

INTRODUCTION

In surgical patients Obstructive Sleep Apnea (OSA) is an important risk factor for post-operative complications. However, in a majority of surgical patients, **OSA remains undiagnosed** leading to post-operative complications such as respiratory depression and oversedation.

PROBLEM

- ◆ Pre-intervention, pre-surgical patients were not assessed for OSA risk despite the availability of the STOP-BANG tool.
- ◆ In 2021, **40%** of rapid response events (RRTs) occurring within 24 hours of transfer from PACU to inpatient units were related to oversedation and respiratory issues. Of these RRT patients:
 - ◆ **50%** had a retrospective STOP-BANG score of ≥ 3 (moderate to severe OSA risk)
 - ◆ **90%** had a pre-surgical positive oversedation risk score documented
 - ◆ **88%** did not have documented OSA diagnosis

AIMS

- AIM 1**—Increase pre-surgical identification of moderate to high risk OSA patients
- AIM 2**—Decrease number of post-operative RRTs
- AIM 3**—Decrease number of oversedation and respiratory distress RRTs

INTERVENTIONS

BEFORE SURGERY—PRE-ANESTHESIA EVALUATION SERVICES (PAES)

1. Initiates STOP-BANG assessment during pre-surgical screening
2. Documents history of OSA/CPAP use
3. Educates patient on pre-surgical CPAP compliance

DAY OF SURGERY—SURGICAL PROCEDURE UNIT (SPA)

1. Completes STOP-BANG with neck circumference
2. Alerts anesthesiologist at bedside if positive OSA risk
3. Provides OSA education and resources for further OSA follow up with primary care physician on discharge

POST SURGERY—POST ANESTHESIA CARE UNIT (PACU)

1. Monitors patient for respiratory issues
2. Ensures oxygenation, appropriate positioning, pain management

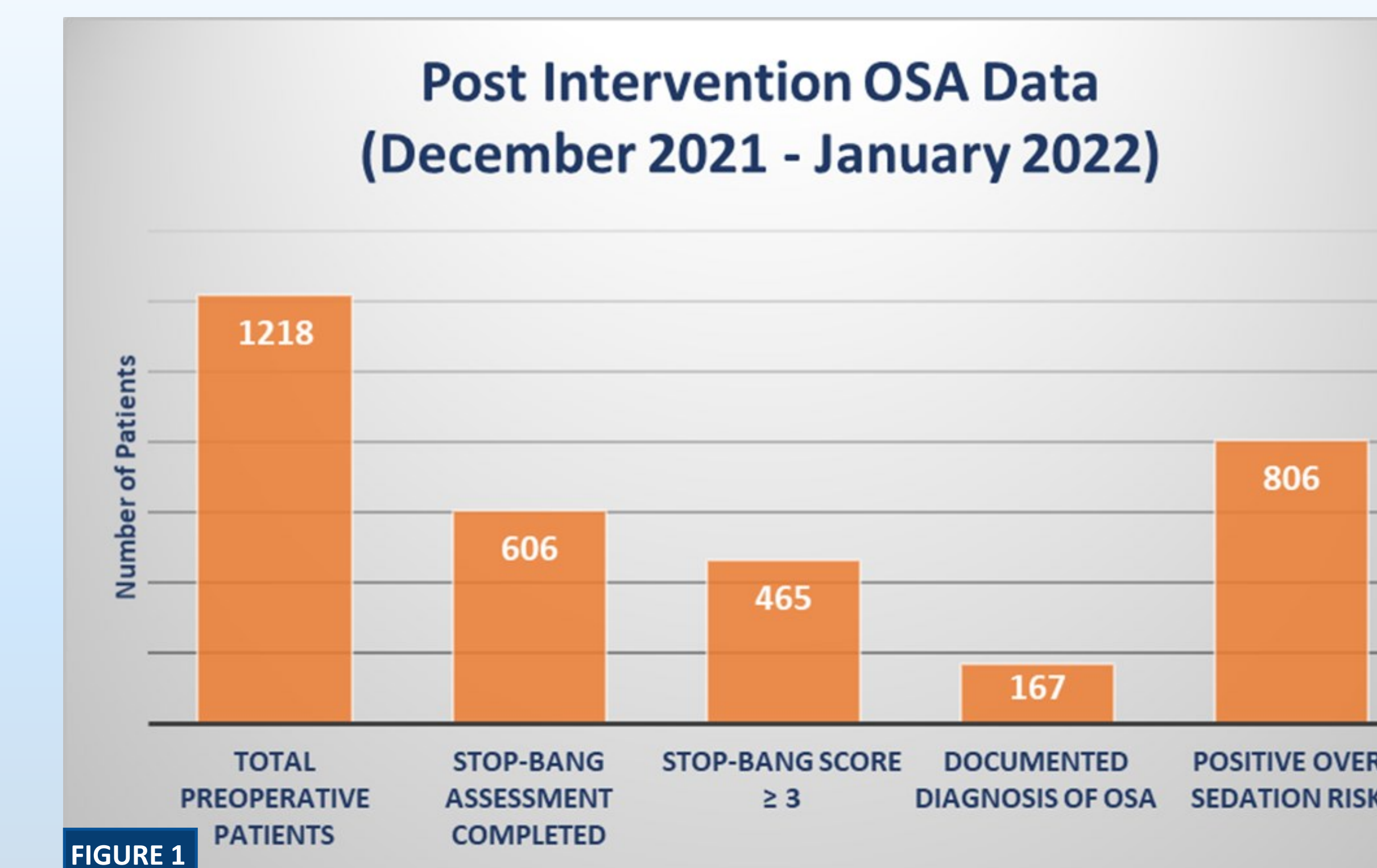


FINDINGS

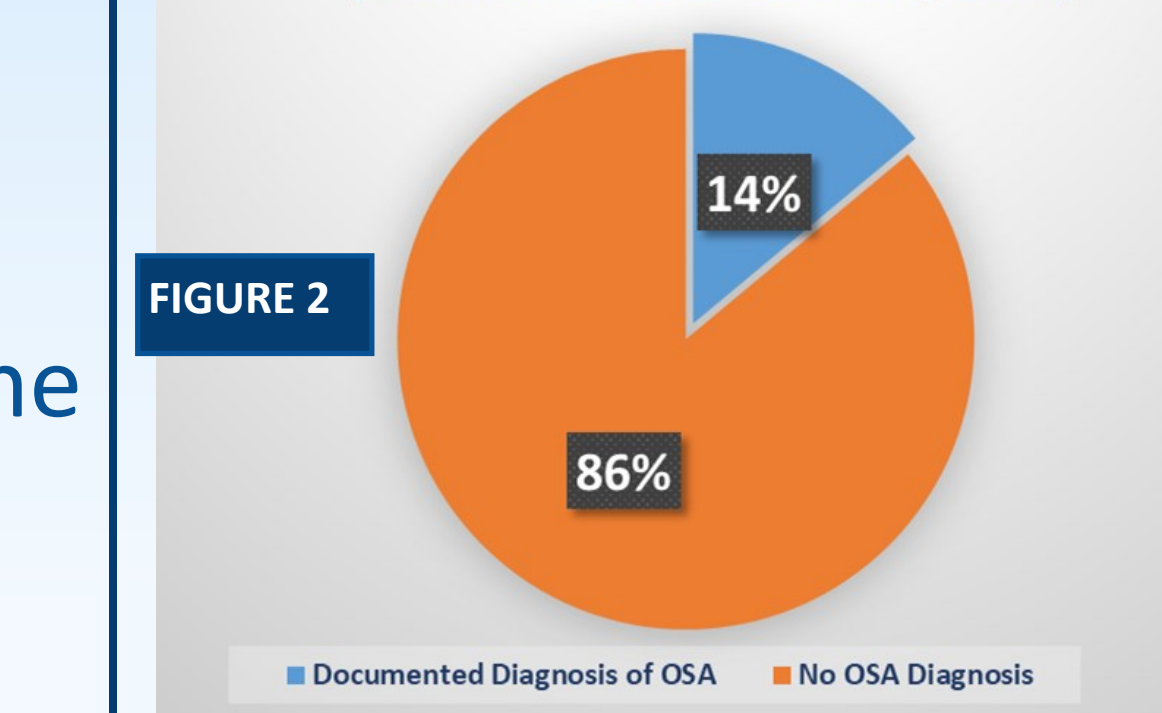
AIM 1

Preliminary post-intervention data for December 2021 and January 2022 indicated:

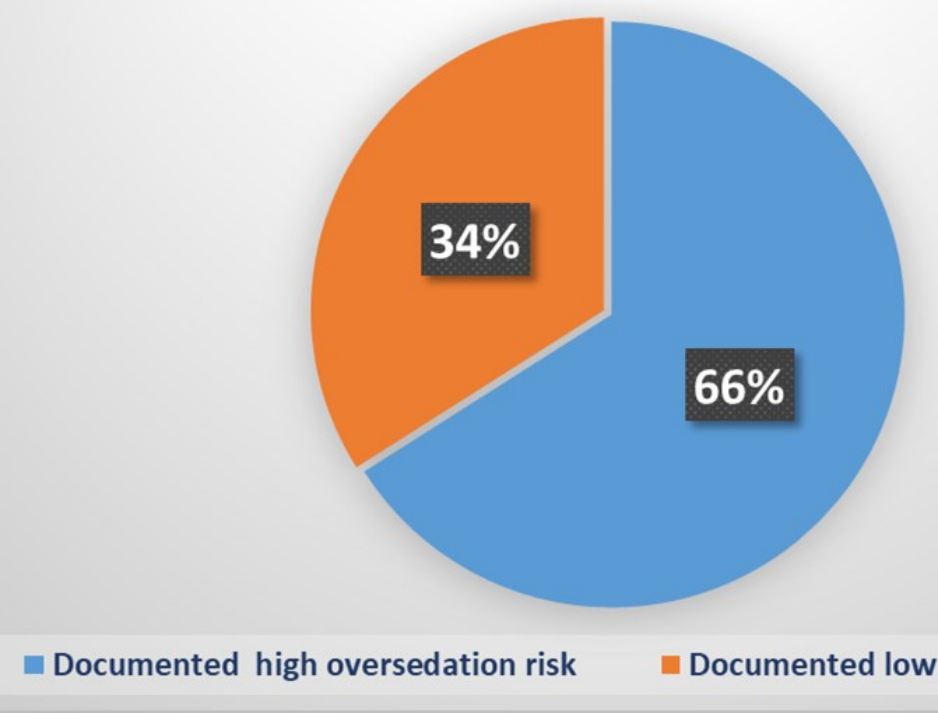
- ◆ Of the **1218** preoperative patients, **606** were screened using the STOP-BANG tool, for a screening rate of **50%** (**Figure 1**)
- ◆ **14%** (n=167) of preoperative patients (n =1218) had documented OSA diagnosis, **86%** did not (**Figure 2**)
- ◆ **66%** of preoperative patients (n=1218) had a high risk for oversedation (**Figure 3**)
- ◆ Of the screened patients (n=606) **77%** (n=465) had a STOP-BANG score of ≥ 3 (**Figure 4**)



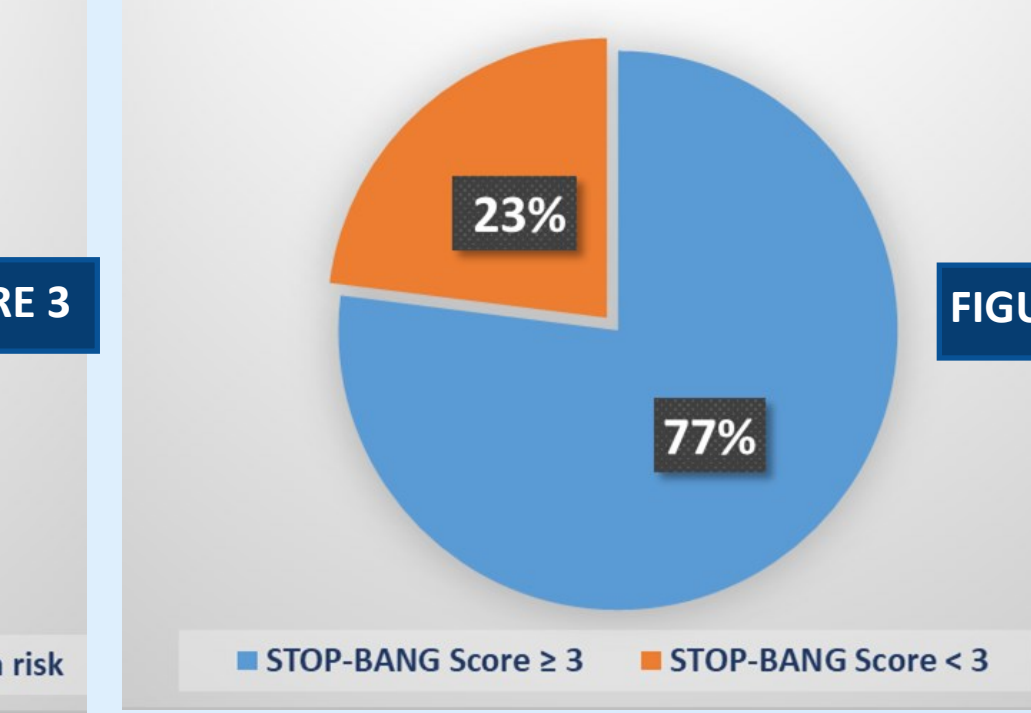
OSA DIAGNOSIS AT PREOPERATIVE SCREENING (December 2021 - January 2022)



PREOPERATIVE OVERSEDATION RISK (December 2021 - January 2022)



PREOPERATIVE STOP BANG ASSESSMENT (December 2021 - January 2022)

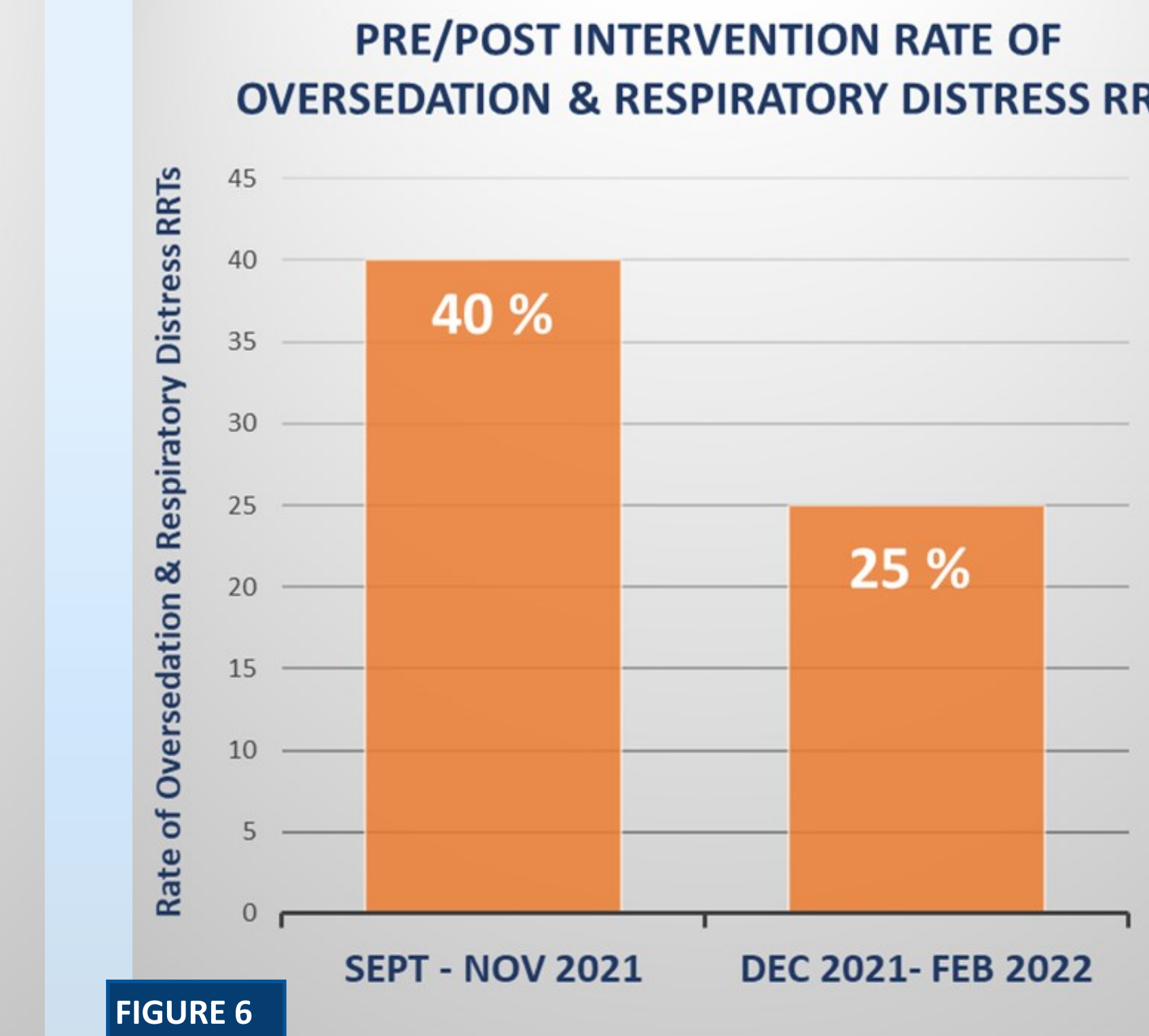
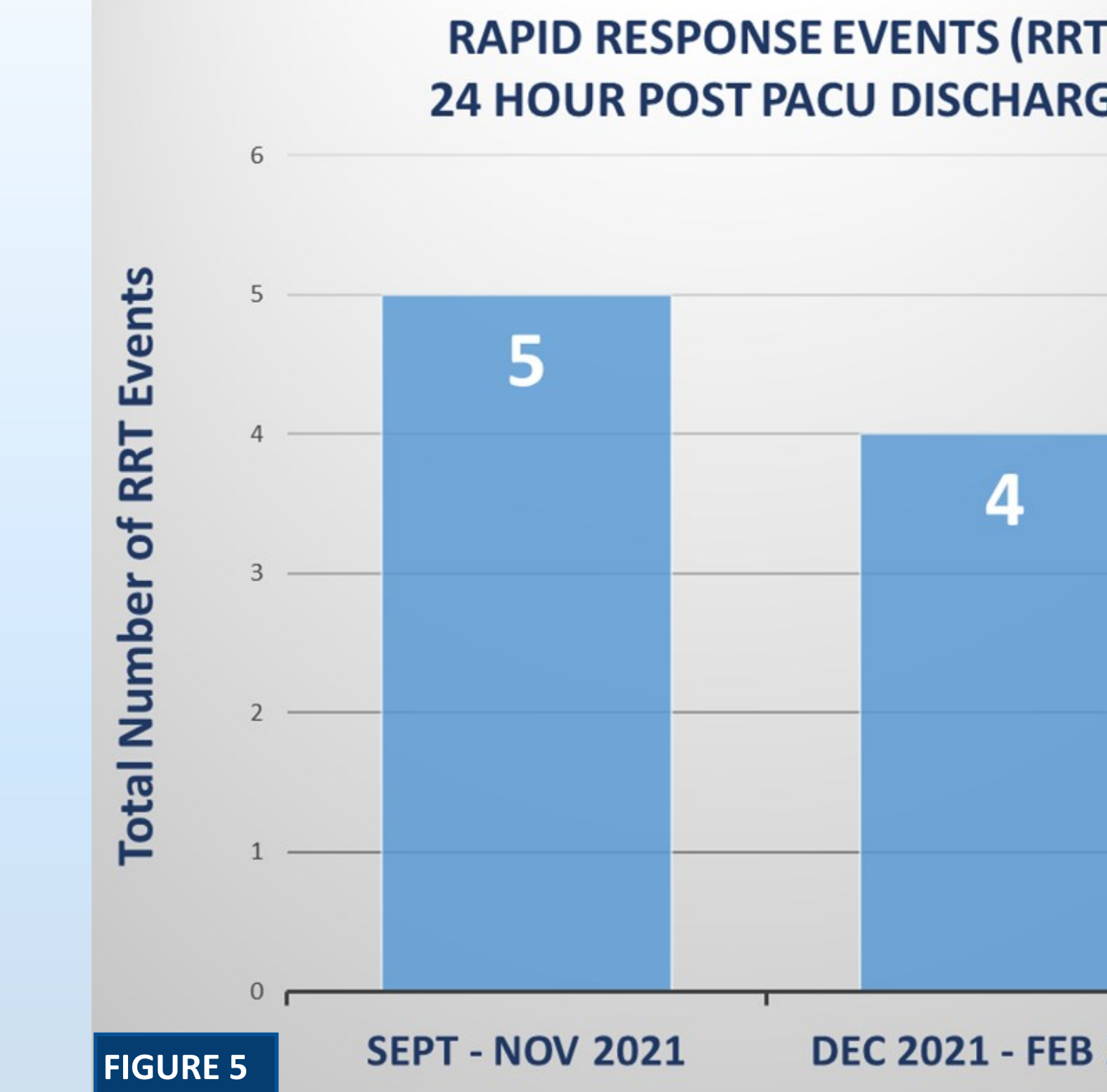


AIM 2

Total RRT events decreased by **20%** (**Figure 5**)

AIM 3

Oversedation and respiratory distress RRTs decreased by **15%** (**Figure 6**)



NURSING IMPLICATIONS

- ◆ Preliminary post intervention data supports existing evidence that a majority of surgical patients have undiagnosed OSA.
- ◆ Therefore, early identification of undiagnosed OSA can help nurses determine appropriate pre-and post-operative nursing interventions for better patient outcomes in surgical patients.
- ◆ Standardizes nursing practice for pre-surgical assessment and post-surgical care for this patient population across the health organization.

PROJECT SUSTAINABILITY

- ◆ Organization-wide support for proactive identification and monitoring of high risk OSA patients.
- ◆ Alternative system-wide respiratory therapy led OSA project, implemented in March 2022, addresses post-operative intervention and monitoring.

