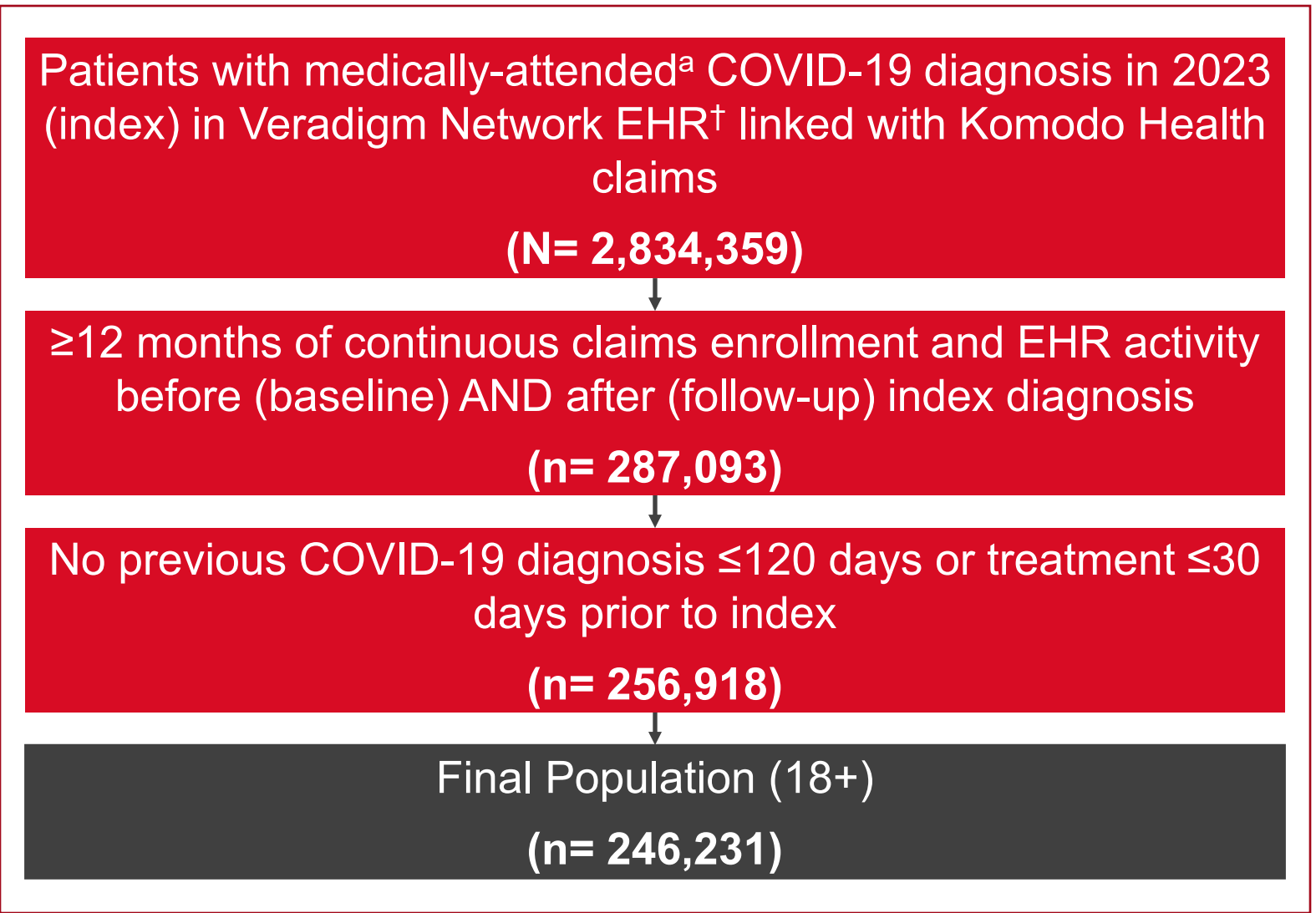


Background

- While population-level immunity to SARS-CoV-2 has increased, the virus remains highly transmissible, new variants continue to emerge, and coronavirus disease 2019 (COVID-19) persists as a leading cause of severe respiratory infections in the US.^{1,2}
- Previous studies have established that SARS-CoV-2 infection leads to endothelial dysfunction and inflammation, accelerates atherosclerosis and arterial rigidity, and elevates risk of thrombosis, myocardial infarction, and stroke post-infection.^{3,4}
- While many underlying conditions associated with progression to severe disease have been identified, the reciprocal effect of COVID-19 infection on underlying comorbidities is only beginning to be elucidated.
- This retrospective study examined whether COVID-19 infection in 2023 was associated with exacerbation and worsening of underlying comorbidities or the development of new conditions.**

Patient Cohort



^aMedically-attended COVID-19 diagnosis defined as evidence of COVID-19 diagnosis (ICD-10-CM or SNOMED diagnosis code) recorded in patient medical record or claims data.
[†]The Veradigm Network EHR is a U.S. based de-identified ambulatory EHR database made up of over 154M patients which includes clinical records from multiple EHR systems deterministically linked with medical and pharmaceutical healthcare claims from Komodo Health.

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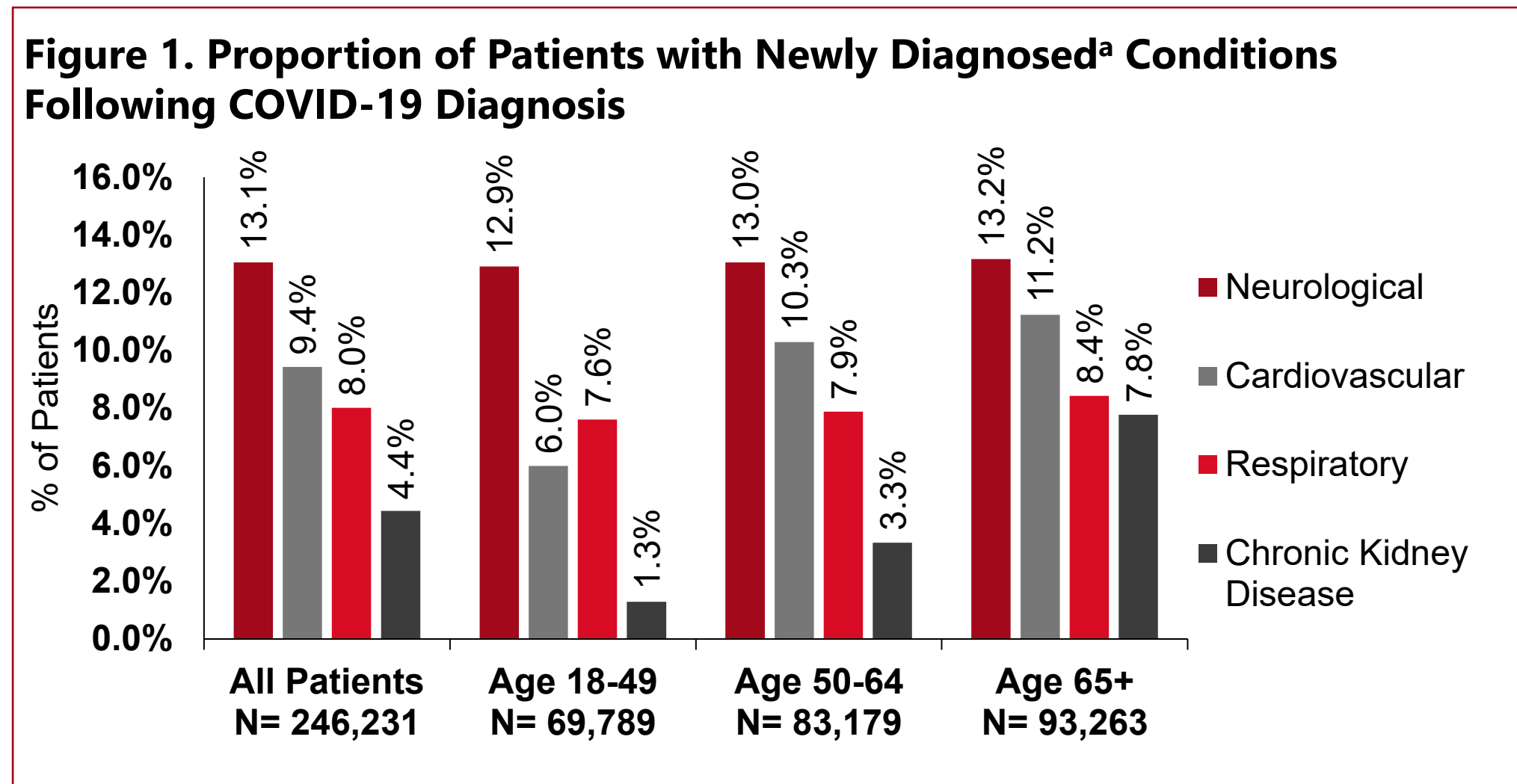
In clinical practice, patients diagnosed with COVID-19 in 2023 had increased rates of both new and worsening neurologic, cardiovascular, respiratory, and renal conditions over the subsequent year. These events were associated with greater healthcare utilization.

Results

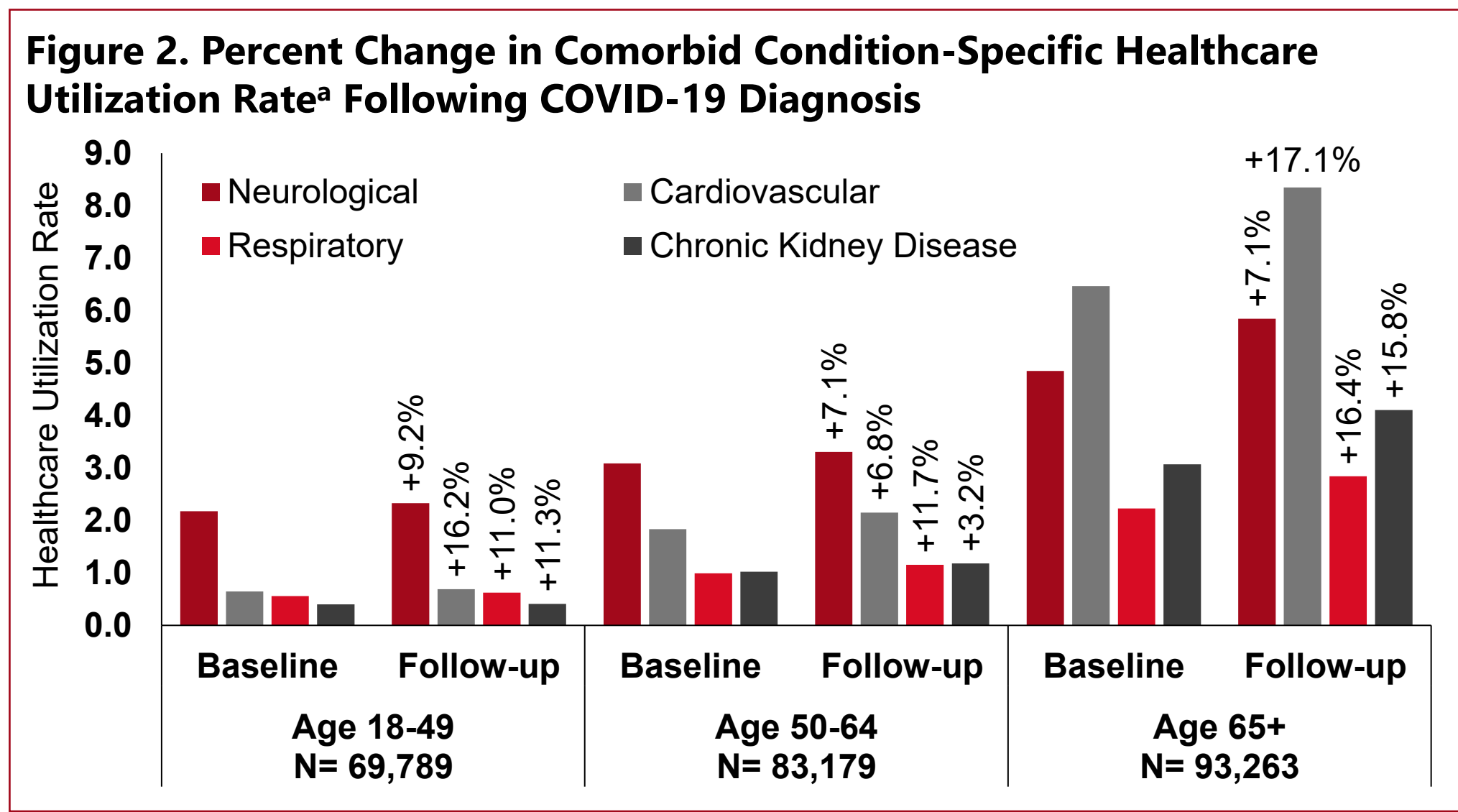
	Patients with Medically-Attended COVID-19 in 2023 (N= 246,231)	
	N	%
Age Group		
18-49	69,789	28.3%
50-64	83,179	33.8%
65+	93,263	37.9%
Sex, Female	155,292	63.1%
Race		
White	166,795	67.7%
Black	17,545	7.1%
Asian	7,305	3.0%
Other/Unknown/Not Reported	54,586	22.2%
Payer Type		
Commercial	134,766	54.7%
Medicaid	17,865	7.3%
Medicare	93,526	38.0%
Other/Unknown/Not Reported	74	0.0%

Results (cont'd)

- More than one-third (39%) of patients had a history of medically-attended COVID-19 in their medical record (pre-index); 73% had evidence of ≥1 prior COVID-19 vaccine administration.
- Following COVID-19 diagnosis, evidence of new comorbidities (evidence in follow-up only) across neurological (13%), cardiovascular (9%), respiratory (8%), and chronic kidney disease (4%) was observed (**Figure 1**).
- Among those with comorbid condition-specific healthcare utilization, utilization rates increased overall by 16.2% (cardiovascular), 11.3% (chronic kidney disease), 9.2% (neurological), and 11.0% (respiratory) post-COVID-19 diagnosis.



^aNewly diagnosed defined as evidence of comorbid condition-specific diagnosis in the follow-up period but not in the baseline period.



^aHCRU rate: Unique days during the time period with any utilization with the comorbid condition-specific diagnosis codes.

Conclusions

Exacerbations and worsening of existing chronic conditions, as well as the onset of new comorbidities, were observed within 12 months following COVID-19 infection in this 2023 cohort.

Further analysis is warranted to evaluate whether COVID-19 is associated with an increased incidence of additional chronic conditions; comparator analyses are required to assess causality.

Such post-infection sequelae emphasize the importance of continued clinical monitoring and prevention strategies to understand and reduce long-term morbidity following COVID-19.