

# Long COVID: Clinical Characteristics and Management in the Real-World Setting

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## BACKGROUND

- Long COVID refers to the presence of symptoms weeks or months after a patient acquires SARS-CoV-2 infection regardless of the viral status<sup>1</sup>.
- The clinical diagnosis and management of long COVID remains in flux<sup>2</sup>.
- The deployment of an International Classification of Diseases, Tenth Revision (ICD-10) code in the United States for long COVID took place in October 2021, nearly two years after patients had begun to describe the condition<sup>2</sup>.
- Given the recently deployed diagnosis code and evolving understanding of long COVID, it is important to understand the current characteristics and management of long COVID patients.

## OBJECTIVE

- The objective of this research was to characterize demographics, concurrent diagnoses, and treatment patterns among patients with a long COVID diagnosis code in the United States.

## METHODS

- The OMNY Health real-world data platform was used to access electronic health record (EHR) data from 4 integrated delivery networks and 1 children's hospital from 2021 to June 2023.
- Patients with a long COVID diagnosis code (ICD-10-CM: U09.9) were included.
- Demographic characteristics of the patient population were summarized at first long COVID diagnosis.
- Concurrent diagnoses were defined as those on the same visit as the long COVID diagnosis.
- Prescriptions and medication administrations and procedures were limited to a 14-day window following the diagnosis date.

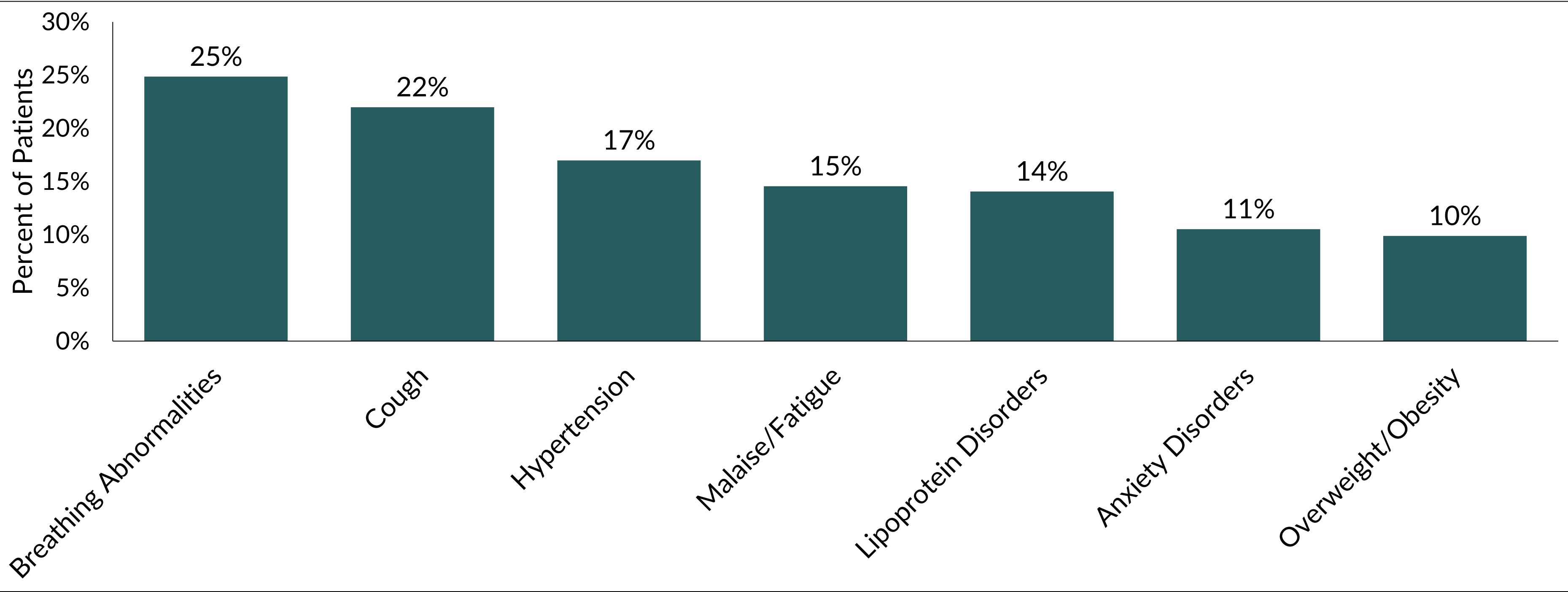
## REFERENCES

1. Raveendran AV, Jayadevan R, Sashidharan S. Long COVID: An overview [published correction appears in Diabetes Metab Syndr. 2022 May;16(5):102504] [published correction appears in Diabetes Metab Syndr. 2022 Dec;16(12):102660]. *Diabetes Metab Syndr.* 2021;15(3):869-875. doi:10.1016/j.dsx.2021.04.007
2. Pfaff ER, Madlock-Brown C, Baratta JM, et al. Coding Long COVID: Characterizing a new disease through an ICD-10 lens. *BMC Med.* 2023;21:58, <https://doi.org/10.1186/s12916-023-02737-6>.

## RESULTS

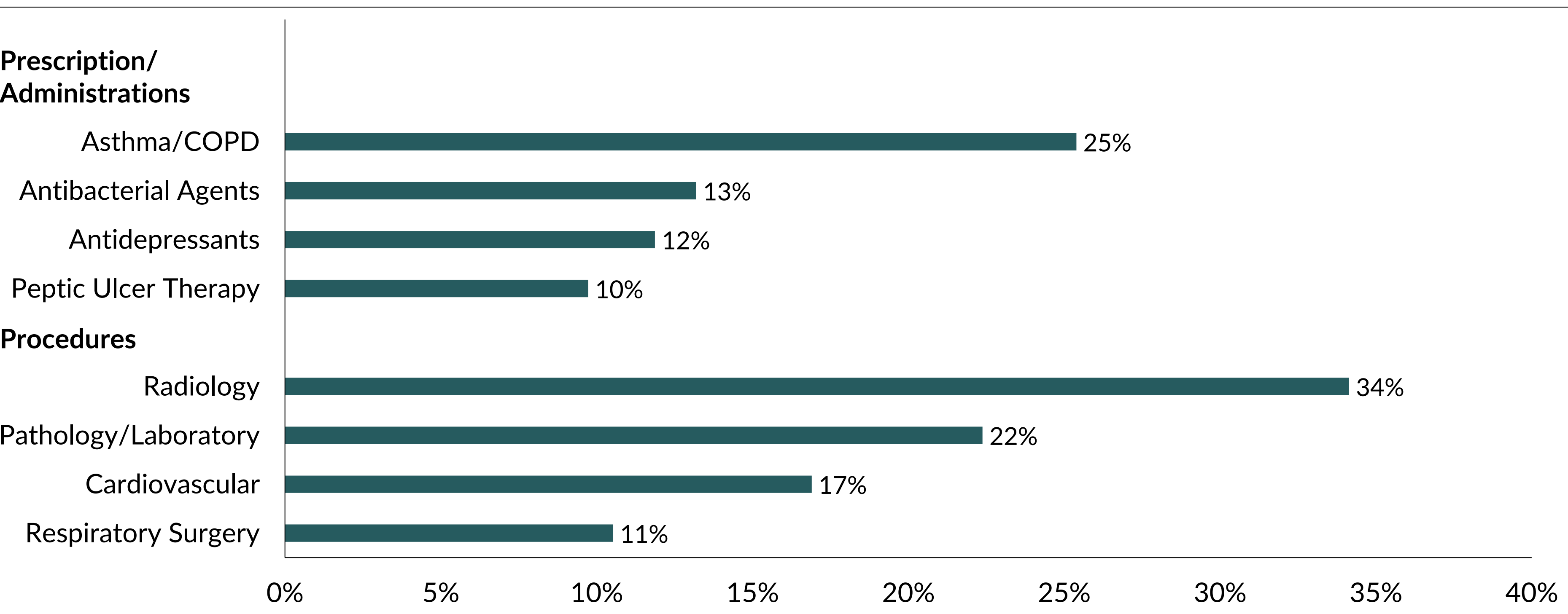
- A total of 17,542 patients were included.
- Demographic characteristics were as follows: gender (65% female), race (80% White, 13% Black, 7% Other among known values), ethnicity (85% not Hispanic or Latino among known values), and age (mean (SD) of 53 (18) years).
- Figure 1 below shows the most commonly occurring concurrent diagnoses.

Figure 1: Concurrent Diagnoses of Long COVID Patients



- Breathing abnormalities and cough were the most common concurrent diagnoses, accounting for 43% of patients combined.
- Treatment patterns for long COVID patients are summarized in Figure 2.

Figure 2: Treatment Patterns among Long COVID Patients



- Asthma and chronic obstructive pulmonary disease (COPD) drugs were the most common therapy given, while radiology procedures were the most common performed.
- Other common surgical procedures outside of respiratory were cardiovascular (8%), nervous system (8%), and integumentary system (7%).

## CONCLUSIONS

- Results provide needed insights into characteristics and treatment patterns of patients in the weeks following long COVID diagnosis. This analysis is an example of how EHRs can be leveraged as a source of information to help researchers better define long COVID symptoms, clinical characteristics, and disease progression.
- Further analyses to understand the clinical characteristics and management of patients dependent on the severity of long COVID symptoms or length of time experiencing long COVID would be helpful.
- As new data continues to become available, future analyses will be important to understand how management of these patients continue to evolve.

## CONTACT INFORMATION

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