

Interdisciplinary Pediatric Long-COVID Care: A Descriptive Study of Interventions and Patient-Reported Outcomes

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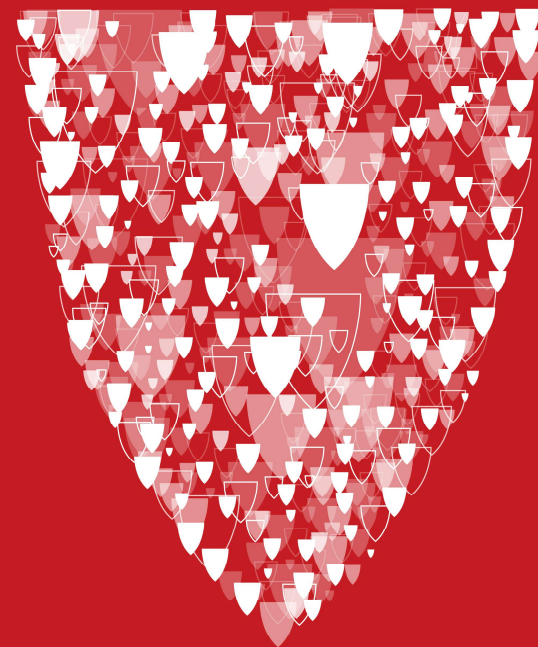


University Hospitals
Connor Whole Health



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Disclosures

None

Background

- Pediatric long-COVID data currently limited to descriptions of symptom prevalence/incidence
- Few studies describe integrative care or include patient-reported outcomes (PROs).

Purpose

- Describe demographic, clinical, symptom severity, and intervention characteristics within an interdisciplinary pediatric long-COVID clinic involving collaboration between infectious disease and integrative medicine physicians.

Clinical Considerations and Framework

When Pediatric Covid Recovery Clinic (PCRC) established, little known about peds long-COVID

- Incidence?
- Characteristics?
- Symptom presentations?
- Anticipated course of the syndrome
- How to best manage care?

Long-COVID: either new symptoms or notably worsened preexisting symptoms temporally associated with COVID infection and persisting for at least 4 weeks after initial dx.

Inclusion criteria

(Informed by CDC, WHO)

- Age 1 – 26
- (1) history of a positive home or PCR COVID test, or
- (2) illness consistent with COVID + known test-positive sick contact with COVID.

INTERCEPT Study

INTERdisciplinary

CarE for

long COVID-19 among

PediaTrics

- Retrospective review
- Care given to **250 PCRC patients aged 4-25**
- March 2021 → June 2023
- **Long COVID dx** (ICD-10 U09.9, Z86.16, B94.8, or G93.3) **OR**
- **Synonyms for long-COVID** (e.g., chronic coronavirus, COVID 19 long hauler, long-COVID syndrome) in EHR

Patient-Reported Outcomes

"Inside-Out" Patient Platform

PedsQL General Well-being

**PedsQL
Multidimensional
Fatigue (child +
parent-proxy)**

**PROMIS Sleep
Disturbance 8a**

**PROMIS Sleep-
Related
Impairment 8a**

**PROMIS Anxiety
8a**

**PROMIS
Depression 8a**

Symptom Survey

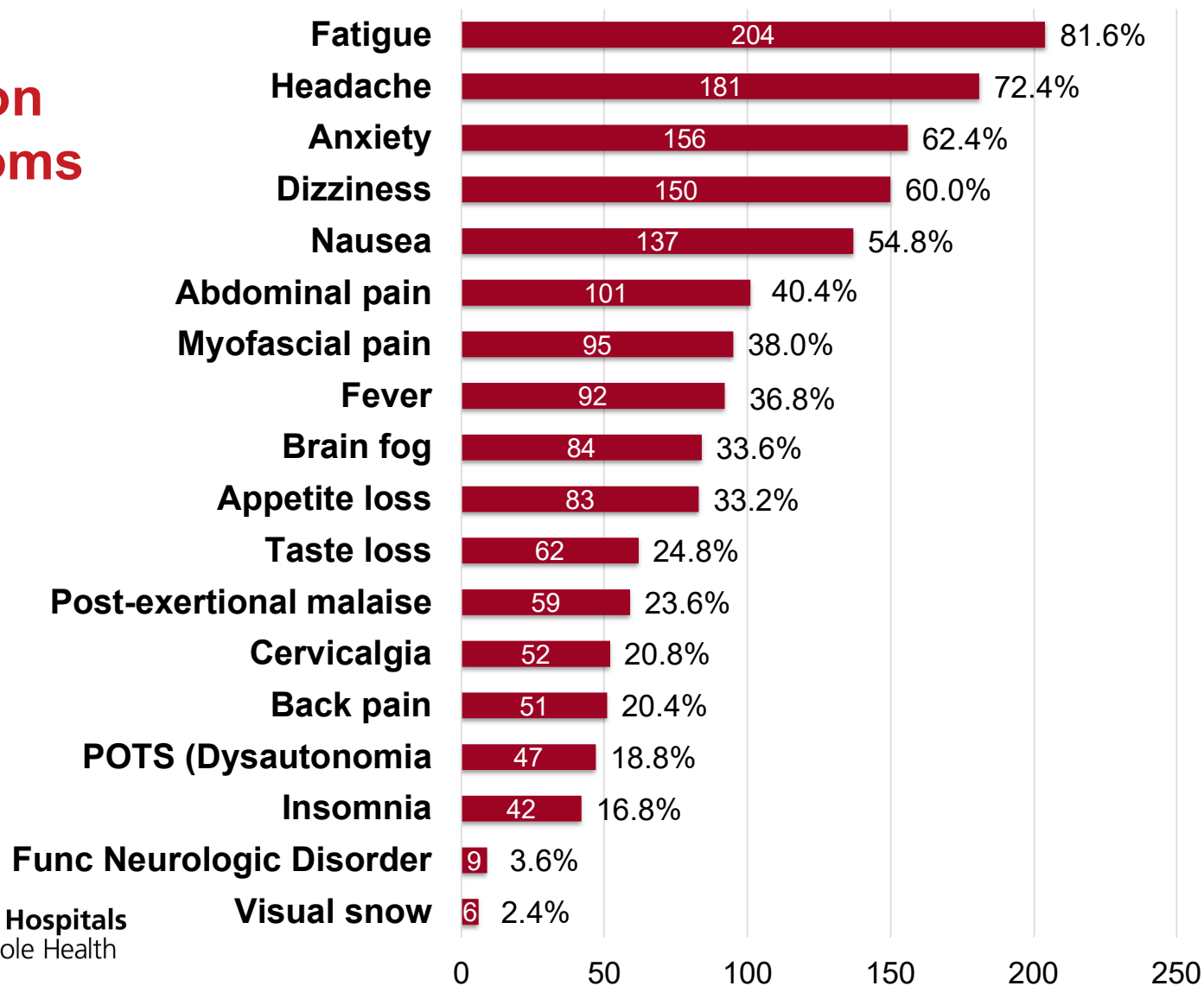
Demographics

N = 250

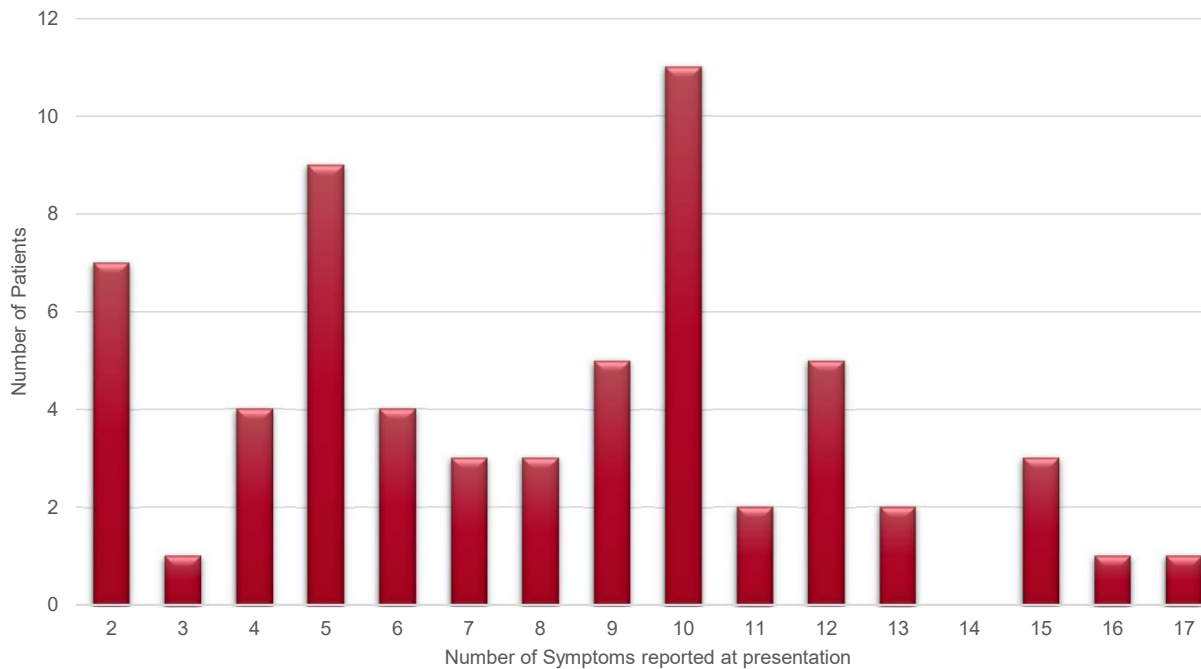
Age at first encounter (years), mean \pm SD	14.62 \pm 3.39
Age category, n (%)	
\leq 11 years	28 (12.1%)
12 - 18 years	188 (81.4%)
\geq 19 years	15 (6.5%)
Sex, n (%)^a	
Female	157 (62.8%)
Male	93 (37.2%)
Race, n (%)^a	
White	202 (80.8%)
Declined/Missing/Unknown	27 (10.8%)
Black/African American	17 (6.8%)
Other race	4 (1.6%)
Ethnicity, n (%)^a	
Non-Hispanic	204 (81.6%)
Declined/Missing/Unknown	39 (15.6%)
Hispanic	7 (2.8%)

^aSex, race, and ethnicity are reported exactly as they were entered into the EHR and may not reflect patients' gender, racial, or ethnic identities,

Common Symptoms

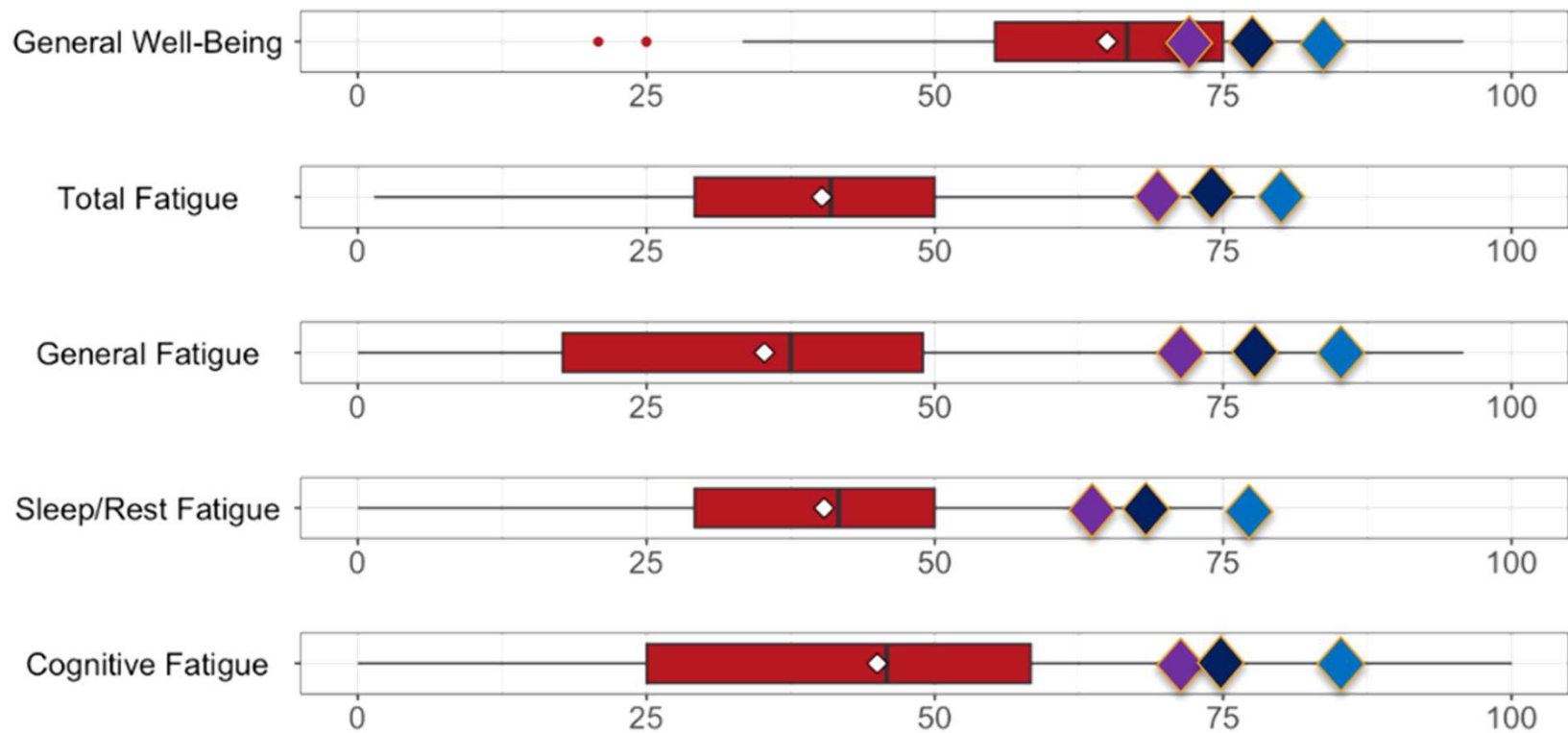


Number of symptoms at time of presentation (1st 60 patients)

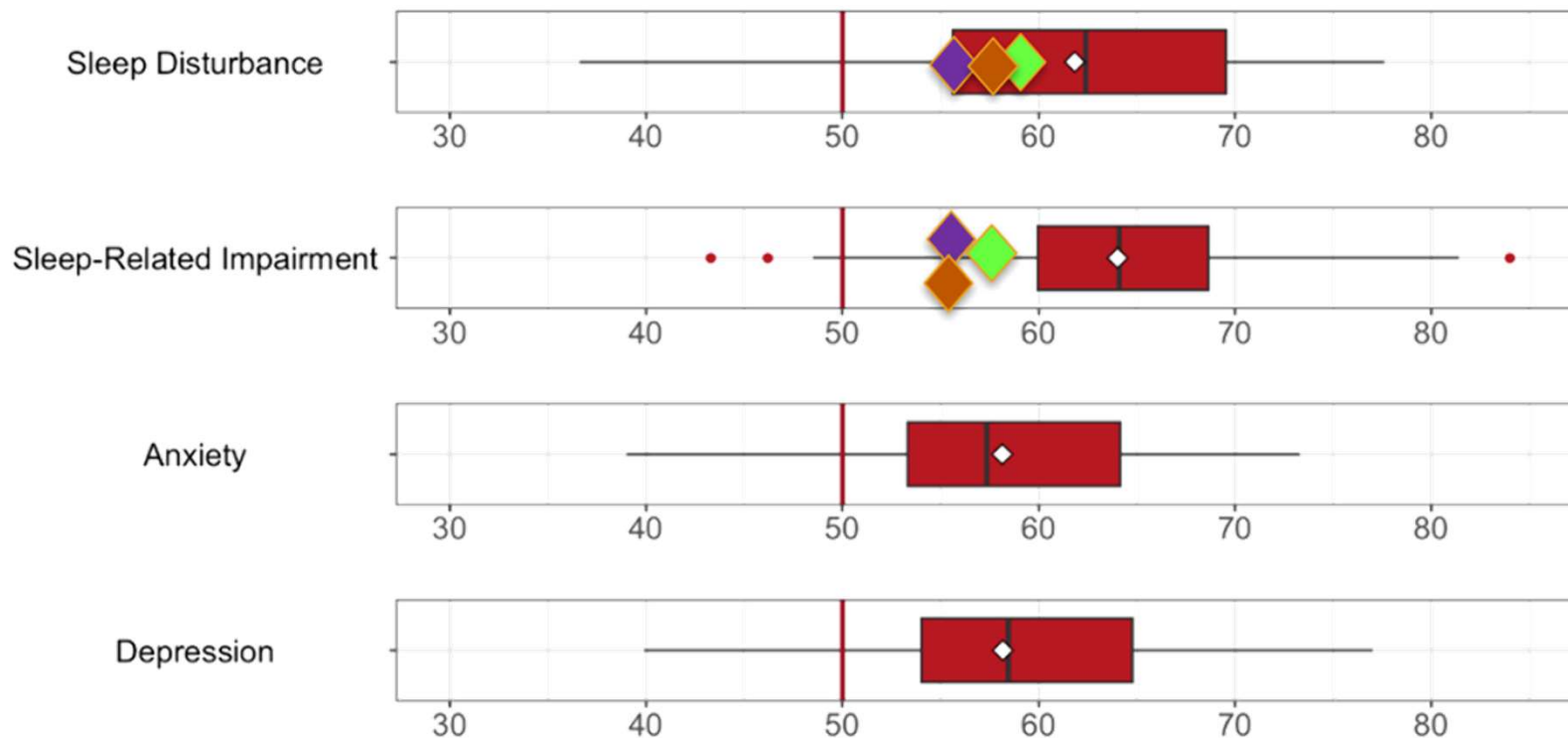


Graph 1. Distribution of patients and the number of symptoms they present with at the time of first presentation to the Pediatric COVID Recovery Clinic.

CASE PATIENT	
Fatigue	48/60 (80%)
Post-exertional fatigue/malaise	39/60 (65%)
Headache	36/60 (60%)
Dizziness	33/60 (55%)
Loss of appetite	28/60 (47%)
Anxiety	27/60 (47%)
Trouble Falling Asleep	21/60 (35%)
Stomach pain	21/60 (35%)
Nausea	21/60 (35%)
Trouble Concentrating/brain fog	17/60 (28%)
Shortness of Breath	13/60 (22%)
Trouble Staying Asleep	9/60 (18%)
Fever (chronic or recurrent)	10/60 (17%)
Diarrhea	5/60 (8%)

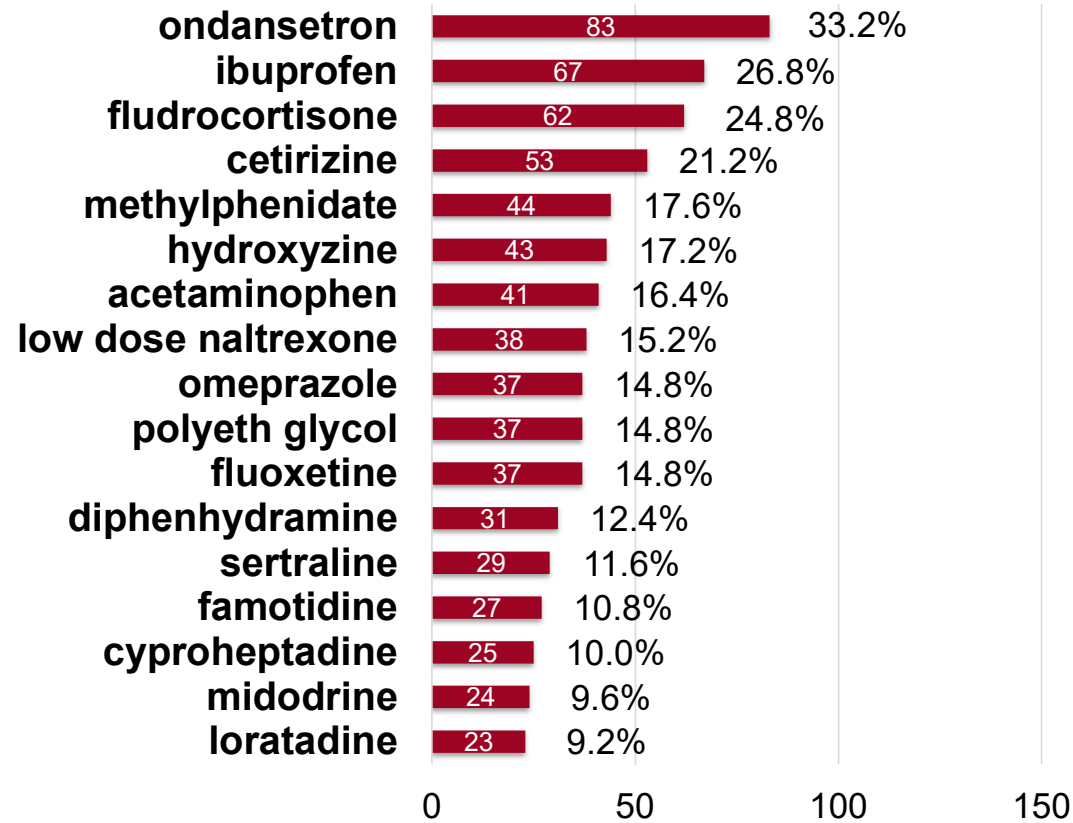
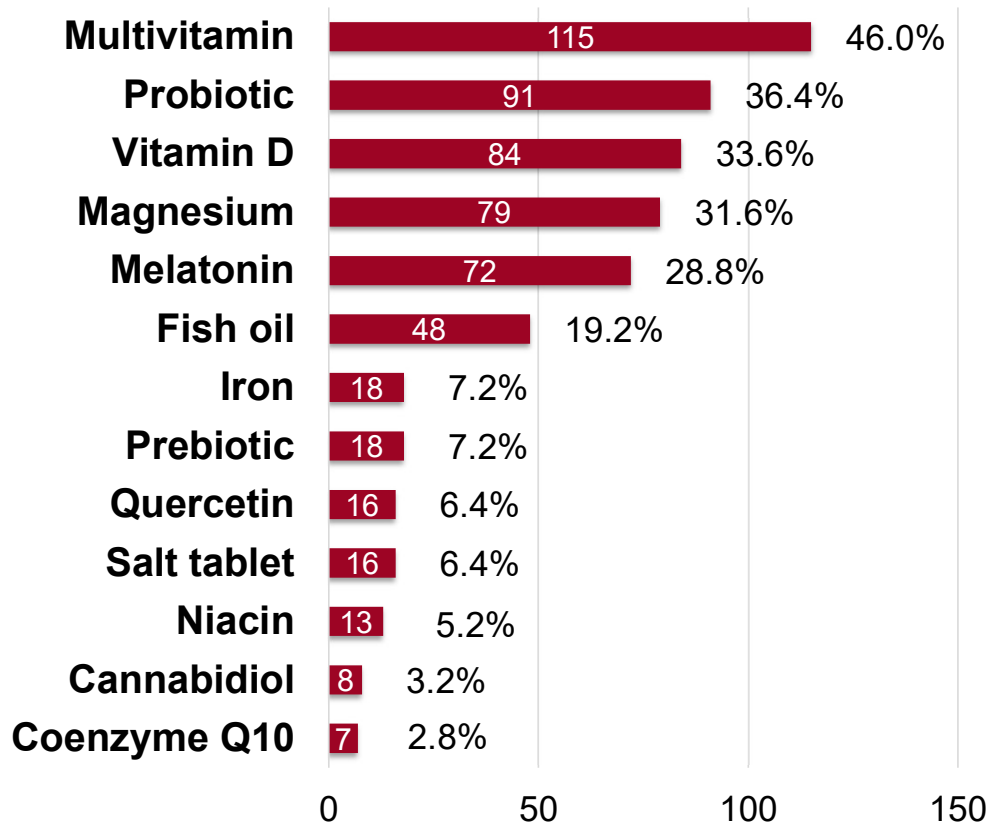


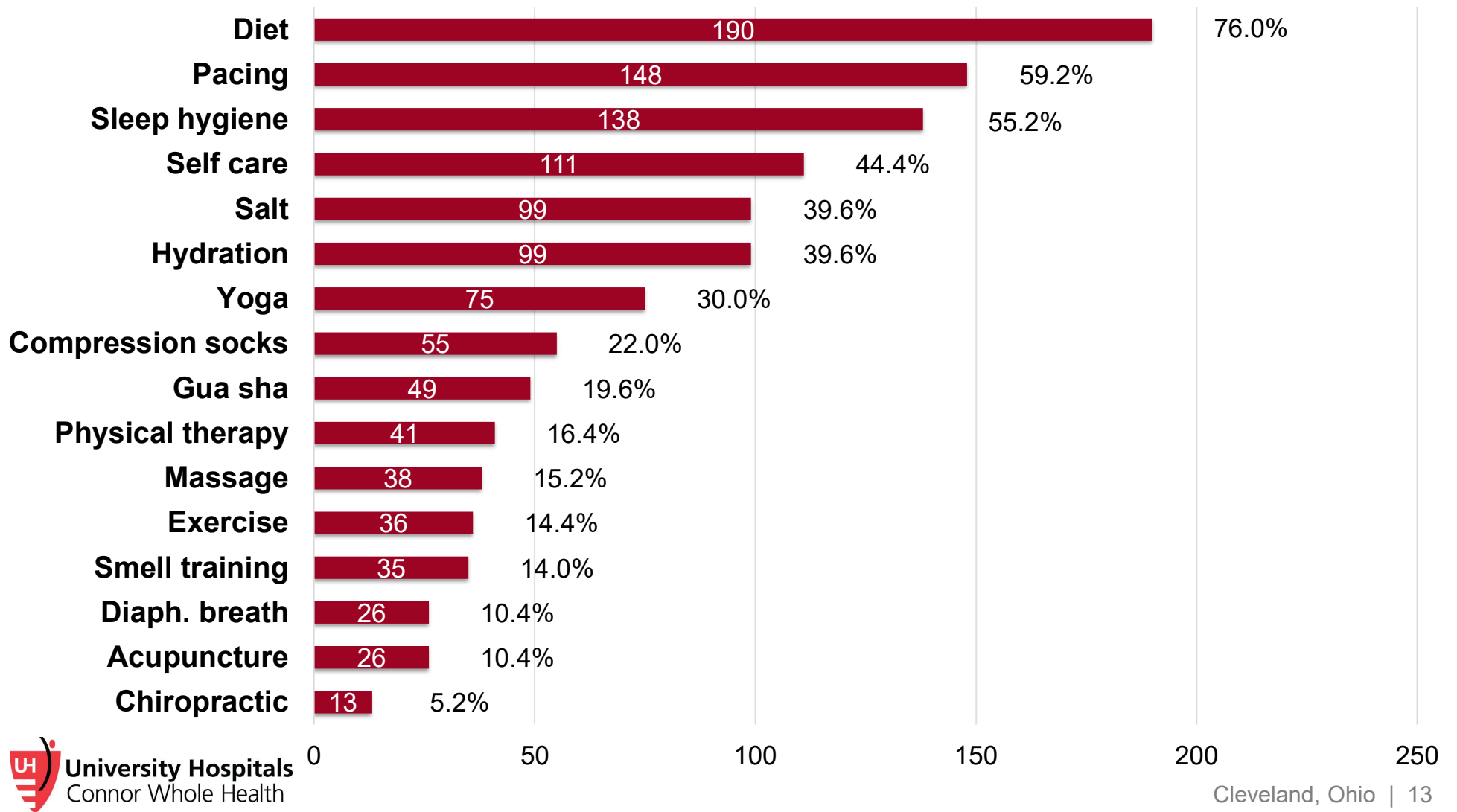
- **Healthy Cohort**
- **Undergoing cancer treatment**
- **Type I Diabetes**



- **Undergoing cancer treatment**
- **Patients in Sleep Clinic**
- **Autism**

Interventions





Conclusions

- Pediatric patients with long-COVID report high symptom burden.
- This study describes patient characteristics, care delivered, and provides a novel description of symptom severity in addition to the presence or absence of symptoms.
- Future research among more diverse populations is needed to evaluate outcomes of the integrative interdisciplinary care.

