

Aspiration Pneumonia Prevention Protocol at Thomas Jefferson University Hospital: Utilizing a Mandatory Yale Swallow Protocol

Ryan Lamm, Kimberly R Bush, Christine Schleider, Kathleen Shindle, Darlene Rosendale, Scott Cowan, John Renzi

Background

- Problem Statement:** Aspiration pneumonia (AP) is a highly morbid inpatient complication. Recently, our institution was identified as a high outlier in postoperative AP rates compared to other 2020-2021 Vizient-participating institutions (**Figure 1**).

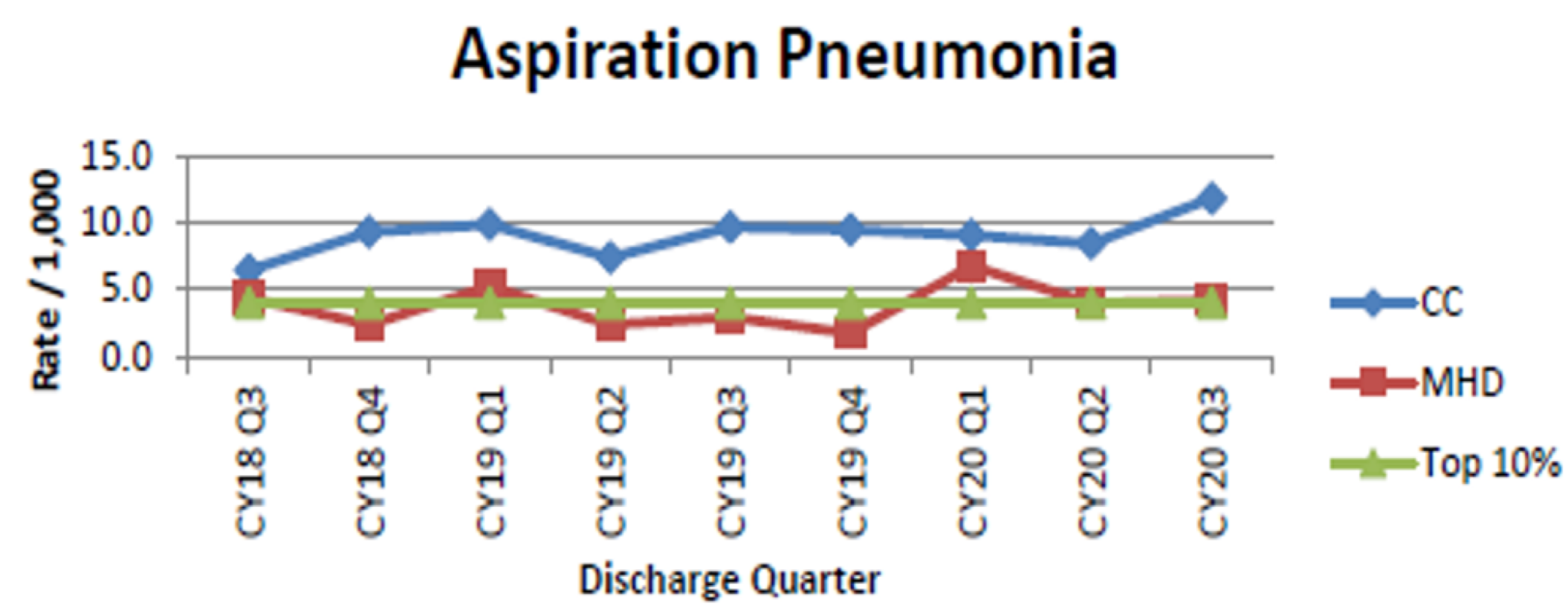


Figure 1. 2020 Vizient AP Rates in Center City (CC) and Methodist campuses (MHD)

- AIM:** Implement a hospital-wide mandatory dysphagia screen protocol with a minimum of 75% compliance on each unit by April 2022 to reduce AP rates at our institution by 50% (5/1000) by January 2023.

Baseline Metrics

- TJUH Center City (CC) campus postoperative pneumonia rates on NSQIP review place them as high outliers in ALL postoperative pulmonary complications and rates of AP were broken down at the unit level (**Figure 2**)

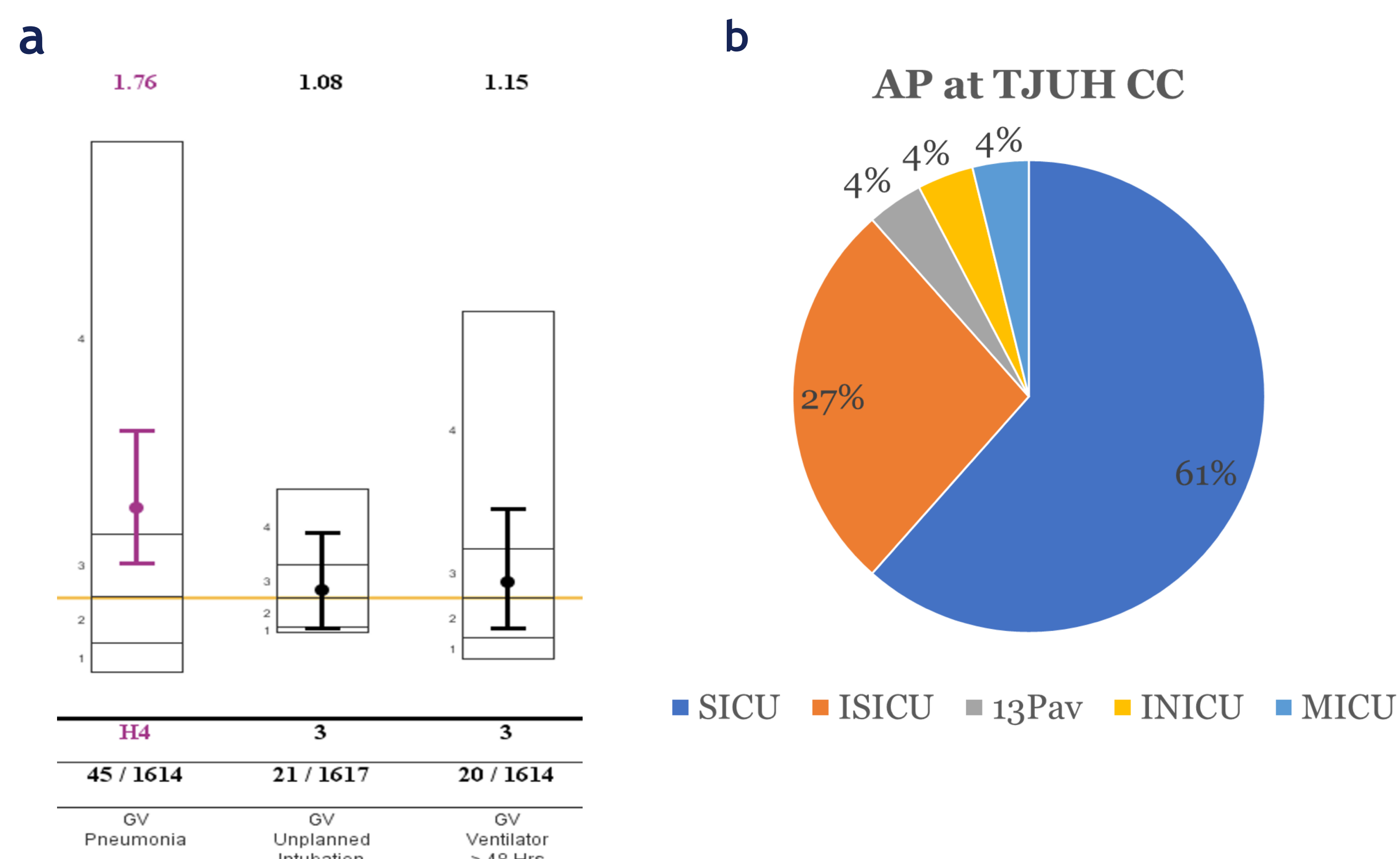


Figure 2. (a) NSQIP postoperative pulmonary complication rates (b) Rates of AP by TJUH CC unit

Interventions

- Yale Swallow Protocol (YSP) was identified as a previously validated dysphagia screen in stroke and postoperative patient populations (Scan **QR CODE** below for YSP and validation studies)
- Multi-disciplinary group of surgical, nursing, speech and swallow, & quality stakeholders assembled to design rollout (**Figure 3**)

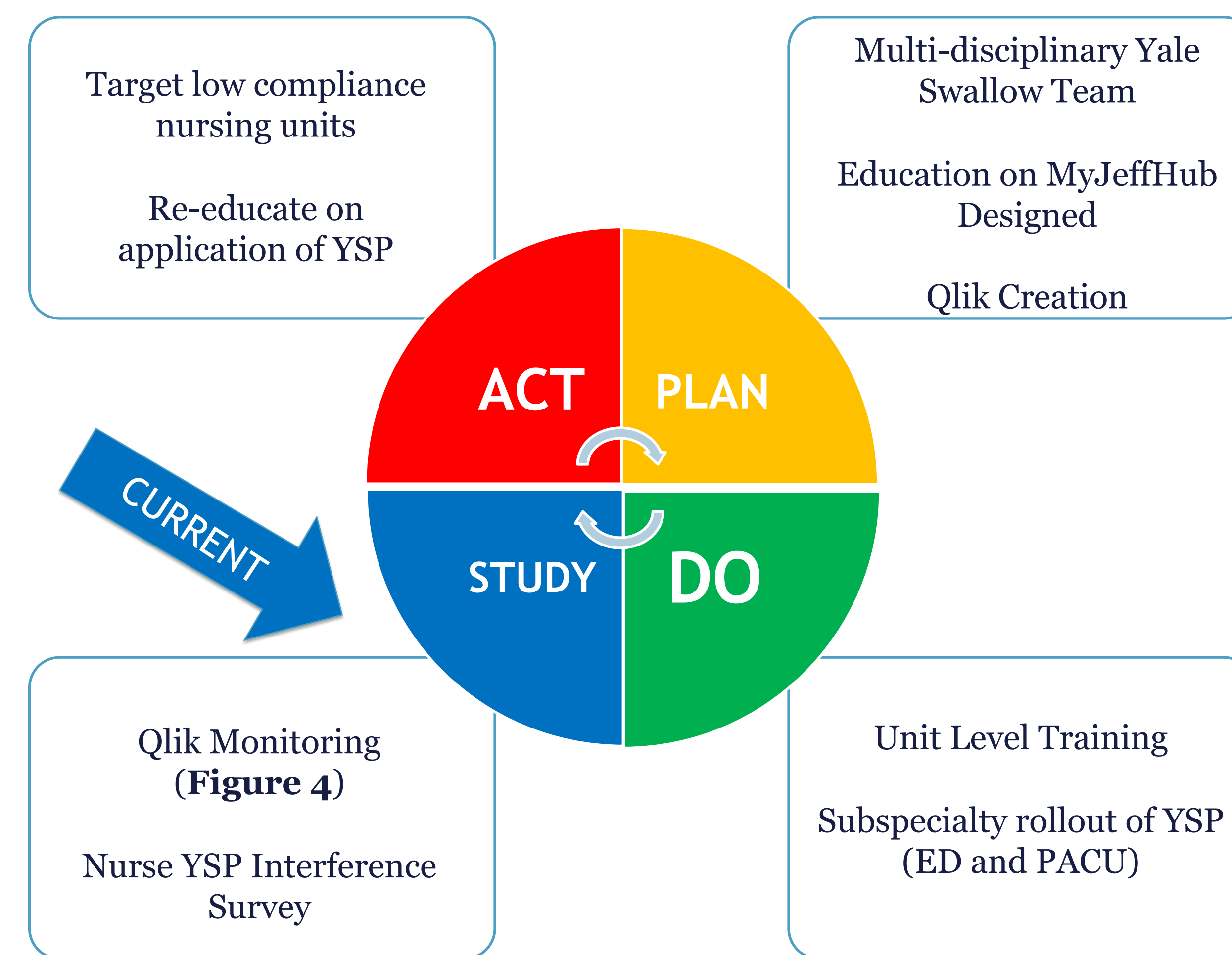


Figure 3. PDSA cycle for Intervention

- A Yale Swallow dashboard was created to track compliance

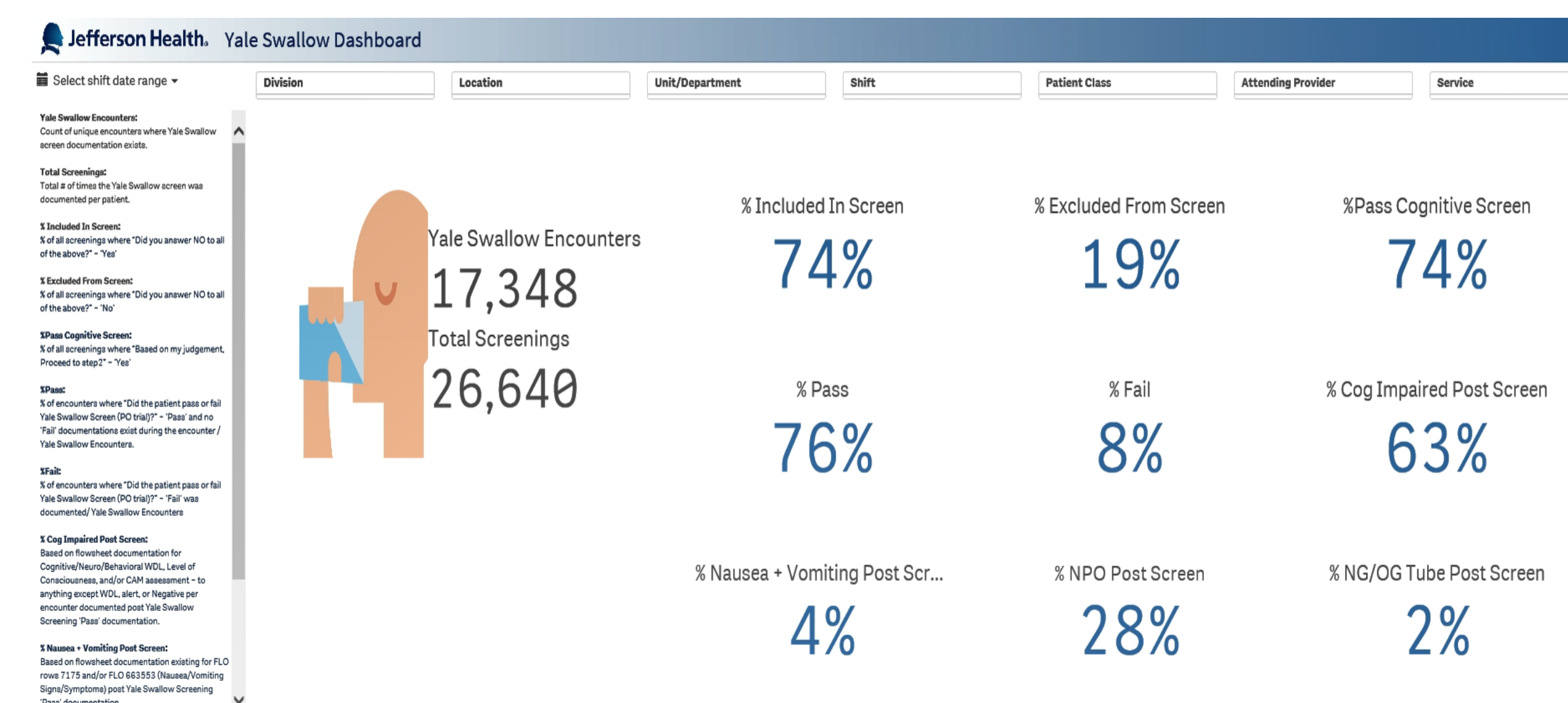


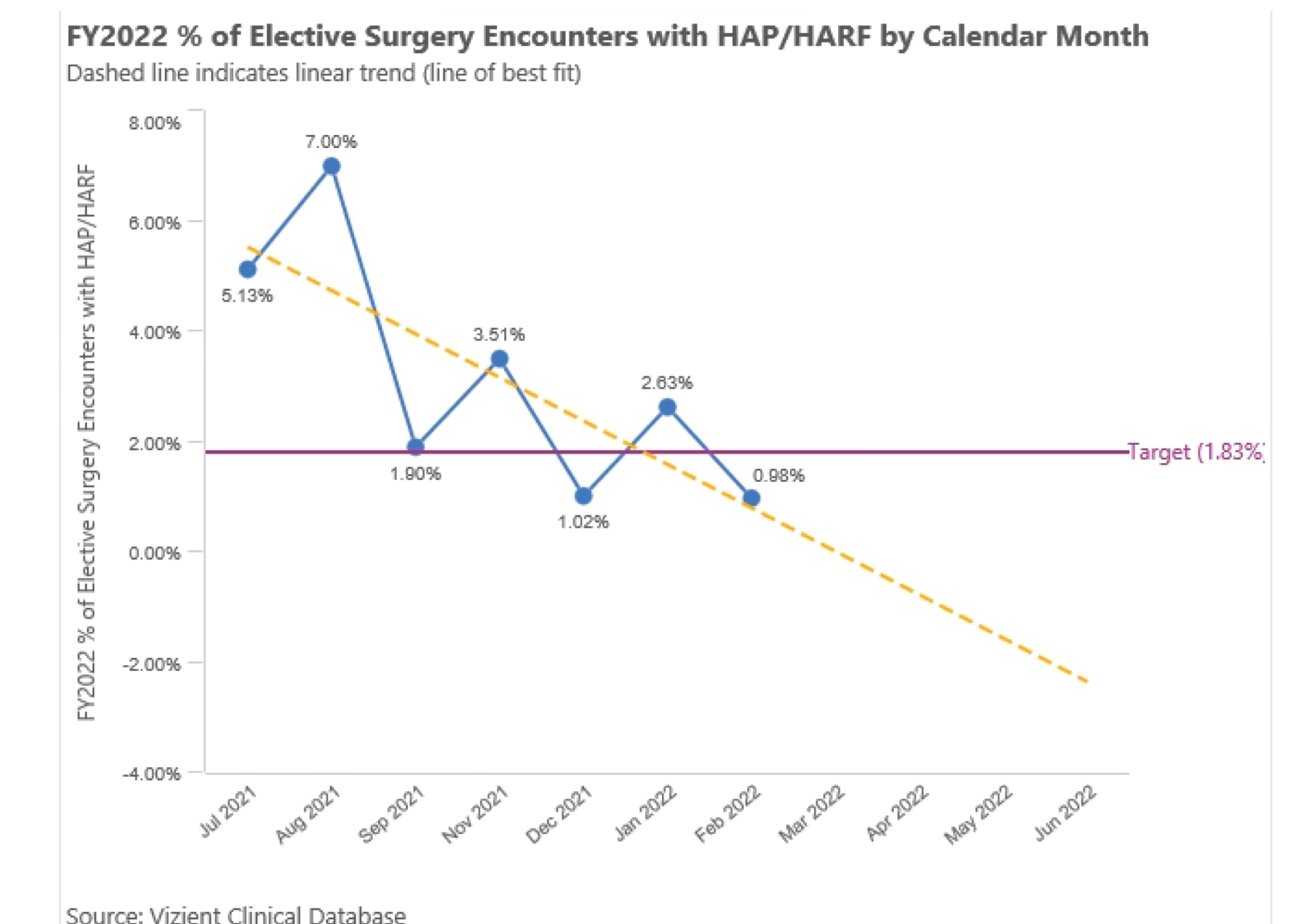
Figure 4. Qlik monitoring dashboard for YSP



Results

- Piloted on ISICU 6/2021 and SICU/MHD surgical units 9/2021 with observed decline of HAP Hospital Acquired Pneumonia (HAP)/Hospital Acquired Respiratory Failure (HARF) (**Figure 5**)

Figure 5. Vizient HAP/HARF Rates in elective surgery patient



- TJUH CC and MHD entire campus rollout 2/23/2022
- Number of screens since rollout has risen (**Figure 6**)

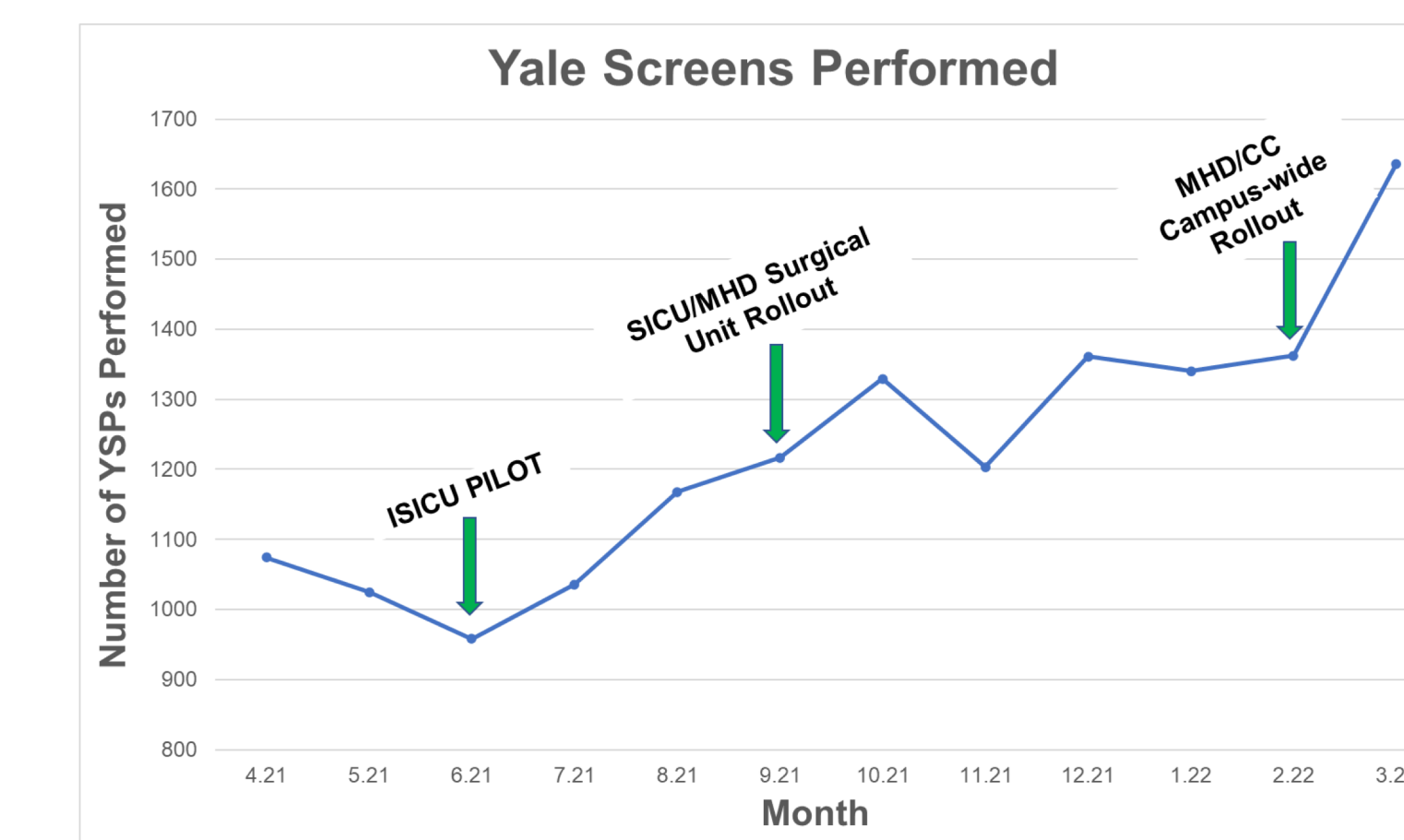


Figure 6. Number of YSPs Performed

Challenges and Lessons Learned

- Selecting appropriate inclusion criteria
 - Exclude bariatric patients; patients with wired jaws, etc.
- Proving the value of adding to the workload of the nursing team
- Negative screening will actually reduce speech and swallow consults

Future Directions

- Rollout to Abington, JNJ, Northeast campuses
- Creation of monthly compliance system to track unit level YSP application and automate feedback

Linkage to Healthcare Disparities

- AP disproportionately affects the elderly and disabled patients
- With mandatory YSP application, we hope to observe a decreased rate of aspiration pneumonia in this vulnerable patient population