

Cerner Electronic Health Record Data

Fact Sheet: Identifying VA Health Care Utilization Using Cerner Electronic Health Record Data

February 2023

CSPEAR provides timely epidemiologic information on VA health care users. This fact sheet presents summary data to inform a broad community of VA leaders, investigators, and clinicians as they consider how best to address the needs of Veterans.

Introduction: The Department of Veterans Affairs (VA) is implementing a new electronic health record (EHR) system as part of the Electronic Health Record Modernization program - transitioning to the Cerner Millennium EHR from the existing CPRS/Vista EHR.^{1,2} The new system will connect VA with the Department of Defense, the U.S. Coast Guard and participating community care providers within a single EHR. Cerner Millennium EHR data collected at VA sites that have transitioned to the new system are available in the VA Corporate Data Warehouse (CDW) environment.^{1,2,3} A CDW database contains this Cerner Millennium EHR data in the Millennium data model but lightly transformed to incorporate basic CDW standards.^{3,4} CSPEAR aims to understand this lightly transformed data to guide further analyses using data from the new EHR system. Mann-Grandstaff VA Medical Center (VAMC) in Spokane, WA, was the first to convert to Cerner Millennium in October 2020. At the time of this analysis in October 2022, five VAMCs had transitioned to the new EHR system.

Fast Facts

- Directly after the transition to the Cerner EHR system in October 2020, outpatient utilization in Spokane notably decreased and rebounded in January 2021. This decline and rebound is less noticeable at the other sites that transitioned to the Cerner EHR system.
- After transition to the Cerner EHR system, outpatient utilization is lower than expected as compared to the comparison sites.
- Primary care utilization markedly decreased in April and May 2020 due to the pandemic.
- There is a peak of primary care utilization in March 2021, which may be attributed to SARS-CoV-2 vaccinations.

Definitions

The definitions of health care utilization were developed to be comparable between Vista and Cerner systems. Visit the VA Centralized Interactive Phenomics Resource for information about health care utilization data in Cerner EHR:

Outpatient Care: https://phenomics.va.ornl.gov/web/cipher/phenotype-viewer?uqid=398facf277f5428ba326d521070f6d6f&name=Cerner_Electronic_Health_Record_Outpatient_CSPEAR

Inpatient Care: https://phenomics.va.ornl.gov/web/cipher/phenotype-viewer?uqid=cc41ba1d81214ed7984ff0a1f00ae094&name=Cerner_Electronic_Health_Record_Inpatient_CSPEAR

Primary Care: https://phenomics.va.ornl.gov/web/cipher/phenotype-viewer?uqid=2631e89e5f6e4279abddab9a444e20e9&name=Cerner_Electronic_Health_Record_Primary_Care_CSPEAR

Methods

Population: Veterans with matching SSNs and birth dates in both Vista and Cerner EHR systems at the five VAMCs that transitioned to the Cerner EHR system before October 2022 (Spokane, WA; Walla Walla, WA; Columbus, OH; Roseburg, OR; White City, OR). Veterans were also selected from four comparison VAMCs that did not transition to Cerner before October 2022 (Boise, ID; Portland, OR; Indianapolis, IN; Northern Indiana HCS). Veterans were age 18-110 on the day of transition to Cerner for the five VAMCs and on October 31, 2020 for the four comparison VAMCs.

Data Sources: Data were pulled from the CDW including Cerner EHR data that has been syndicated to the CDW.

Analyses: Health care utilization at the five VAMCs that have transitioned to Cerner was counted in the two years before transition and up to two years after transition. For the four comparison VAMCs, health care utilization was counted October 2018-October 2022. This analysis reflects only health care utilization at VA facilities and not utilization from non-VA facilities.

Project Approval: This work was conducted under CSPEAR's operational access to VA data.

Notes: This work was conducted under CSPEAR's operational access to VA data. This material is the result of work supported with resources and the use of facilities at the VA Cooperative Studies Program Epidemiology Centers in Seattle, WA. The contents do not represent the views of VA or the US Government. Additional figures and information are provided in the Supplement.

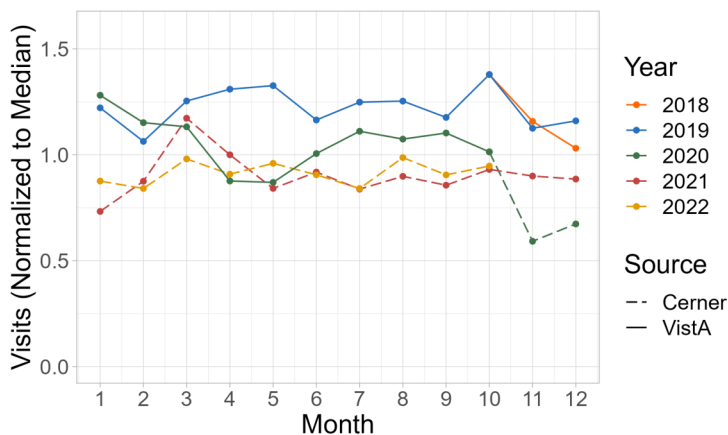
Visit [CSPEAR's website](#) or contact CSPEAR@va.gov for more information.

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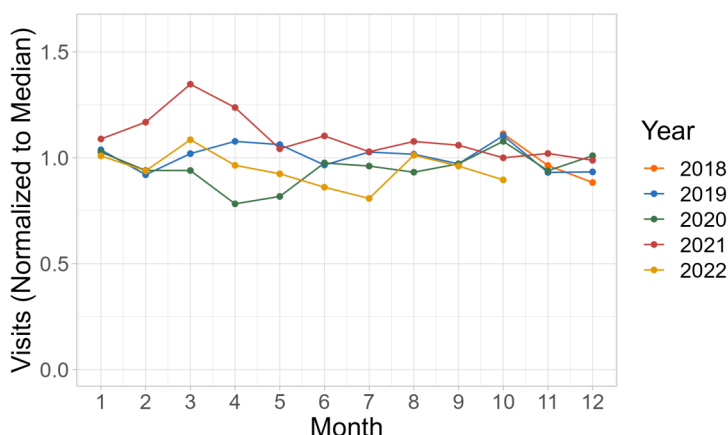


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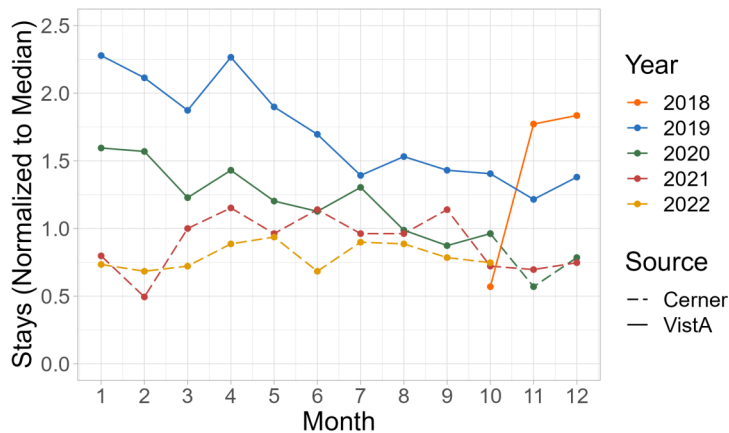
Outpatient Visits in Spokane, WA—2018-2022



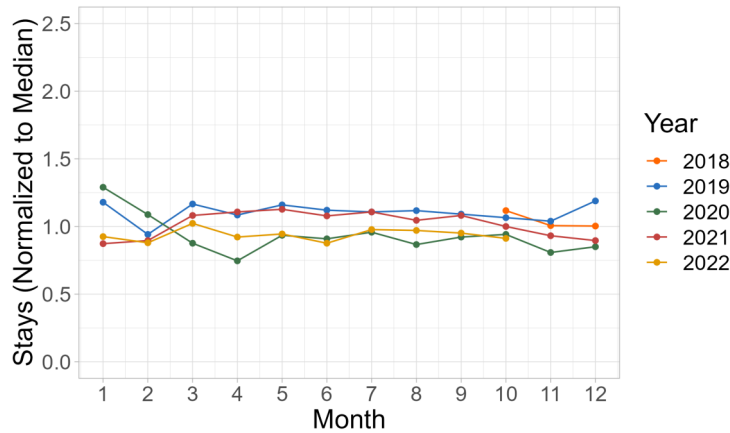
Outpatient Visits in Boise, ID—2018-2022



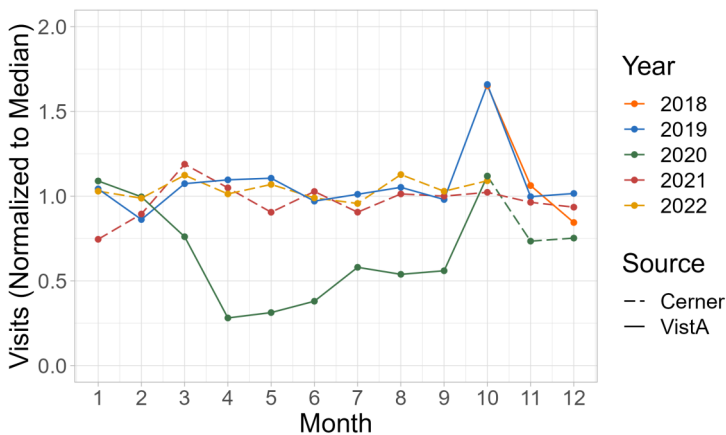
Inpatient Admissions in Spokane, WA—2018-2022



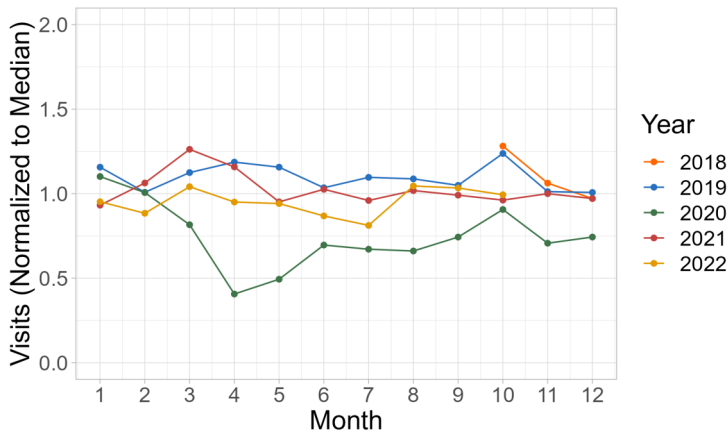
Inpatient Admissions in Boise, ID—2018-2022



Primary Care Visits in Spokane, WA—2018-2022



Primary Care Visits in Boise, ID—2018-2022



Limitations and Challenges

- At the time of analysis, limited data were available post transition for Walla Walla, WA; Columbus, OH; Roseburg, OR; White City, OR.
- Results are affected by secular trends in health care utilization, and trends after the transition to the Cerner EHR system are not solely attributable to the transition.
- Comparison sites were selected for their geographic proximity. The populations served and the services offered likely differ between the five sites that transitioned to Cerner and the four comparison sites.

References and Resources

1. VA EHR Modernization. <https://digital.va.gov/ehr-modernization/>. Accessed Jan 2023.
2. VA EHR Modernization. <https://vaww.ehrm.va.gov/>. Accessed Jan 2023.
3. VIREC Electronic Health Record Modernization. <https://vaww.virec.research.va.gov/EHRM/Overview-and-Implications.htm>. Accessed Feb 2023.
4. VIREC VA Millennium EHR Data Documentation. <https://vaww.virec.research.va.gov/EHRM/Documentation-and-Resources.htm>. Accessed Feb 2023.

Visit www.research.va.gov/topics for information about VA research on other key topics relating to Veterans' health.