and deficiencies in EHR use efficiency and could guide a tailored training approach to improve EHR efficiency.