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Title

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Patient Characteristics with Lengths of Stay >100 Days

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INTRODUCTION

A small but significant portion of UCDCMS inpatients have been medically cleared discharge but are unable to be placed for weeks to months.

Extended boarding in hospital beds is harmful to patients

- Patients are at risk for falls or hospital acquired infections.
- Hospital beds lack privacy and quiet offered by lower levels of care, which is especially unhealthy for patients with psychiatric or neurocognitive comorbidities.

Extended boarding in hospital beds is expensive and wasteful^{1,2}

- Care at UCDCM is significantly more expensive than at lower levels of care, so weeks or months spent at a higher than necessary level of care represents a significant and unnecessary expenditure of resources.

From January to December, 2019, there were 53 adult patients with LOS>100 days. 17 of those patients were medically justified for staying that long and were discharged within a week of medical clearance. The rest, 36 patients, were discharged 13 to 732 days (mean of 218 days) after medical clearance.

The factors associated with LOS Outliers have been described³⁻⁷, but previous studies have not focused on a populations with such large minimum LOS. This study seeks to characterize and quantify the barriers to discharge faced by LOS>100 patients who have been medically cleared but have difficulty finding placement at a lower level of care.

Methods

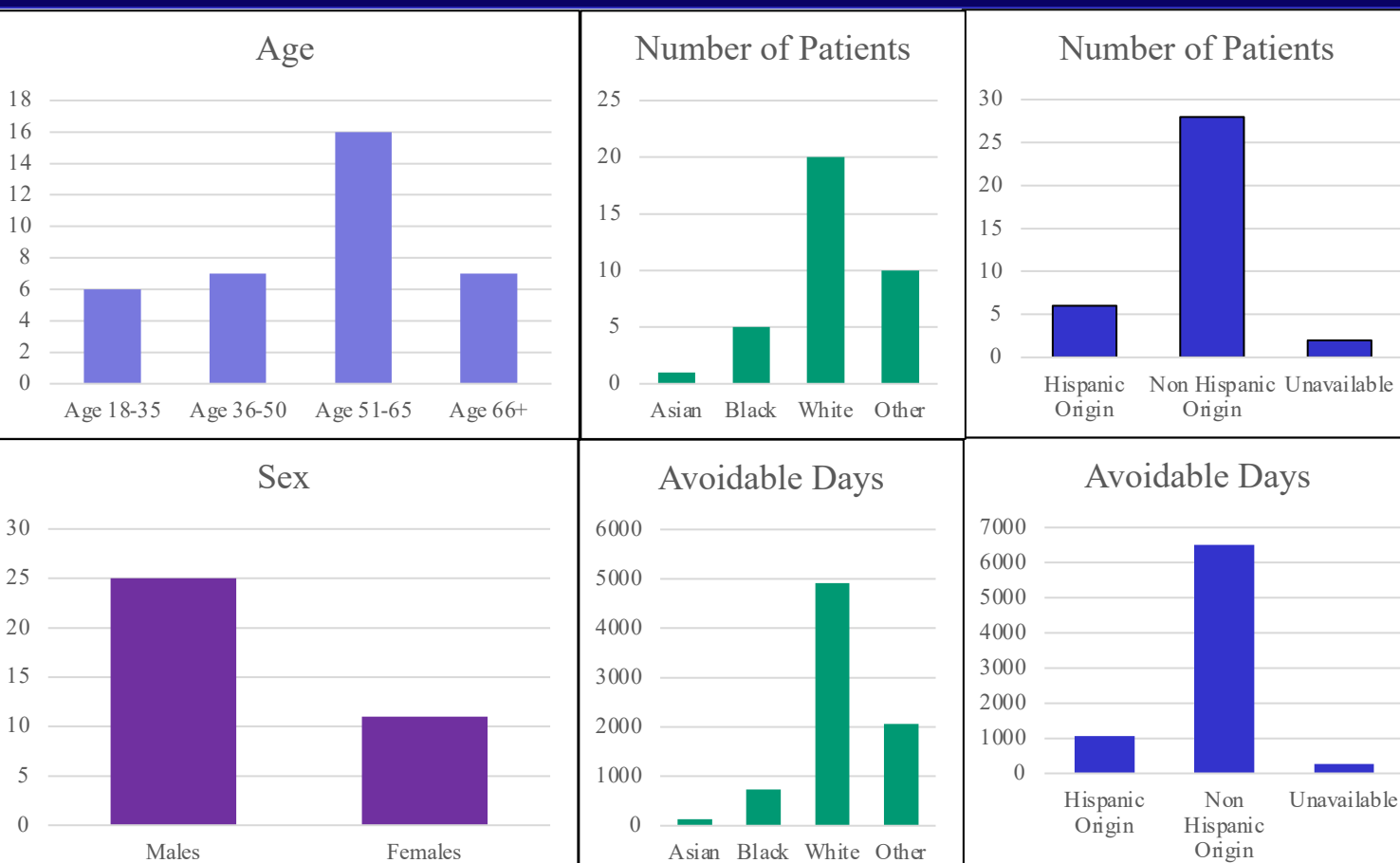
We used a list of patients whose current Length of Stay exceeds 100 days (LOS>100 list) that is maintained UC Davis Case Management. The 4 pediatric patients on the LOS>100 list were not examined because this study is interested specifically in adult patients. This left 28 adult patients on the LOS>100 list.

Next, we searched the charts of 19 of the 28 adults on the LOS>100 list for a progress note stating that they were medically cleared for discharge. The date of this note was recorded as the Date of Medical Clearance for that patient. The number of days between Date of Medical Clearance and February 15, 2019 (the date of writing), or their Discharge Date was recorded as the Number of Avoidable Days for that patient. If a patient was not medically cleared for discharge, they were excluded from the rest of the chart reviews. 3 patients were excluded from further study because their medical acuity justified their continued admission.

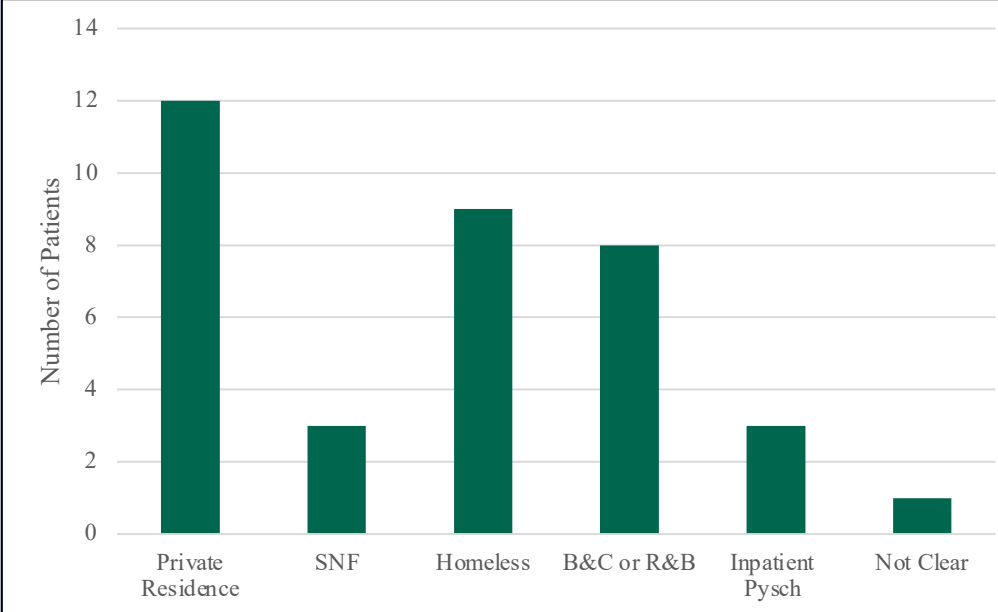
The individuals with the most knowledge of the barriers to discharge faced by these patients are the Hospital Case Managers. We enlisted the help of Hospital Case Managers to create a list of 29 barriers to discharge that they frequently see. We then took this list of barriers and performed chart reviews on the remaining 16 of the original 19 adults from the LOS>100 list. For each patient we recorded the presence of any barrier that from the list of barriers. We did not encounter a barrier to discharge that was not on the list of barriers.

Billing information for patients currently admitted is not easily obtained, so to estimate cost per day, we identified two patients from 2018 who had LOS>100 days. For each patient, we divided the LOS by total hospital cost. This calculation does not exclude the medically justifiable portion of their admission so will overestimate the cost per day associated with avoidable hospital days.

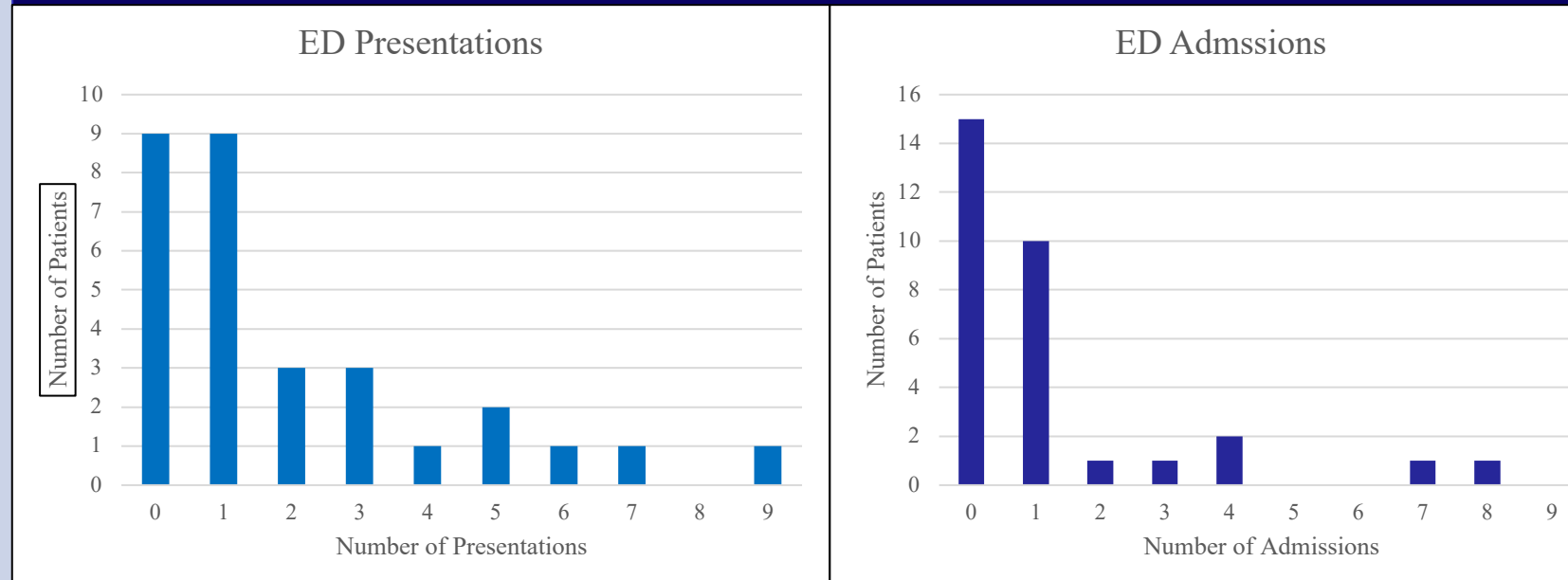
Age, Sex, Race & Ethnicity



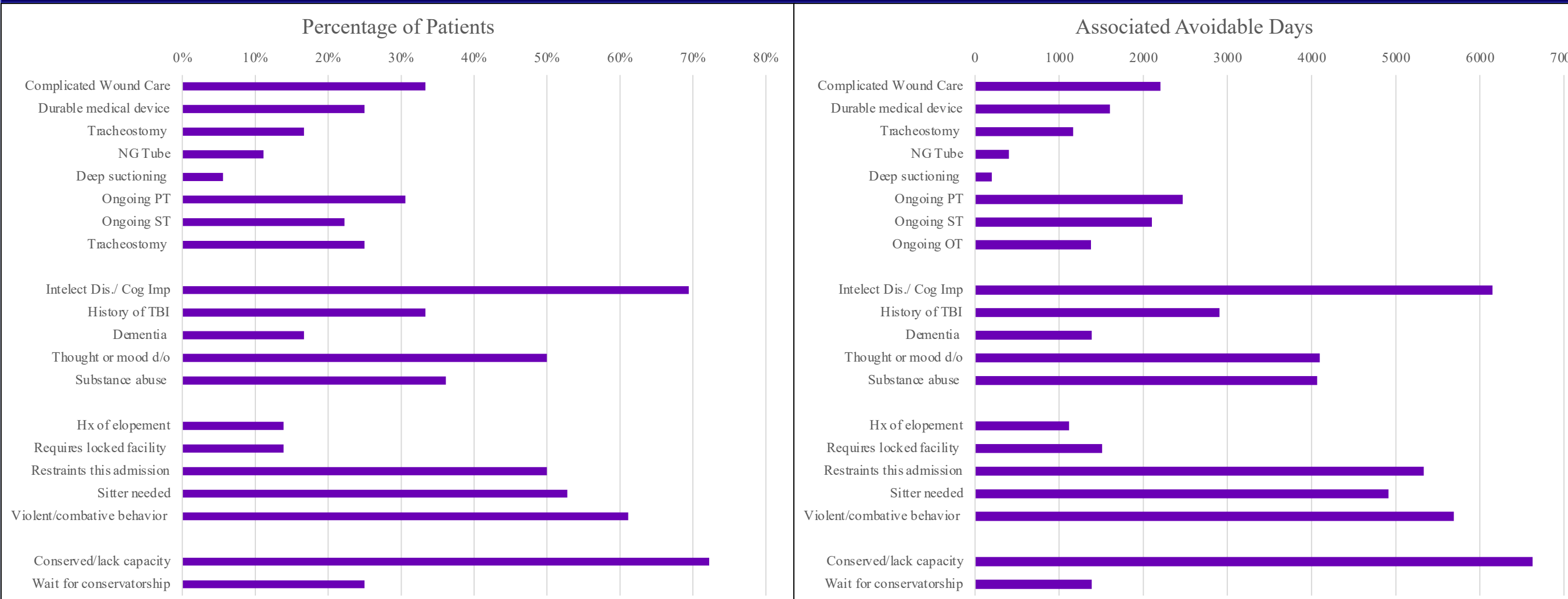
Housing Prior to Admission



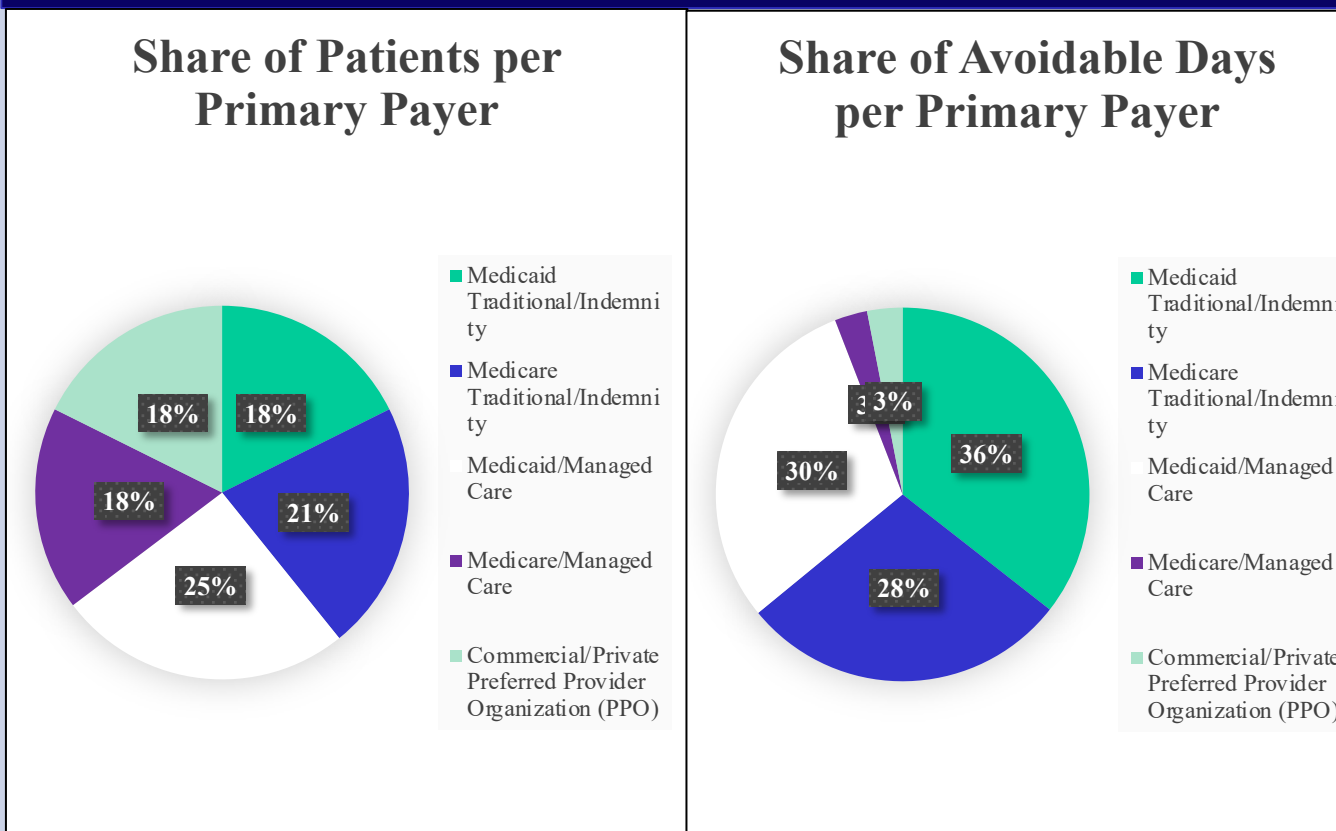
ED Admissions and Presentation in Year Prior



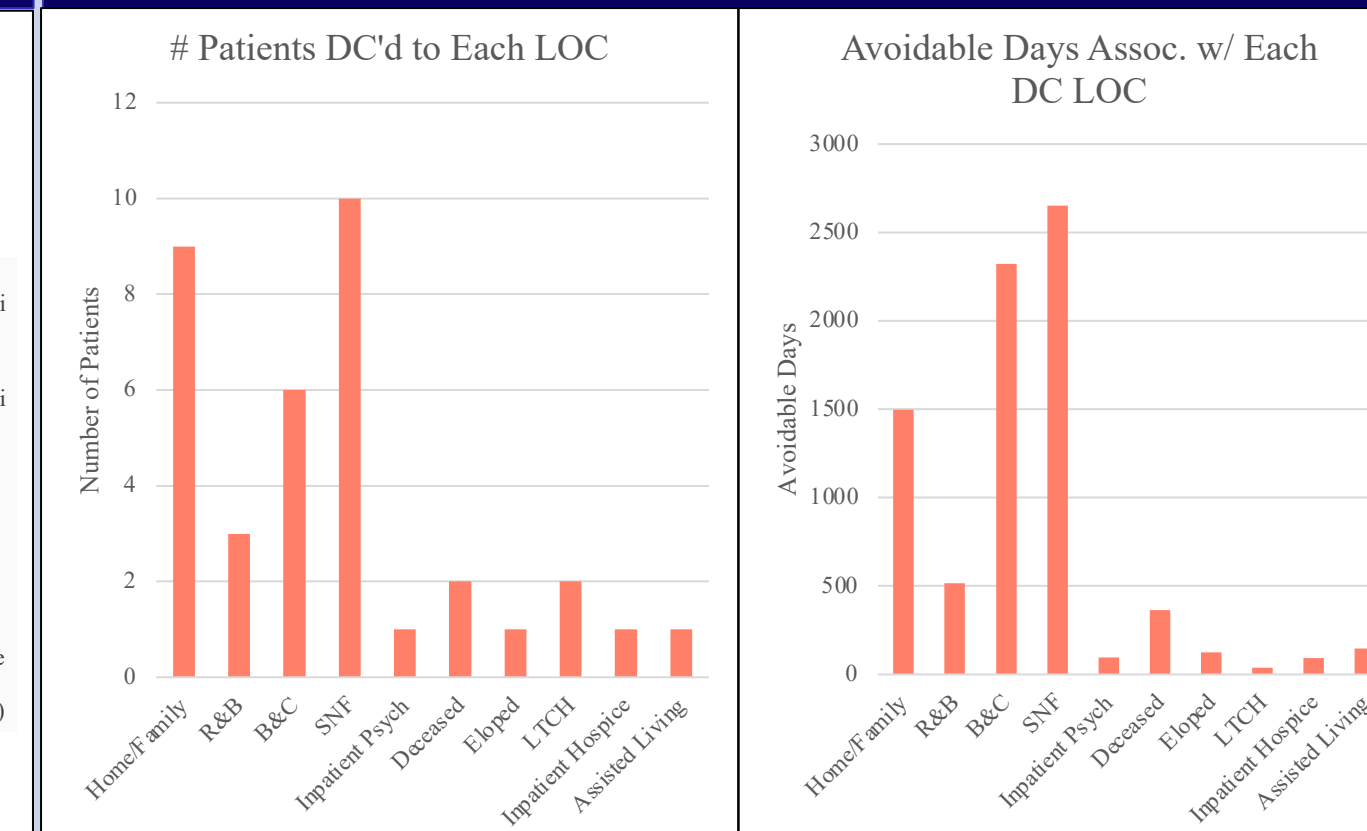
Occurrence of Each Characteristic and Associated Avoidable Days



Payers/Insurance



Discharge Levels of Care



HA Infections/Injuries

- 20 Hospital Acquired Infections or Injuries occurred AFTER date of medical clearance
- 2 Falls
 - 5 HA pneumonia
 - 1 C. difficile
 - 3 Catheter associated inf.
 - 7 HA UTI
 - 2 sacral decubitus ulcer

Discussion

Neuropsychiatric barriers are the most common

- 92% of patients were diagnosed with cognitive impairment, intellectual disability, or a thought or mood disorder.
- 72% of patients were conserved or lacked capacity, and 84% of avoidable days were attributable to this group

Agitated and Combative

- 78% of LOS>100 patients had a hx of elopement, required discharge to a locked facility, required restraints and/or a sitter, or exhibited combative/violent behavior

Costs

- Approximate hospital cost of \$2,600 per bed-day
- **7848 Avoidable Days = \$20,404,800**
- **218 Average Avoidable Days/patient = \$566,800/patient**

CONCLUSION

The primary barriers to discharge faced by these patients are neuropsychiatric and behavioral. It is critical to note that these patients are not able to find placement because of a lack of available beds, per se. Throughout 2019, many patients were discharged from UCDCM to lower levels of care in a timely manner. Rather, it appears that agencies are choosing not to accept these patients because they represent increased staffing expenses, additional risk to staff and other patients, and an emotional toll/burden on staff.

To ensure reliable placement of patients:

- UCDCM can seek to control beds at these facilities, either through contract or direct ownership.
- UCDCM can offer incentives to facilities that accept these difficult to place patients.

The second strategy was successfully employed by hospitals in Syracuse, NY.⁸

- Facilities that reliably accepted difficult to place patients were in turn notified of patients that offered more profitability, such as patients with rehabilitation potential.
- Area hospitals worked to establish a community fund that offered money to facilities to offset the cost of expensive medications (which had been identified by long-term care facilities as barrier)

REFERENCES

1. Cyganska M. The Impact Factors on the Hospital High Length of Stay Outliers. *Procedia Econ Finance*. 2016;39:251-255. doi:10.1016/S2212-5671(16)30320-3
2. Bashkin O, Caspi S, Haligou R, Mizrahi S, Stalnikiowicz R. Organizational factors affecting length of stay in the emergency department: initial observational study. *Isr J Health Policy Res*. 2015;4. doi:10.1186/s13584-015-0035-6
3. Lagoe R, Pernisi L, Luziani M, Littau S. Addressing hospital length of stay outlier patients: A community wide approach. *Adv Biosci Biotechnol*. 2014;05:188. doi:10.4236/abb.2014.53024
4. Barriers to discharge for length of stay outliers: a review of general medicine patients in a university hospital. *SHM Abstr*. https://www.shmabstracts.com/abstract/barriers-to-discharge-for-length-of-stay-outliers-a-review-of-general-medicine-patients-in-a-university-hospital/. Accessed September 17, 2018.
5. Brasel KJ, Lim HJ, Nirula R, Weigelt JA. Length of stay: an appropriate quality measure? *Arch Surg Chic Ill 1960*. 2007;142(5):461-465; discussion 465-466. doi:10.1001/archsurg.142.5.461
6. Jentsch T, Seifert B, Neuhaus V, Moos RM. Predictors for shorter and longer length of hospital stay outliers: a retrospective case-control study of 8247 patients at a university hospital trauma department. *Swiss Med Wkly*. 2018;148:w14650. doi:10.4414/smw.2018.14650
7. Freitas A, Silva-Costa T, Lopes F, et al. Factors influencing hospital high length of stay outliers. *BMC Health Serv Res*. 2012;12:265. doi:10.1186/1472-6963-12-265
8. Lagoe RJ, Westert GP, Kendrick K, Morreale G, Mních S. Managing hospital length of stay reduction: a multihospital approach. *Health Care Manage Rev*. 2005;30(2):82-92.