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Title

Challenges for COVID-19 Vaccination Delivery and Data Interoperability In Smaller Independent Primary Care Practices

Priority 1 (Research Category)

COVID-19

Presenters

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Abstract

Context: The initial COVID-19 vaccination strategy presented logistical, relied on mass vaccination campaigns, and were slow to reach primary care. Many primary care practices were also unable to reliably and efficiently receive vaccination data. Objective: Test the hypothesis that between the lack of inclusion of primary care in a national vaccination strategy, and the lack of vaccine data interoperability, the primary care practices were unable to vaccinate or know patient vaccination status. Study Design and Analysis: Descriptive, cross-sectional analyses to investigate COVID-19 vaccination status captured in practices from 12/01/2020-12/31/2021. Patients were aggregated by month using the dates of first doses and the patient counts in each month to compare cumulative counts between the administration sites. We calculated practice vaccination rates and compared them to vaccination rates reported by CDC for the county where the practice was located. Setting or Dataset: The study used data from the Centers for Disease Control and Prevention (CDC) and the American Family Cohort (AFC) dataset. AFC full EHR data from 947 practices in the PRIME Registry, a national primary care clinical registry. Population Studied: Patients aged 5+ who visited or had immunization reported to practices during the study period. Patients who died were excluded. Intervention/Instrument: Vaccination status and administration sites were assessed using COVID-19 vaccine CPT, RXNorm, ICD, SNOMED CT, CVX, HCPCS, and free text. Outcome Measures: Practice vaccination rate was calculated as the number of patients who received at least one dose divided by the total number of patients who had visits or had immunization recorded during the study period associated with the practice. Results: 539 (57%) practices gave COVID-19 vaccine or captured patient vaccination status. These practices were visited by 1,838,936 patients and of these 435,112 (23.7%) had at least one dose of vaccine recorded, but only 89,423 (4.9%) were vaccinated in practices. 60% of patients were vaccinated in the first quarter of 2021 or prior. The CDC reported higher vaccination rates for the same counties of practice locations. Conclusions: PRIME Registry practices were generally unable to provide COVID-19 vaccine or capture vaccination status through the end of 2021. This may be due to an absence of a primary care vaccination strategy combined with poor data exchange from Immunization Information Systems.