

University of Utah Health Comprehensive COVID19 Clinic

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Post-Acute COVID Care

- Goals
 - Provide patient-focused care for individuals with prolonged symptoms after surviving acute COVID-19 infection
 - Facilitate collaboration between investigators studying post-acute COVID by developing the research infrastructure
 - Implement our research findings into clinical practice
 - Develop support for providers caring for patients with prolonged symptoms of COVID-19

Post-Acute COVID Care

- Post hospitalization patients – General floor and post ICU
- “Long Haulers” or “long COVID” have typically mild-moderate disease initially and are not hospitalized
 - Estimated to be about 30% of patients infected with covid

Severe COVID19 infection

- Post ICU syndrome – not just COVID19
- Persistent cognitive dysfunction
- Severe muscle weakness (paralysis and proning)
- PTSD
- Anxiety/Depression
- Significant oxygen requirements
- Symptoms reported one year and beyond after hospitalization
- Hoffer et al, AMJMED 2021

Symptoms of Post-Acute COVID

Most Frequent Symptom System

Constitutional: fatigue, myalgia/arthralgia, exercise intolerance

Pulmonary: shortness of breath, chest pain, cough

Neurologic: memory loss, difficulty concentrating, headache, anosmia, dysgeusia, tinnitus, blurry vision

Psychiatric: anxiety, depression

No definitive test at this point. Include long COVID as part of differential diagnosis list

TOP 2  of over 50 Long Hauler Symptoms

1. Fatigue
2. Muscle/body aches
3. Shortness of breath
4. Difficulty concentrating
5. Inability to exercise
6. Headache
7. Difficulty sleeping
8. Anxiety
9. Memory problems
10. Dizziness
11. Persistent chest pain
12. Cough
13. Joint pain
14. Heart palpitations
15. Diarrhea
16. Sore throat
17. Night sweats
18. Lost/diminished sense of smell
19. Tachycardia
20. Fever or chills

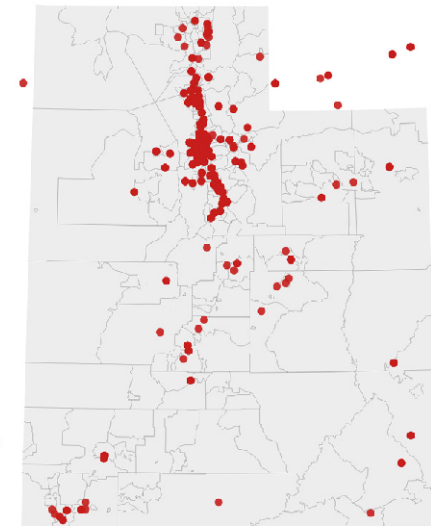
LONG COVID CONTINUES TO IMPACT UTAHN'S HEALTH AND PRODUCTIVITY



Many people who had COVID-19 continue to experience ongoing health problems even after they recovered from the initial infection. These problems can include **respiratory issues, cardiovascular problems, and neurological issues**, among others. **Long-term COVID clinics can provide specialized care and support** to these individuals to help them manage their ongoing health issues.

>1800
PATIENTS SINCE
JULY 2021

U of U Health's Comprehensive
COVID Clinic Reach



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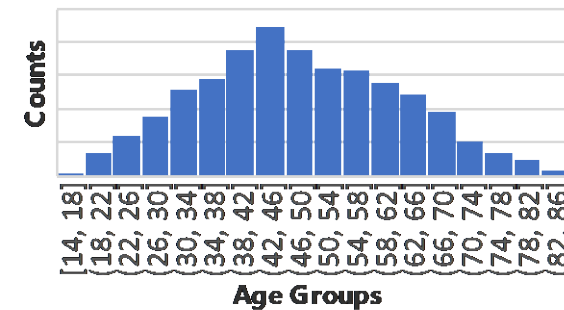
Long COVID affects 1 in 5 adults¹

- Since July 2021, U of U Health's Comprehensive COVID Clinic cared for **>1,800 patients**
- **67% of patients were female, 32% were male**
- **49% of patients are from rural and underserved areas with low health equity**
- Majority of patients are **between 26 and 62**

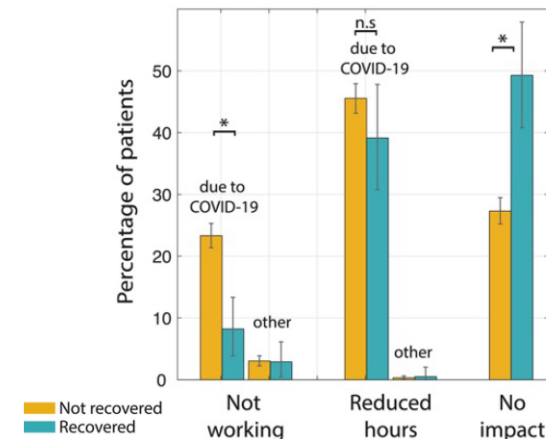
Patients with long COVID:

- **Are less able to work and may lose health insurance**
- **40% working reduced hours**
- **20% not able to work**
- **Struggle to care for children and elderly family members**

Distribution of ages

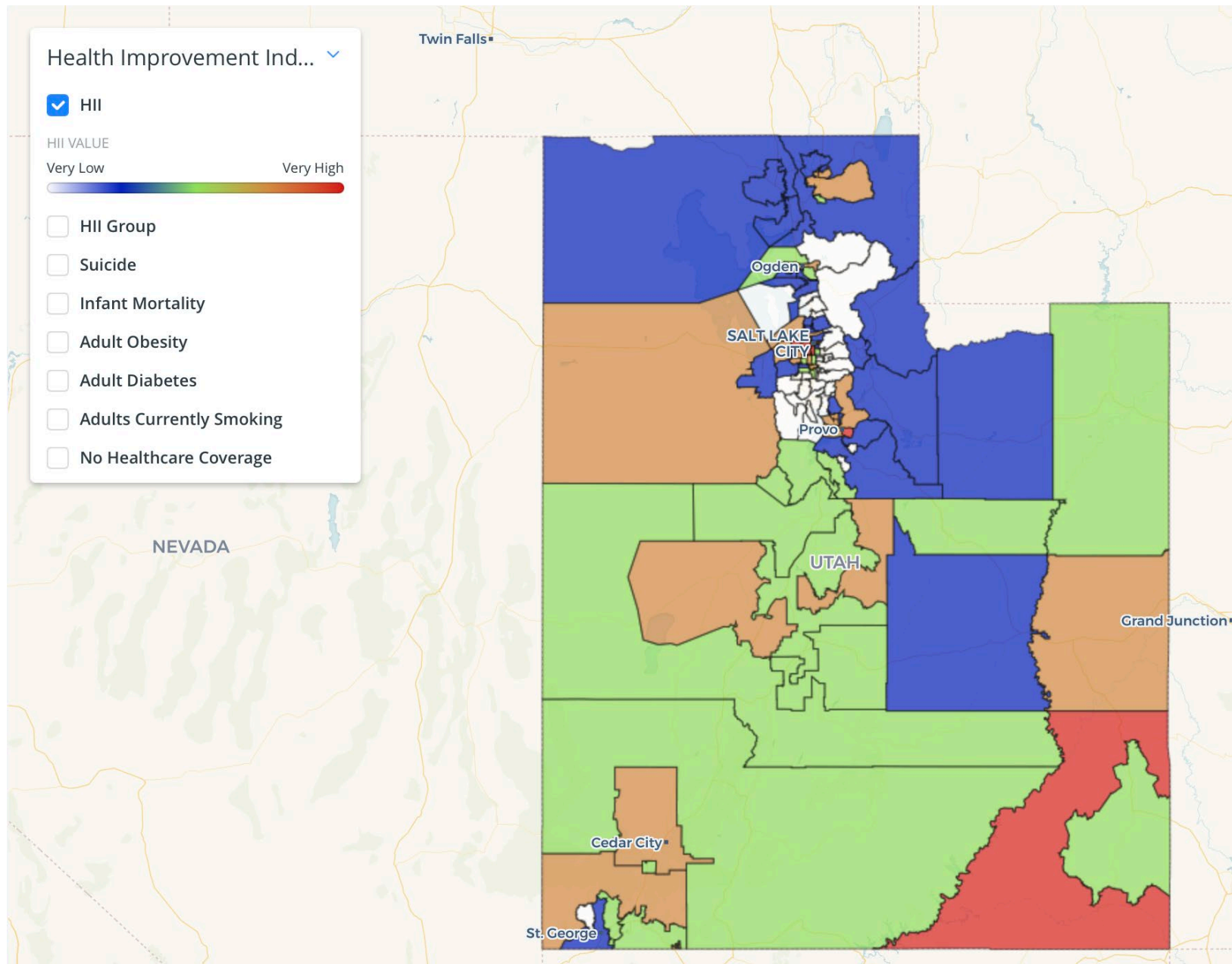


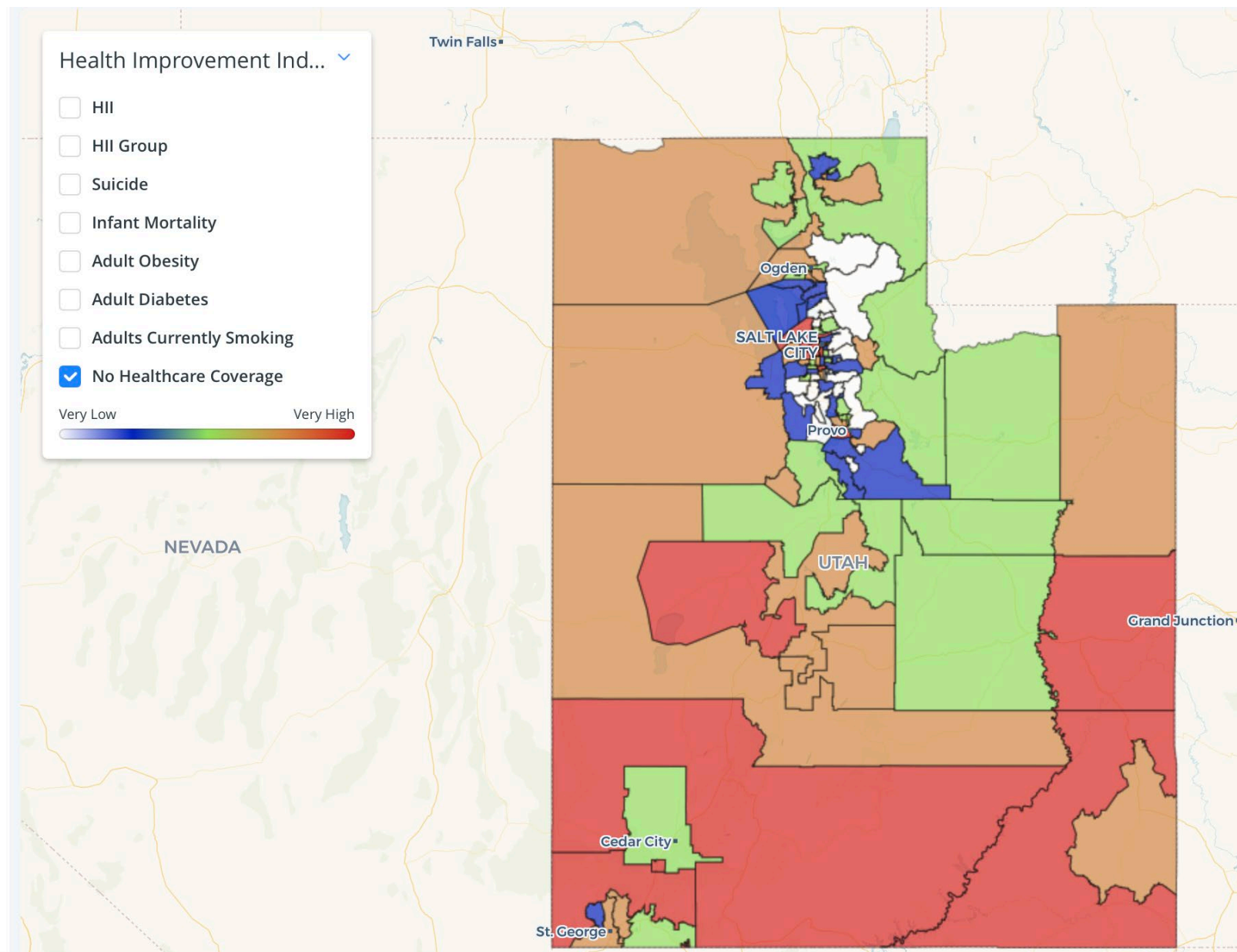
d. Long COVID impact on work



Utah Health Improvement Index (HII)

- The **Utah's** Health Improvement **Index** (HII) is a composite measure of **social determinants** of health by **geographic area**.
 - It includes nine indicators that describe important aspects of demographics, socioeconomic deprivation, economic inequality, resource availability, and opportunity structure.
 - The higher the value, the more need for improvement in the area.
- Population aged ≥ 25 years with < 9 years of education, %
 - Population aged ≥ 25 years with at least a high school diploma, %
 - Median family income, \$
 - Income disparity
 - Owner-occupied housing units, % (home ownership rate)
 - Civilian labor force population aged ≥ 16 years unemployed, % (unemployment rate)
 - Families below poverty level, %
 - Population below 150% of the poverty threshold, %
 - Single-parent households with children aged < 18 years, %

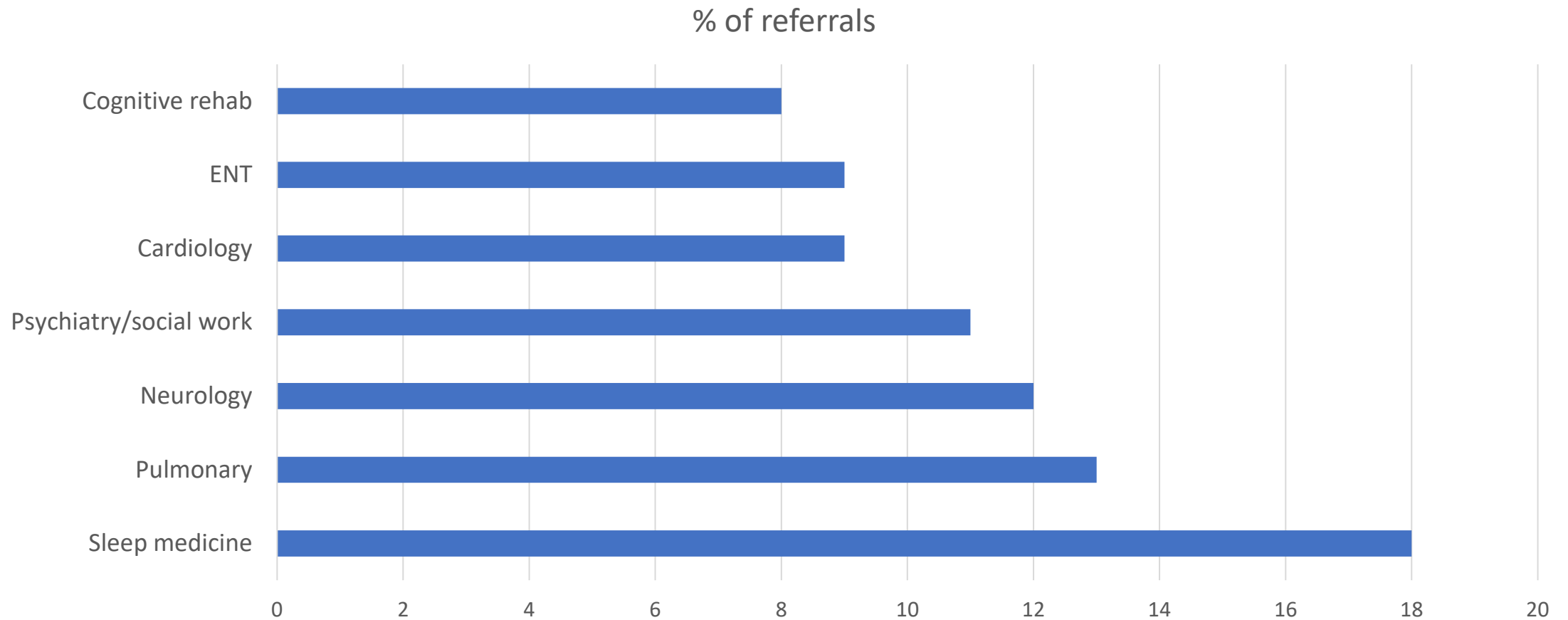




Comprehensive COVID19 Clinic

- Opened mid July 2021
- 4 days per week
- 1800 new patient visits
- Average 5-10 new referrals received per day, about 105 per month
- New primary care referrals for 7% of patients seen
- 1300 referrals to more than 35 different specialties
- Average patient then sees 3 specialist providers
- Physical therapy (not traditional graded exercise), speech therapy (brain fog), Social work/case managers, co-existing anxiety and depression

Comprehensive COVID19 Clinic



RFA for funding from the state legislature

- Rep. Melissa Ballard as a sponsor and long COVID patient
- Cares act funding and payments to the state of Utah from FEMA
- \$ 4 million dollar one time request
- 70% for uninsured and under-insured patients, social work, SLP, PT, follow up
- 20% for education for providers state wide, PT protocols, SLP protocols, ECHO program, doc to doc
- 10% for research, research coordinator state wide



New variables

- Different COVID19 variants (delta vs omicron)
- Patients that have had multiple COVID19 infections
- Breakthrough cases

Research

- Patient registry
- Annotated biorepository
 - Blood, tissue
- Multidisciplinary research
 - Triple I
 - Pulmonary, CV, ID, Hematology, Neurology, Psychiatry
 - RECOVER NIH research study
- Inform our community
 - Research works in progress
 - Clinical case conference

Patients can participate in research studies without being University Health patients. **www.Coronavirus.Utah.edu**

RECOVER trial and disparities in the US

Similar patterns emerged among people with mild to moderate disease. Among patients who were not hospitalized, Black adults were more likely to have blood clots in their lungs, chest pain, joint pain, anemia, or be malnourished. Hispanic adults were more likely than white adults to have dementia, headaches, anemia, chest pain, and diabetes. Conversely, white adults were most likely to have conditions such as cognitive impairment (sometimes referred to as “brain fog”) and fatigue.

The researchers also found that in comparison to people who did not have COVID, those who did were more likely to experience conditions affecting their nervous system, respiratory function, and circulation, and more likely to feel fatigued or have joint pain.

In the second study, which published in [BMC Medicine](#), researchers analyzed data from the electronic health records of 33,782 adults and children who received a diagnosis for long COVID between October 2021 and May 2022 at one of 34 U.S. medical centers. All had been given a diagnosis – Post COVID-19 condition, unspecified – the code for the condition first introduced in U.S. health care systems in October 2021.

In studying the profile of these patients and their symptoms, the researchers found multiple patterns. Among the more striking: most of the patients were white, female, non-Hispanic, and likely to live in areas with low poverty and greater access to health care.

How to schedule a patient for the COVID19 Clinic

- Long COVID patient referral – WHO definition (typically 3 months post infection with symptoms that last at least 2 months) and not hospitalized
 - Not for acute infection
 - Positive COVID test NOT required
 - Referral from primary care or subspecialist provider – please specify which symptoms are triggering the referral
- Thank you to all of the providers that have helped
- Questions? jeanette.brown@hsc.utah.edu

Project ECHO

- <https://physicians.Utah.edu/echo>
- Long COVID and Post Viral Syndrome
- University of Utah and Bateman Horne
- Recorded previous didactic sessions
- Submit a challenging case for upcoming sessions and receive input from panel and from other providers
- Mondays from noon-1 pm
- CME credits available for participation

