DELIRIUM:
Delirious ELders, Implementing Reduction Interventions Using Mobility

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INTRODUCTION

This quality improvement project involved hiring, training, and managing 3 Delirium Mobility Aids to implement a non-pharmacologic delirium prevention bundle package, including early mobility, on hospitalized patients age ≥65.

% Patients Discharged Home Rather than Care Facility

(p-value 0.06)

Because of this project, 40 people have been able to discharge to home instead of a Skilled Nursing Facility

"I really wanted to get out of bed but no one would let me move. Now I have my own personal walker!"
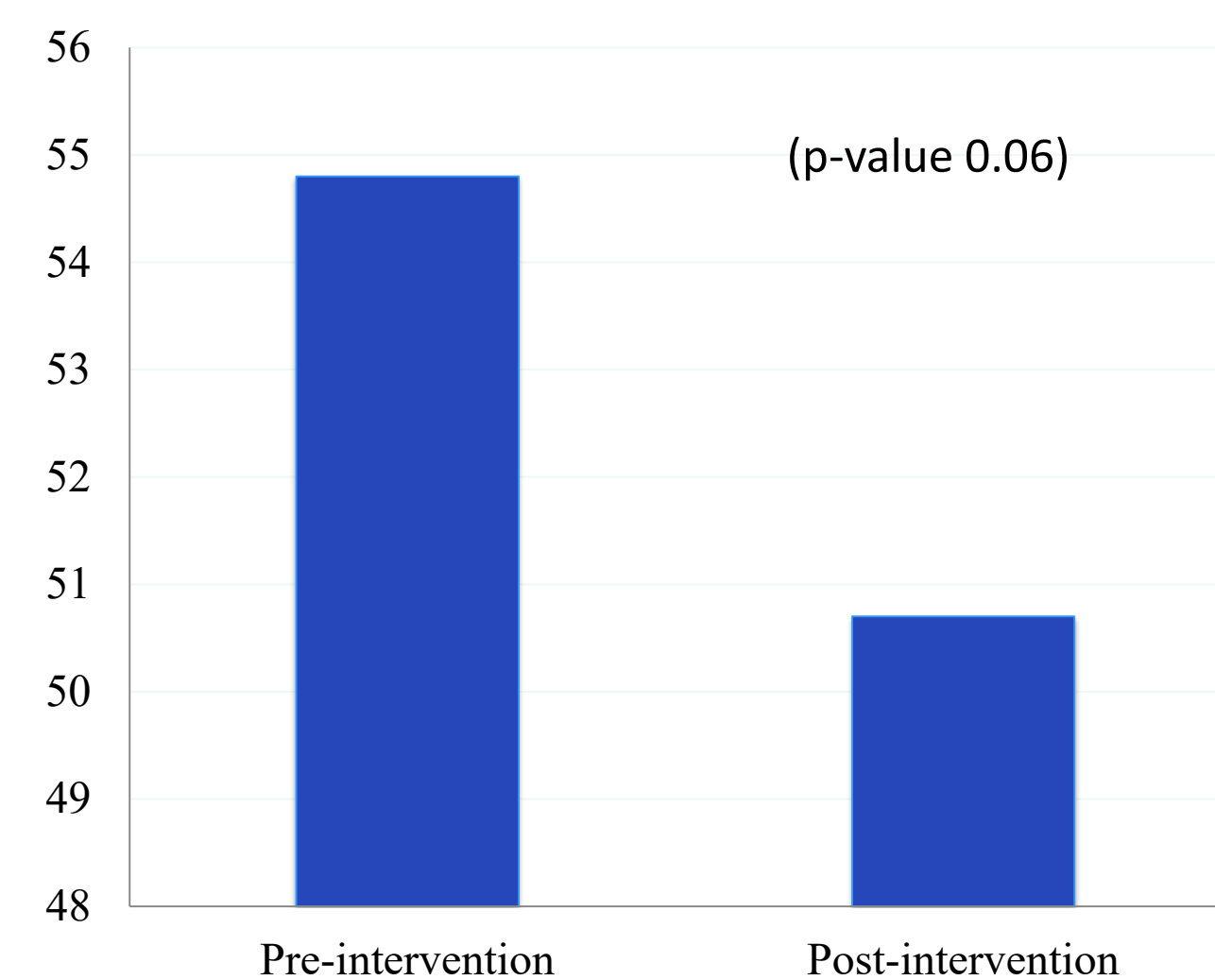- Jeannine

Background

Delirium affects 20-30% of older hospitalized patients [1]. Patients with delirium have double the mortality rate [3], which increases with delirium duration [4]. Delirium worsens long term cognitive functioning [9,10,11,12]. Hospital costs increase by $2,500 per patient, totaling $6,900,000,000 in Medicare expenditures [7]. A single delirium episode increases total yearly costs by ~$64,421 [2].
Research suggests the best treatment is non-pharmacologic multicomponent interventions [6], and those with most benefit include early mobility, reorientation, cognitive/sensory stimulation, and hydration [5].

Delirium Burden per Hospital Day

Results

Preliminary data collected at month 9 of 12:
- No statistically significant change in total delirium burden. However there is a trend toward decreased delirium in prolonged hospitalization (measured after day 4). For these patients with LOS > 6 days, there was a 4% reduction in late-stay delirium compared to 2018 and 10% from 2017.
  - 7.5-13% more patients were completely delirium free after day 4
- Length of Stay (LOS): no significant change (5.5 days)
- Patients admitted from home experienced a 4% increase in discharge to home (rather than care-facility) approaching near significance (p-value 0.06).
- There was a trend toward reduction in hospital falls: 2017- 33. 2018- 29. 2019 (present)- 19, projected to reach 25 by year's end.
- Press-Ganey patient satisfaction scores remained stable.

Methods

A delirium prevention protocol was created addressing four main pillars.
- Hydration: water placed within patient reach.
- Sensory input:
  - window blinds opened by 9:00 am
  - hearing-aids and eye-glasses retrieved and utilized.
  - Soothing music via delirium TV channel for non-communicative patients.
- Reorientation: oriented to person/place/time 3 times daily.
- Mobility: 20-min walk (mobilization event) 3 times daily

Work and time constraints prohibited existing health professionals (CNA, RN, MD, PT, OT) from implementing the protocol. Thus a new job position (Delirium Mobility Aid) was created to implement this protocol for all patients age ≥65 admitted to Medical A (28-bed medical unit). This was proposed to Providence St. Vincent Medical Foundation who awarded a $170,000 institutional grant for 12 months. The project residents reviewed applications, interviewed, and hired 3 CNA's to fill the position 12 hr/day, 7 days/week. Physical and Occupational Therapy trained the aids for 3 weeks in delirium management and mobilization techniques. Data was collected in Epic flowsheets and chart notes.
Confusion-Assessment-Method (CAM) is a established delirium scoring system utilized on Medical A. Data from intervention year (2019) was compared to baseline data collected 2 years prior (2017, 2018) on the same hospital unit.

Hospital Falls

Project Reach and Cost Analysis

- 40 people have discharged home instead of SNF
- Average LOS at SNF is 7-10 days, and cost $450/day.
- SNF costs alone have saved $126,000-$180,000
- Which exceeds project running costs of $124,000
- This does include cost savings of the hospitalization ($2,500 per delirious patient) or total cost savings of the following year ($64,421 per delirium episode)
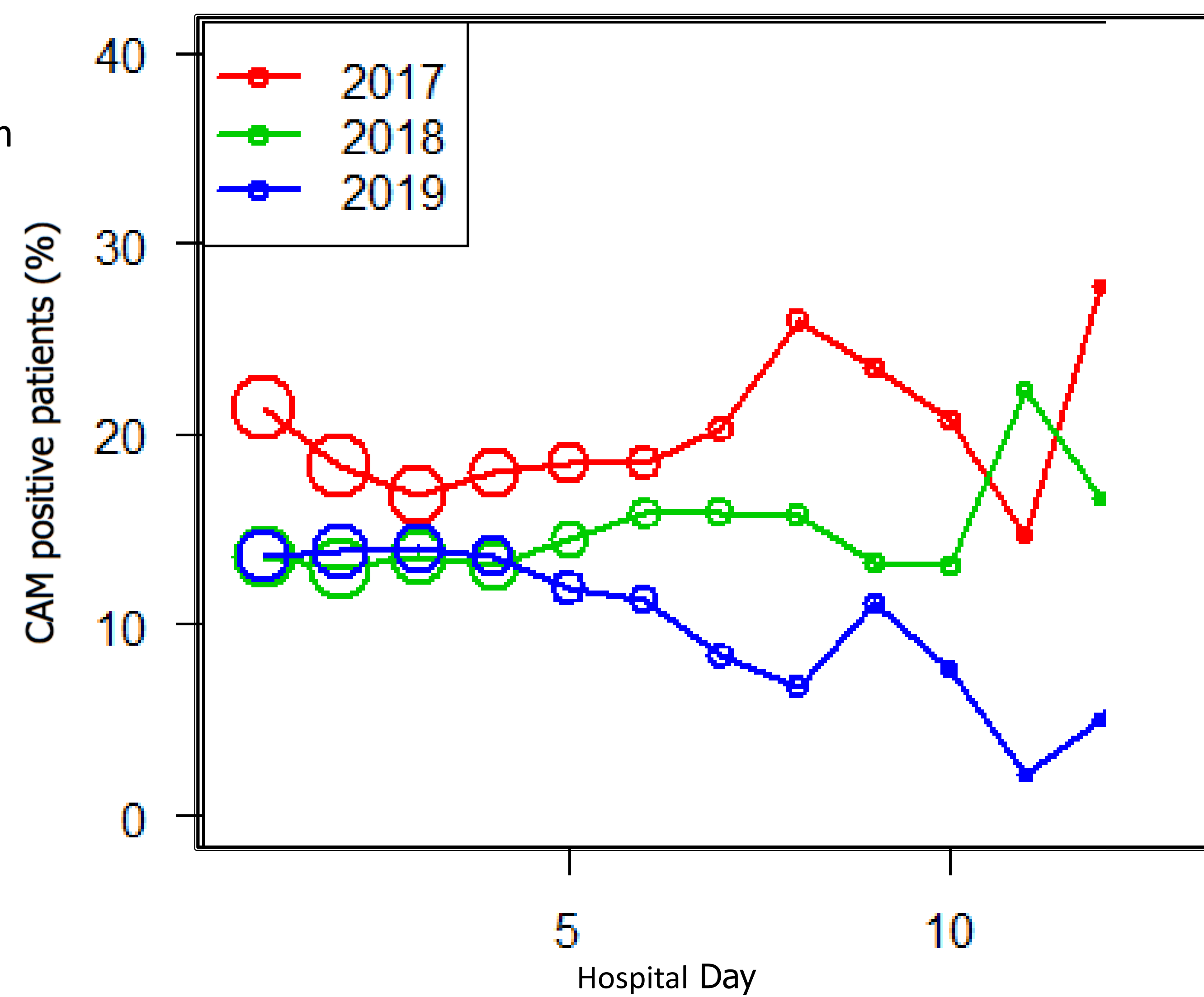
Conclusion

Non-pharmacologic multicomponent prevention protocols, which include mobilization, implemented by specialized CNA's, are a potentially viable treatment of delirium in elderly patients with prolonged hospitalization. This may increase rate of discharge to home, without worsening falls, LOS, or patient experience, and has a cost-savings benefit.
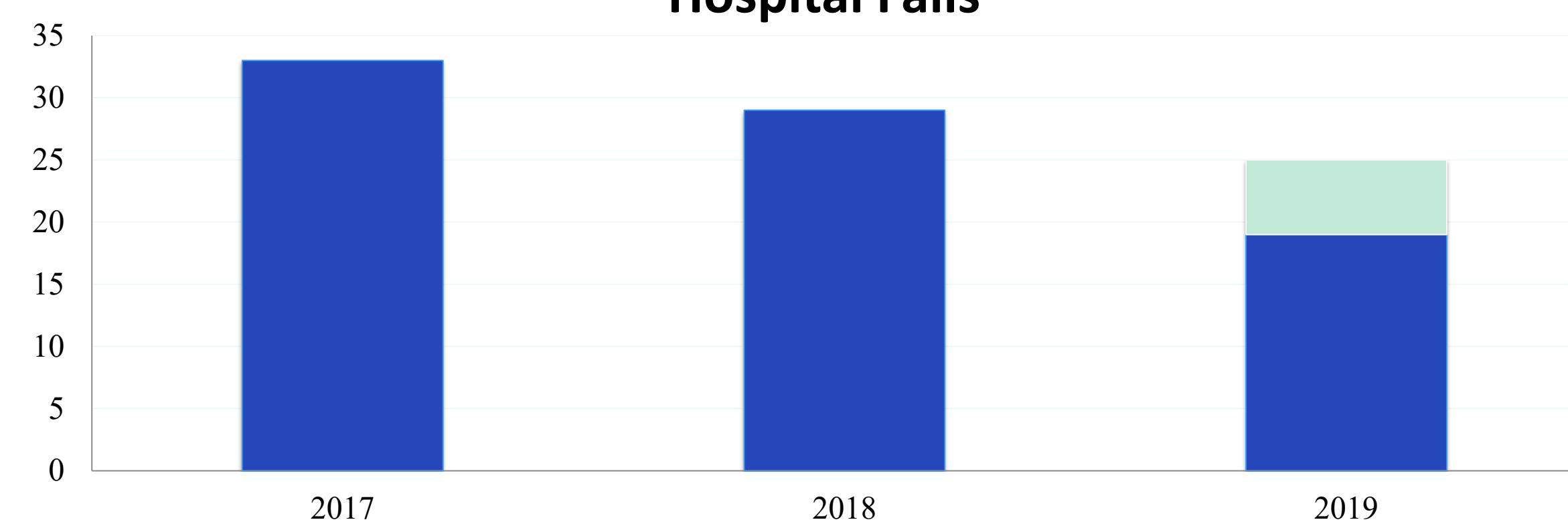
Process Measures

CAM Assessment Rate

Daily percent of patients (eligible) worked by CNA

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