

# Outcomes of and Lessons Learned from Patients with Severe COVID-19 in a Long-Term Acute Care Hospital

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#### **METHODS**

- Using the medical records of patients treated for COVID-19 related care following discharge from short-term acute care, a single-center retrospective analysis was conducted at Gaylord Specialty Healthcare, a long-term acute care hospital (LTACH) in the Northeastern United States.
- Study data was collected from March 19, 2020 through August 14, 2020.
- A reference cohort of 170 patients treated at the facility the three months prior (December 1, 2019 through February 29, 2020), was used to compare patient demogrpahics and outcomes.

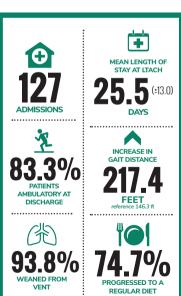
Patients with Covid-19 ambulated greater distances than a comparison cohort, and weaned from ventilation and improved swallowing at a high rate of success.

## CONCLUSION

Through coordinated care and rehabilitation, the majority of patients treated at Gaylord Specialty Healthcare for severe COVID-19, and related complications, showed significant improvement, including improvements in functional ability, cognitive communication, and pulmonary measures. Together, these data suggest patients in the postacute phase of COVID-19 benefit from structured rehabilitation.

### **RESULTS**

- There were 127 admissions and 118 discharges by the data cut-off. The patient mean (±SD) length of stay was 25.5 (±13.0) days.
- Mean patient age was 63 years, 64.1% were male, and 29.9% of patients tested-positive for SARS-CoV-2 infection at admission. 40/51 (83.3%) patients admitted as nonambulatory were ambulatory at discharge.
- Gait distance increased an average of 217.4 feet from admission to discharge, a significantly greater increase than the reference cohort of 146.3 feet.
- 93.8% (15/16) of patients being mechanically ventilated at admission were weaned before discharge with a mean wean time of 11.3 days.
- 74.7% (56/75) of patients admitted with a restricted diet were discharged on a regular diet.



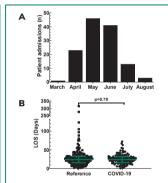
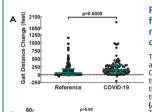
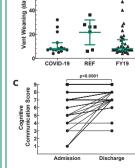


Figure 1. Patient admissions and length of stay (LOS) trends during the COVID-19 pandemic.

(A) During the study period, there were 127 admissions for COVID-19 related care, the highest rate being in May, 2020 with 46 patients. (B) The median patient LOS for the 118 discharges was similar between the COVID-19 and Reference cohort. Error bars represent the 25% and 75% quartiles.

Figure Summary: Patient LOS was similar between COVID-19 and Reference cohorts.





# Figure 2. Patient functional ability, respiratory, and cognitive communication outcomes.

The change in gait distance, from admission to discharge, of the COVID-19 cohort was compared to the Reference cohort to determine if the extent of improvement between the two groups were comparable (A); COVID n=102, Reference n=94 To measure respiratory outcomes, the ventilator wean time of the COVID-19 cohort, Reference (REF) cohort, and all patients mechanically ventilated during fiscal year 2019 (FY19), were compared (B): COVID-19 n=15, REF n=7, FY19 n=37, Using a modified NOMS score, the cognitive-communication status of referred COVID-19 patients was measured at admission and discharge (C); n=75. Error bars represent the 25% and 75% quartiles.

Figure Summary: Patients recovering from COVID-19 displayed similar or "better" outcomes compared to the reference cohort, an observation that may be the result of a younger population, patient demographics, or baseline health status.