



Pressure Injuries in Patients with COVID-19 admitted to acute rehabilitation



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Introduction

- Many patients with COVID-19 have complicated, prolonged hospitalizations placing them at risk for pressure injuries.¹
- Known factors that increase risk for pressure injuries development are immobility, frailty, poor nutrition, age and incontinence.^{2,3}
- *Objective:* To describe characteristics of patient admitted to acute inpatient rehabilitation after hospitalization for COVID-19.

Methods

- Retrospective chart review of patients admitted to acute inpatient rehabilitation with the diagnosis of COVID-19.
- Study Period: March 1, 2020- June 30, 2020.
- EPIC electronic medical record (EMR) was used to identify patients.
- Manual chart check was performed to verify COVID-19 hospitalization prior to admission to acute rehabilitation and to classify severity and location of pressure injuries.
- Description of pressure injuries was based on first initial documentation in the EMR.
- Microsoft Excel was used for data organization and analysis.

| | COVID 19 + with PI N=20 | COVID 19 + without PI N=42 | P-value |
|--|----------------------------|-------------------------------|---------|
| Age (years) Average ± Stdev | 58.40 ± 16.43 | 61.42 ± 13.08 | 0.39 |
| Gender: Female | 5 | 19 | 0.13 |
| Race | | | 0.57 |
| White | 11 | 17 | |
| Black | 7 | 23 | |
| Other | 1 | 1 | |
| ICU Admission | 14 | 26 | 0.38 |
| Length of Stay (days) Average ± Stdev | 34.15 ± 15.13 | 30.77 ± 22.81 | 0.44 |
| Braden Score on Admission Average ± Stdev | 14.25 ± 3.46 | 16.40 ± 3.65 | 0.03 |

Most Common Locations for Pressure Injuries

1. Sacrococcygeal region (43%)
2. Nose (10%)
3. Foot/heel (10%)

Results

- Approximately, one-third of patients discharged to acute inpatient rehabilitation after a hospitalization for COVID-19 had a new pressure injuries (31%).
- Patients with COVID-19 and new pressure injuries had on average 1.58 new pressure injuries.
- Potential risk factors for developing pressure injury in COVID-19 patients include: older age, male gender, longer length of stay and ICU admission

Conclusions

- Rehabilitation physicians should be aware of the clinical characteristics of COVID-19 patients with concurrent pressure injuries in order to better manage their ongoing rehabilitation needs.
- Further study is needed to better study the relationship between COVID-19 and pressure injuries.

Reference

1. Lavery AM, Preston LE, Ko JY, et al. Characteristics of Hospitalized COVID-19 Patients Discharged and Experiencing Same-Hospital Readmission — United States, March–August 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:1695–1699. DOI: <http://dx.doi.org/10.15585/mmwr.mm6945a2>.
2. Mervis, J. S., & Phillips, T. J. (2019). Pressure ulcers: Pathophysiology, epidemiology, risk factors, and presentation. *Journal of the American Academy of Dermatology*, 81(4), 881-890. doi:10.1016/j.jaad.2019.09.022
3. Bergquist S, Rita Frantz R. Pressure ulcers in community-based older adults receiving home health care. 1999;12:339-51