

Background

Patients with chronic kidney disease, including glomerular diseases, have altered immunocompetence and are at increased risk for vaccine-preventable infections. The Advisory Committee on Immunization Practices recommends that such patients receive annual influenza vaccines and 23-valent pneumococcal vaccination (PPSV23) after age-appropriate 13-valent series (PCV13).¹ Adherence to these recommendations is unknown and difficult to determine given lack of centralized vaccine records in an increasingly transient population.²

Objective

The primary objective was to adjudicate vaccine administration dates among CureGN participants at the University of North Carolina as a data quality assurance exercise.

Methods

CureGN is a prospective multi-center cohort study of patients with glomerulonephritis. We adjudicated pneumococcal and influenza vaccine administration, comparing electronic medical record information to 2014-2019 self-reported data gathered by CureGN study coordinators for UNC patients. All pneumococcal and a 10% random sample of influenza vaccine administration records were adjudicated.

Sources/Acknowledgements

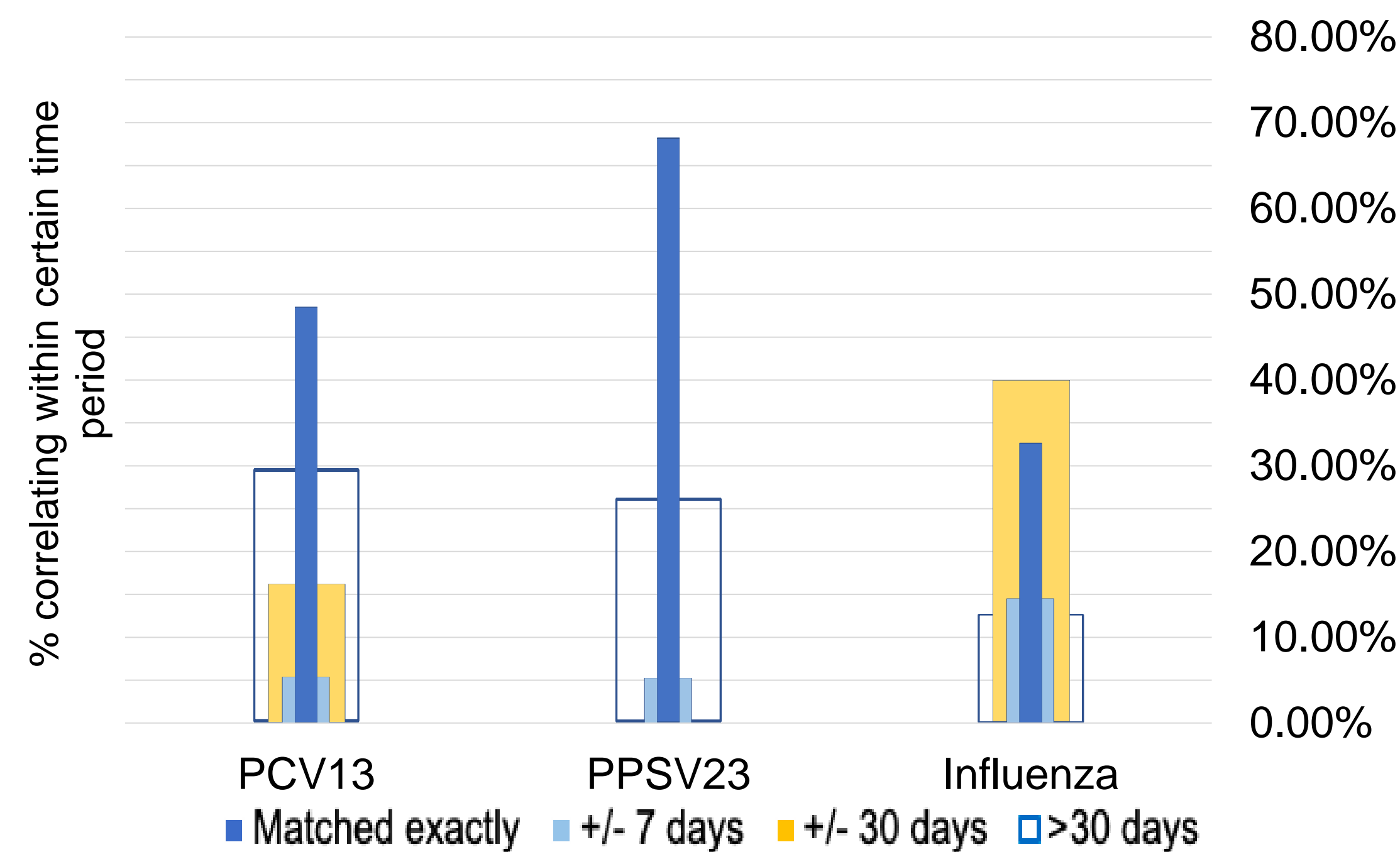
- Chi et al. "Guidelines for Vaccinating Kidney Dialysis Patients and Patients with Chronic Kidney Disease" summarized from the *Recommendations of the ACIP* (2012).
 - Wiot et al. "Challenges facing vaccinators in the 21st century: results from a focus group qualitative study." *Human Vaccines & Immunotherapeutics*, 15:12 2806-2815 (2019).
- Funding for the CureGN consortium is provided by UM1DK100845, UM1DK100846, UM1DK100876, UM1DK100866, and UM1DK100867 from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). Patient recruitment is supported by NephCure Kidney International. Dates of funding for first phase of CureGN are 9/16/2013-5/31/2019.

Results

Overview of adjudicated vaccines

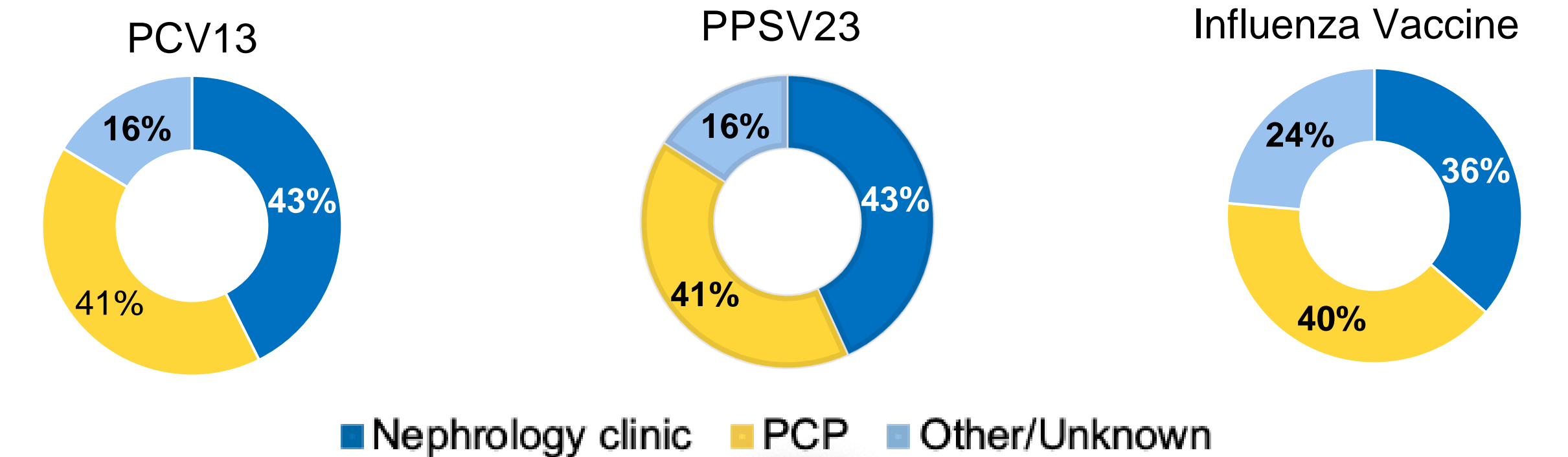
	# of vaccines adjudicated (%)	# recorded in CureGN and EMR (%)	# not found in EMR (%)	# not recorded by CureGN (%)
PCV13	70 (35)	37 (33)	8 (22)	25 (50)
PPSV23	51 (26)	19 (17)	7 (20)	25 (50)
Influenza	76 (39)	55 (50)	21 (58)	n/a
Total #	197	111	36	50

Correlation of CureGN-reported vs EMR-adjudicated vaccine dates

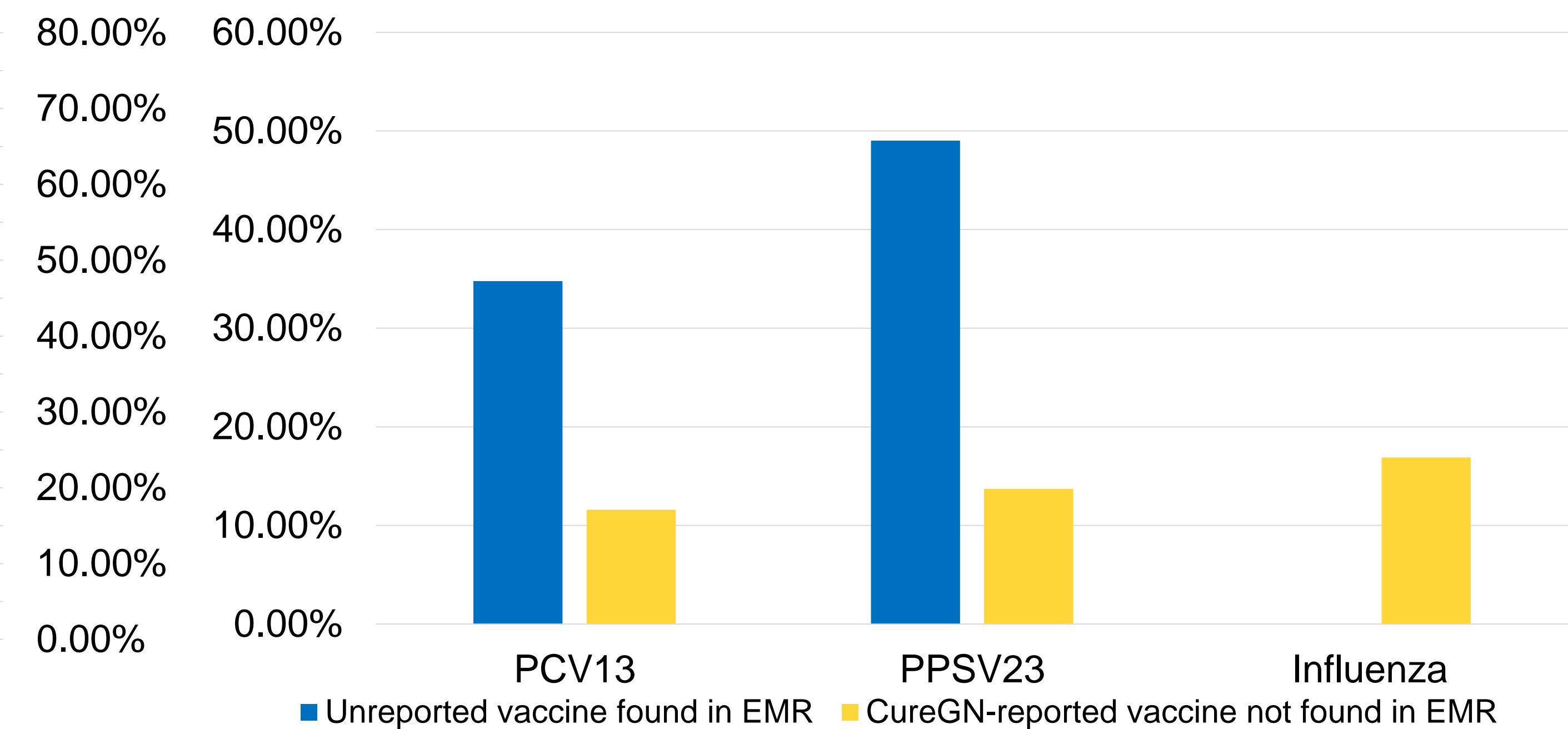


- Thirty-seven PCV13 CureGN-reported administrations (50%) were found on medical record review, of which 49% had matching administration dates in the medical record and an additional 22% were discrepant by <30 days.
- Nineteen PPSV23 administrations (34%) were CureGN-reported and found in the medical record, of which 68% had matching dates and an additional 5% were discrepant by <30 days.
- For influenza vaccines, 33% had matching dates and an additional 55% were discrepant by <30 days.

EMR-adjudicated vaccines by administration location



% of vaccines absent in EMR or not reported in CureGN database



Summary/Conclusions

While most CureGN-reported vaccinations among UNC CureGN participants were successfully adjudicated to within 30 days of electronic medical record administration dates, some vaccinations were either not CureGN-reported or not documented in the electronic medical record. These findings illustrate difficulties of recording vaccine utilization in observational cohort data.