

NAPCRG 52nd Annual Meeting — Abstracts of Completed Research 2024.

Submission Id: 6577

Title

Exploring Trends in Postpartum Hemorrhage with SHRINE Network Aggregated Electronic Health Records (EHR) Data.

Priority 1 (Research Category)

Health Care Disparities

Presenters

Olga Kravchenko, PhD

Abstract

Context. Healthcare research involving patient medical data is often delayed by lengthy approval processes. The Shared Health Research Information Network (SHRINE) offers rapid, secure access to aggregate counts of patient data from participating hospitals. In this study we employ SHRINE's query tools to explore temporal trends in postpartum hemorrhage (PPH), identify potential disparities, and highlight the importance of accessible data in advancing health equity and improving maternal health outcomes.

Objective. Assess temporal PPH trends and comorbidity burden among women who had given live births from 2005 to 2022.

Study Design and Analysis. We have used repeated annual cross-sectional analyses to extract aggregated EHR counts data that included demographics, PPH risk factors and comorbidities in live births during hospital stays. Data underwent quality assessment to ensure reliability of subsequent analyses. Phenotypes were defined using ICD-9 and ICD-10 diagnostic codes. Temporal trends were assessed using Mann-Kendall tests.

Setting or Dataset. This study utilized harmonized, de-identified, structured EHR data in aggregate counts of patients who meet inclusion and exclusion criteria, from multiple health centers across the United States.

Population Studied. Women 15-54 years with live births between 2005-2022.

Intervention/Instrument. PPH data was systematically extracted with SHRINE's EHR query tools, returning aggregated de-identified patient data per specified criteria, preserving patient privacy.

Outcome Measures. Incidence rates of PPH, prevalence of associated comorbidities, demographic distribution, and any longitudinal changes in these measures across the study period.

Results. Our findings indicate significant increases in PPH incidence overall from 2005 to 2022, with the highest PPH prevalence following cesarian section with placenta previa or accreta (29.81%). American Indian and Native Hawaiian showed the highest prevalence of PPH (11.52%, 11.71%). Single comorbidity yielded the lowest rates (10.15%), highlighting the increased risk with multiple comorbidities.

Conclusions. This study has utilized SHRINE's aggregated EHR data to demonstrate a rising trend in PPH incidence from 2005 to 2022, marked by significant disparities across demographic groups and an elevated risk linked to certain clinical conditions.

Downloaded from the Annals of Family Medicine website at www.AnnFamMed.org. Copyright © 2024 Annals of Family Medicine, Inc. For the private, noncommercial use of one individual user of the Web site. All other rights reserved. Contact copyrights@aafp.org for copyright questions and/or permission requests.