EHR User Experience in the VA's EHR Transition

Background

The Department of Veterans Affairs (VA) is in the midst of a more than 10-year-long, multi-billion transition from its homegrown electronic health record (EHR) system to a commercially-developed system, the Federal EHR (formerly known as Oracle Health EHR). It is the largest-scale EHR transition in history, replacing the software used by more than 300,000 employees to care for millions of Veterans.[1] In addition to the technical change, it is a massive social and organizational transformation in which 130 locally-tailored versions of the VA's current EHR are slated to be replaced by a single nationwide system.

Key Findings

VA's EHR transition was massively disruptive to EHR users at the first few facilities to make the switch

- A sustained reduction in efficiency (clinical tasks taking longer) and usability was observed.[2]
- The transition disrupted health professions trainees' onboarding and clinical education, which was substantially remedied in response to evaluation findings.[3]
- The transition prompted important changes to several clinical team members' professional roles.[4]

Contributors to the disruptiveness of EHRM were diverse

- EHR transition challenges were compounded by co-occurrence with COVID-19 surges, which had negative impacts on clinician experience and patient care.[5]
- Training on the new EHR was insufficient and poorly targeted.[2]
- There were important gaps in the functionality of the EHR itself.[2,6]
- The EHR transition is complicated by a simultaneous effort to reduce practice variation and EHR customization across VA facilities.[7]

Funded VA EHR User Experience Projects

COMPLETE: Optimizing support for VA nurses during transition to Cerner: Assessment of non-VA nursing experiences (Sarah Krein, PhD, RN, Jessica Davila PhD, Julian Brunner PhD, HSR-funded PROVEN Rapid Pilot Project, Apr 2023 – Mar 2024). This study found variability across organizations in the nature and extent of workflow changes encountered by nurses, and surfaced several recommendations for improving nurse experience in EHR transitions. *For more information*: Julian.Brunner@va.gov

COMPLETE: Impacts of Cerner Millennium on communication across specialty care referrals (Kristina Cordasco, MD MPH MSHS, HSR-funded PROVEN Rapid Pilot Project, Dec 2020 – Sep 2022). This study found that while some interviewed users appreciated certain aspects of the referral functionality in the new EHR, many expressed frustration with poor usability, and specialists reported not receiving information needed for referral triaging. *For more information*: Kristina.Cordasco@va.gov

COMPLETE: Impacts of the Electronic Health Record Modernization on women's health care coordination: A qualitative investigation (Kristen Gray, PhD MS, HSR-funded PROVEN Rapid Pilot Project, May 2022 – Apr 2023). In this study, staff identified aspects of VA's EHRM which affected women (vs. men) Veterans disparately, including training and go-live support, data migration and accuracy, EHR product functionality, and community care staffing and backlogs. *For more information*: Kristen.Gray2@va.gov

ONGOING: EHRM Partnership Integrating Rapid Cycle Evaluation to Improve Cerner Implementation (EMPIRIC)
(Seppo Rinne MD PhD, Sarah Cutrona MD MPH, QUERI-funded Partnered Evaluation Initiative, Oct 2020 – Sep 2025)
The goal of the evaluation is to understand frontline clinician and staff experiences with VA's EHR transition and to identify best practices that can improve EHR implementation. It involves three key operational partnerships, each with related evaluation goals:

- In partnership with the Simulation Learning, Evaluation, Assessment, and Research Network (SimLEARN): evaluating EHRM user experience and the role of simulation
- In partnership with the National EHRM Supplemental Staffing Unit (NESSU): evaluating NESSU impacts and generating recommendations to improve EHR training and support
- In partnership with the Clinical Informatics and Data Management Office (CIDMO): conducting synthesis of EHRM evidence, developing an EHR causal framework, establishing EHRM usability and user satisfaction metrics, and developing an EHR surveillance system to detect workarounds and workflow aberrancies

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ONGOING: **Strengthening Cerner implementation for health professions trainees to optimize learning and reinforce Veteran care (SCHOLAR)** (Seppo Rinne, MD PhD, George Sayre, PsyD, QUERI-funded Partnered Evaluation Initiative, Oct 2021 – Sep 2024). This project examines health professions trainees' experience and needs related to EHRM, identifying local and national-level practices to improve the impact of EHRM on trainees. *For more information*:
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ONGOING: **Reducing employee turnover and identifying workforce needs during EHRM (RETAIN)** (Edwin Wong, PhD MA, Seppo Rinne, MD PhD, HSR-funded Investigator-Initiated Research, Jun 2023 – May 2026). This study examines the effects of EHRM on workforce outcomes including turnover, absenteeism, burnout, and engagement. *For more information*: Edwin.Wong@va.gov

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For More Information on:

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