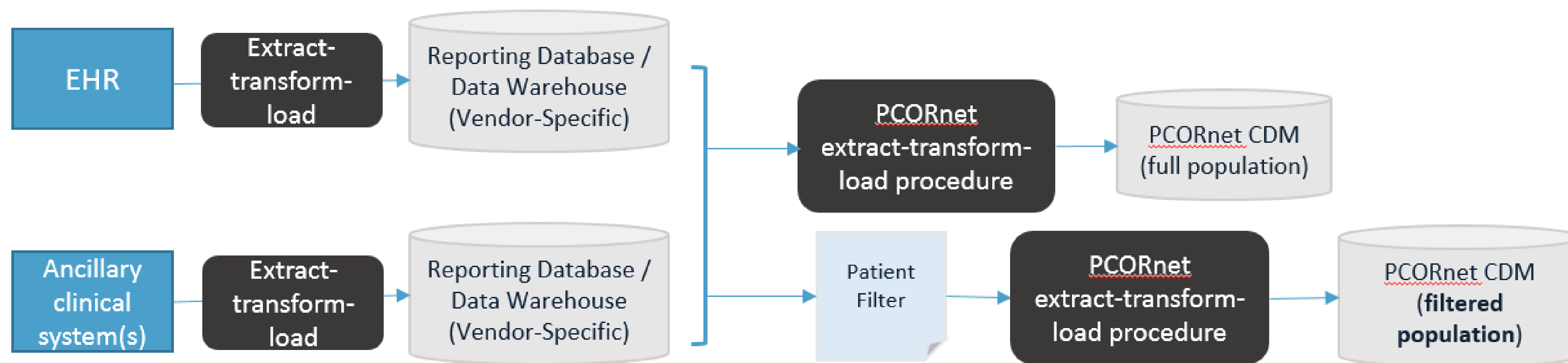


Jason P. Block, MD, MPH, Keith A. Marsolo, PhD, Kshema Nagavedu, MPH, L. Charles Bailey, MD, PhD, Henry Cruz, BA, Christopher B. Forrest, MD, PhD, Kevin Haynes, PharmD, MSCE, Adrian F. Hernandez, MD, MHS, Rainu Kaushal, MD, MPH, Abel Kho, MD, Kathleen M. McTigue, MD, MPH, MS, Vinit P. Nair, BPharm, MS, Richard Platt, MD, MSc, Jon Puro, MPA/HA, Russell L. Rothman, MD, MPP, Elizabeth Shenkman, PhD, Lemuel Russell Waitman, PhD, Mark G. Weiner, MD, Neely Williams, EdD, Thomas W. Carton, PhD, MS on behalf of PCORnet® Network Partners

## Background

- Data on patients infected with SARS-CoV-2 has been limited in the early stages of the pandemic because of the challenges of obtaining granular, detailed information
- Networks that join together large healthcare systems provide important opportunities to obtain granular, longitudinal information on large populations, including both children and adults
- The National Patient-Centered Clinical Research Network, PCORnet®, includes millions of patients across data contributing sites
- To respond to the pandemic, institutions created a subset of their overall data (Figure 1) that included only patients with respiratory illness beginning in January 2020

Figure 1: PCORnet Common Data Model Infrastructure



EHR: electronic health record; CDM: Common Data Model

## Methods

- Beginning in early April 2020, we began querying PCORnet institutions, providing counts and frequencies of children and adults diagnosed with COVID-19 (using ICD-10 codes) or testing positive for SARS-CoV-2
- The query evolved to include demographics, comorbidities, weight status, and treatment of patients across care settings from ambulatory to inpatients and emergency departments
- As of August 27, 2020, we captured data on 22,192 children and 151,131 adults testing positive for SARS-CoV-2; 14,182 children and 128,268 adults had diagnostic codes for COVID-19
- 36 healthcare systems provided data for this query, with Utah, Florida, North Carolina, and New York providing the largest number of patients

Figure 2: Prevalence of + SARS-CoV-2 Lab Test for Adults, by Age Group and Race, Across Ambulatory (Amb), Emergency Department (ED), Inpatient (IP), and Use of Ventilators (Vent)

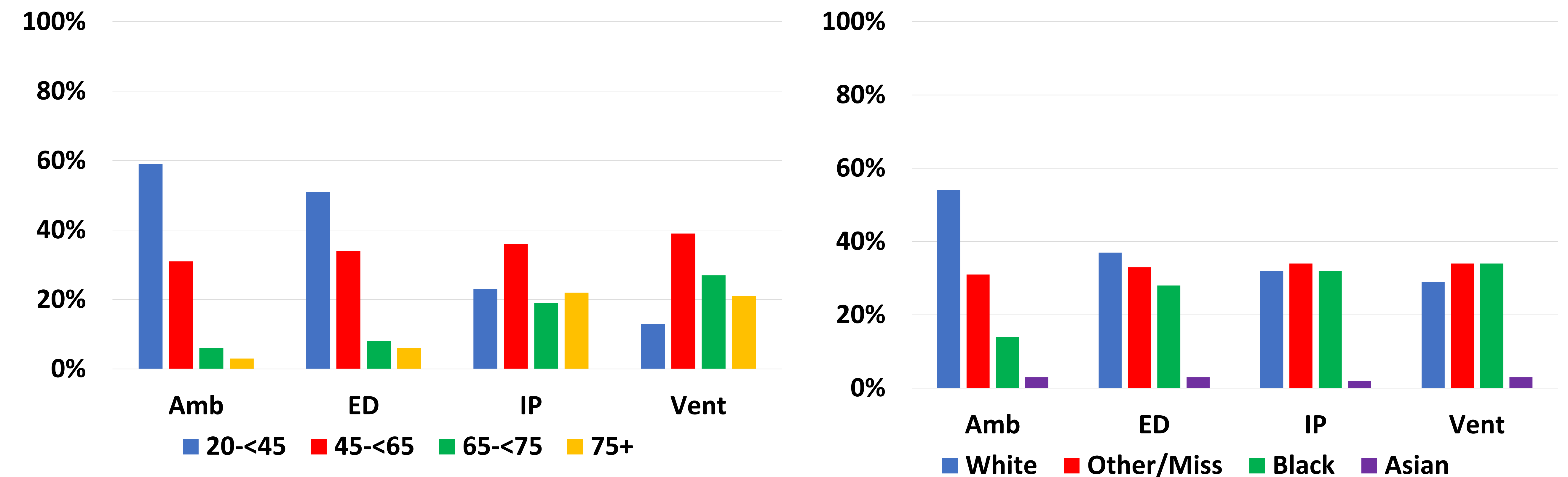
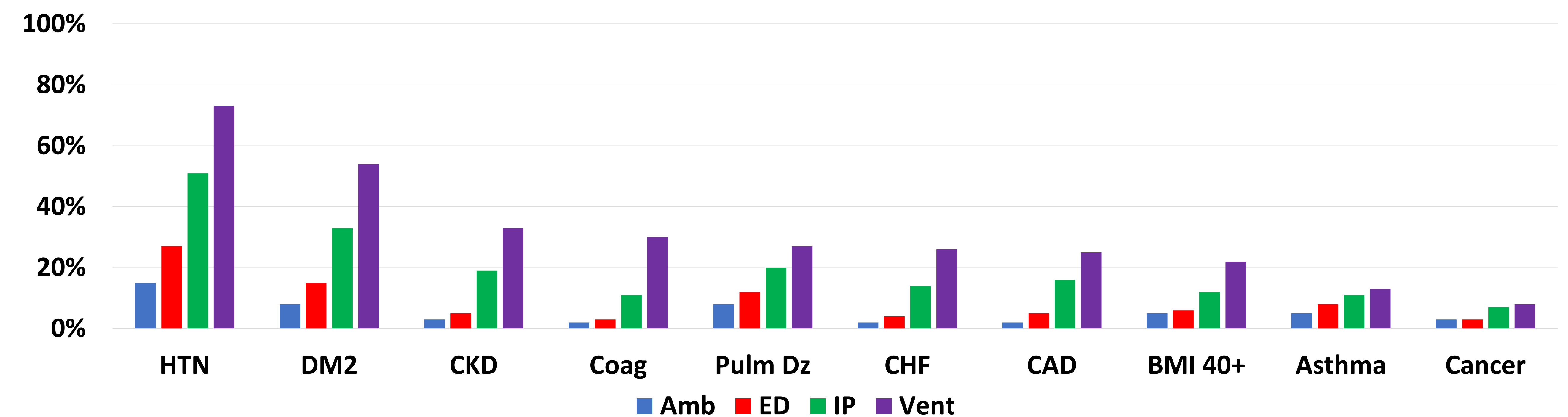


Figure 3: Prevalence of Comorbidities for Adults with + SARS-CoV-2 Across Care Settings



## Conclusions and Next Steps

- Similar to prior studies, adults with COVID-19 being treated in the hospital or emergency department were more likely to be Black and Older and have a much higher burden of comorbidities compared to those in the ambulatory setting (Figures 2 and 3); the most common comorbidities for children were asthma and anemia
- PCORnet has developed an infrastructure to support population health surveillance, including for infectious diseases and chronic disease, and is partnering with the Centers for Disease Control and Prevention for ongoing surveillance work through 2021

Jason Block: [jblock1@partners.org](mailto:jblock1@partners.org)