



# A Lean Approach to Weight Loss Operations

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## Introduction

In November of 2017, Vanderbilt University Medical Center's Surgical Weight Loss Clinic held a Lean Event. The goal of this event was simple; clinic leadership wanted to reduce waste in the clinic's processes that led to poor patient satisfaction, experience, and volume. Over the course of three and a half days, team members including front-line associates, clinical providers, administrators and support staff met to review the current state clinic flow. The result of this event was a Vanderbilt record breaking one hundred and six identified problems and sixty-eight process improvement specific solutions to implement over the course of the next twelve months.

## METHODS

### Patient Access

Visits to the clinic were measured by analyzing NEC GNAV Pro Link data for Patient Access to the Weight Loss Center pre and post Lean Event. The phone agent data represented is broken into three important categories; Agent Average Speed to Answer (how quickly the team answers a new phone call), Abandonment Rate (when a patient hangs up a call without answer after hearing the automated phone tree options) and Total Number of Agent Outbound Calls. The data displayed in the respective graphs cover the timeline of August 1, 2017 to August 1, 2018. Post Lean Event data is represented after the November Lean Event happened on November 1, 2017. All data was a direct report pull from NEC GNAV Pro Link by selecting the first and last day of the month for each respective month.

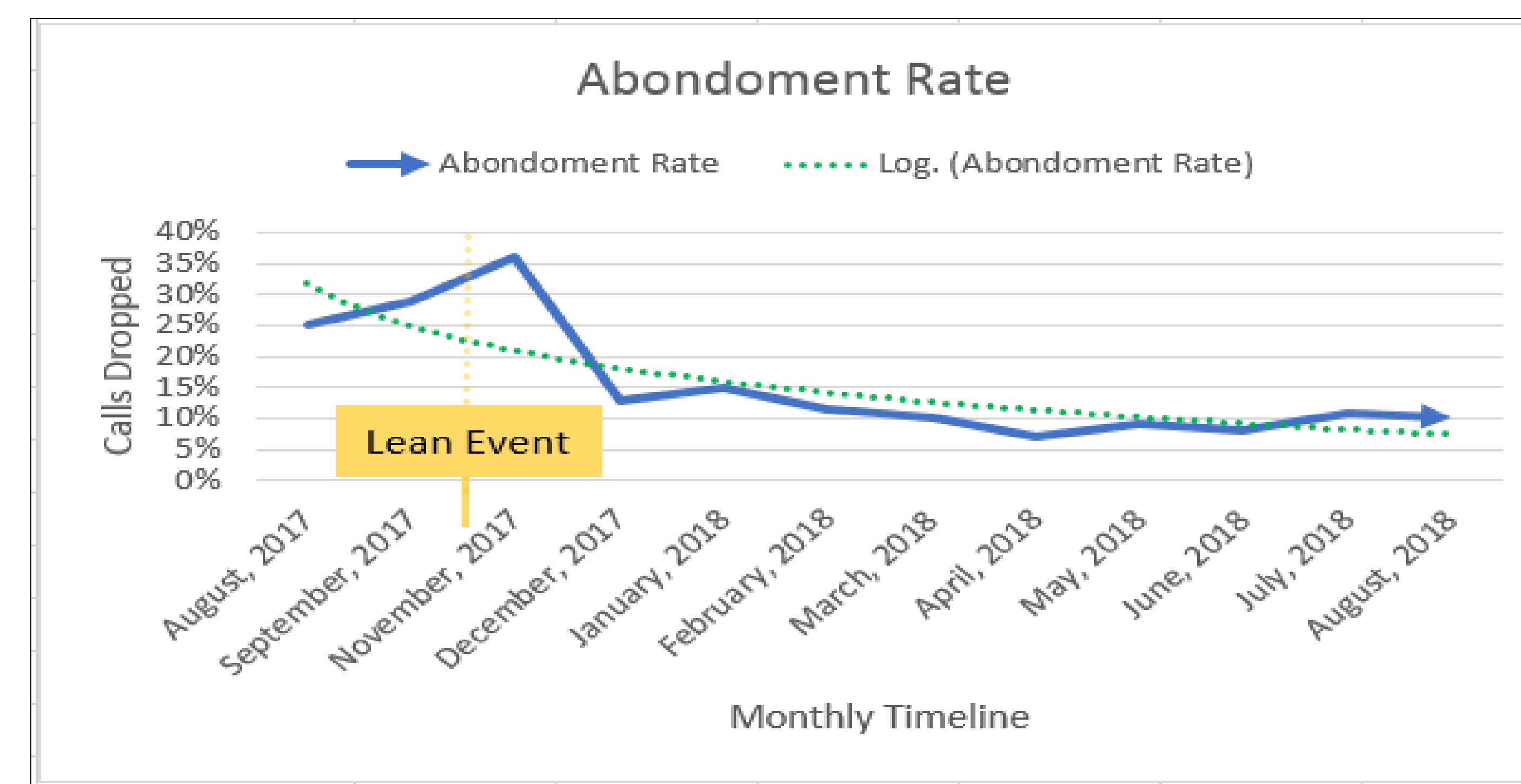
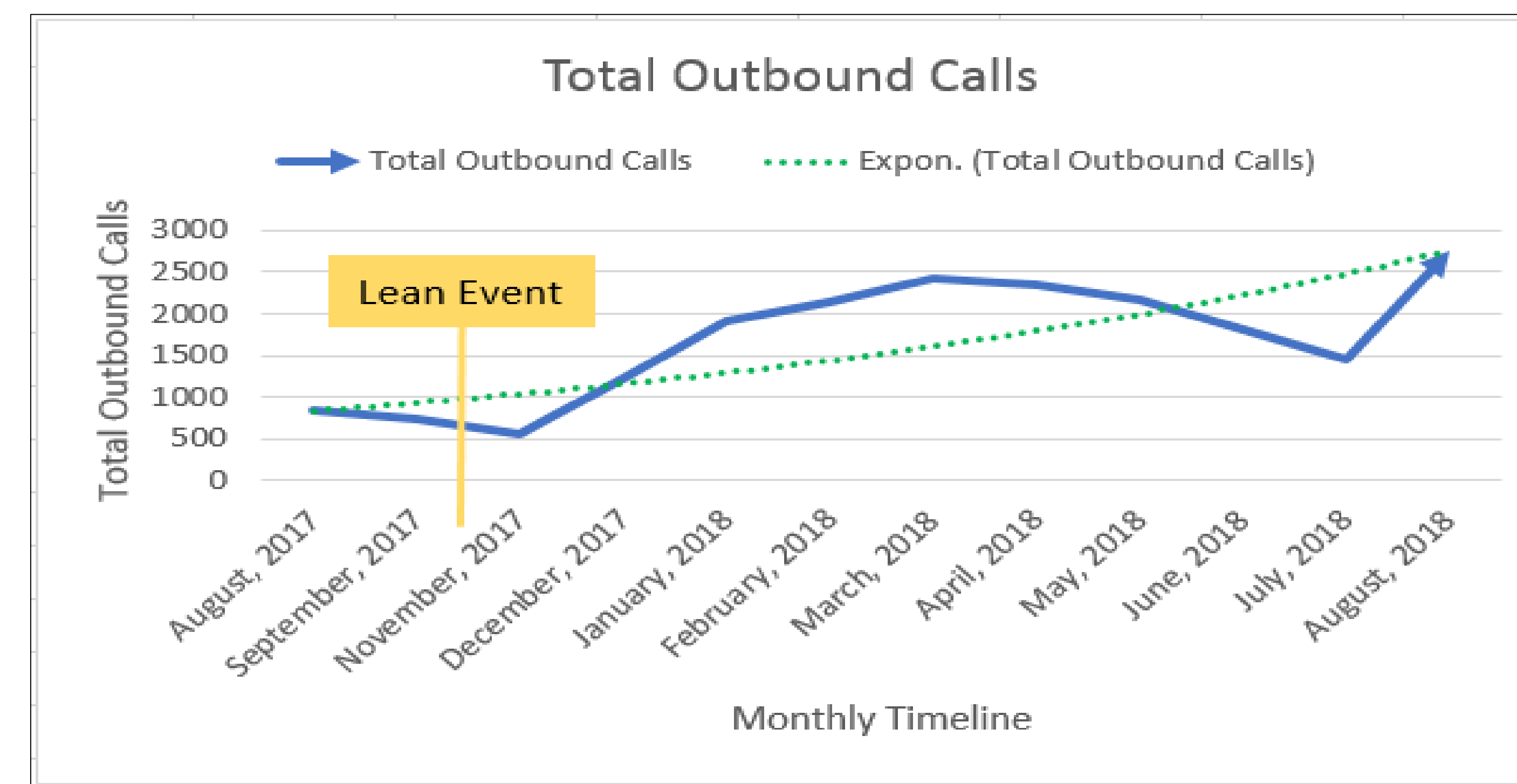
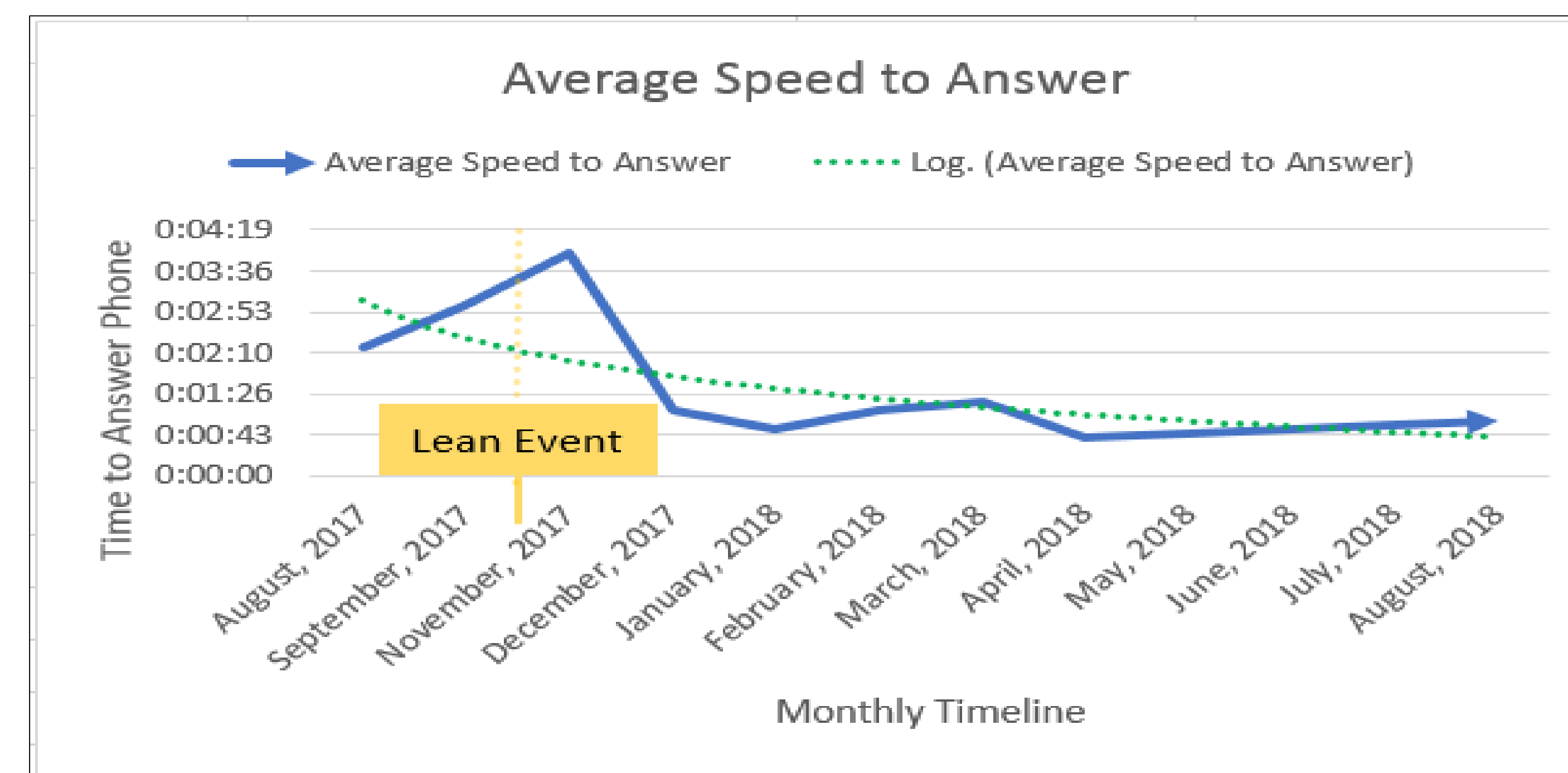
### Visit Volumes

Visits to the clinic were measured by analyzing Epic data for completed visits to the Weight Loss Center pre and post Lean Event. The visits are represented in the graph as falling between 8/1/2017 to 8/1/2018. The post Lean Event data is represented after the November Lean Event that happened on November 1, 2017. Looking at the visit data after the Lean Event, you can see a rise in overall visit volume compared to pre-Lean Event visits. All data was a direct report pull from our Epic EMR system.

### Patient Satisfaction

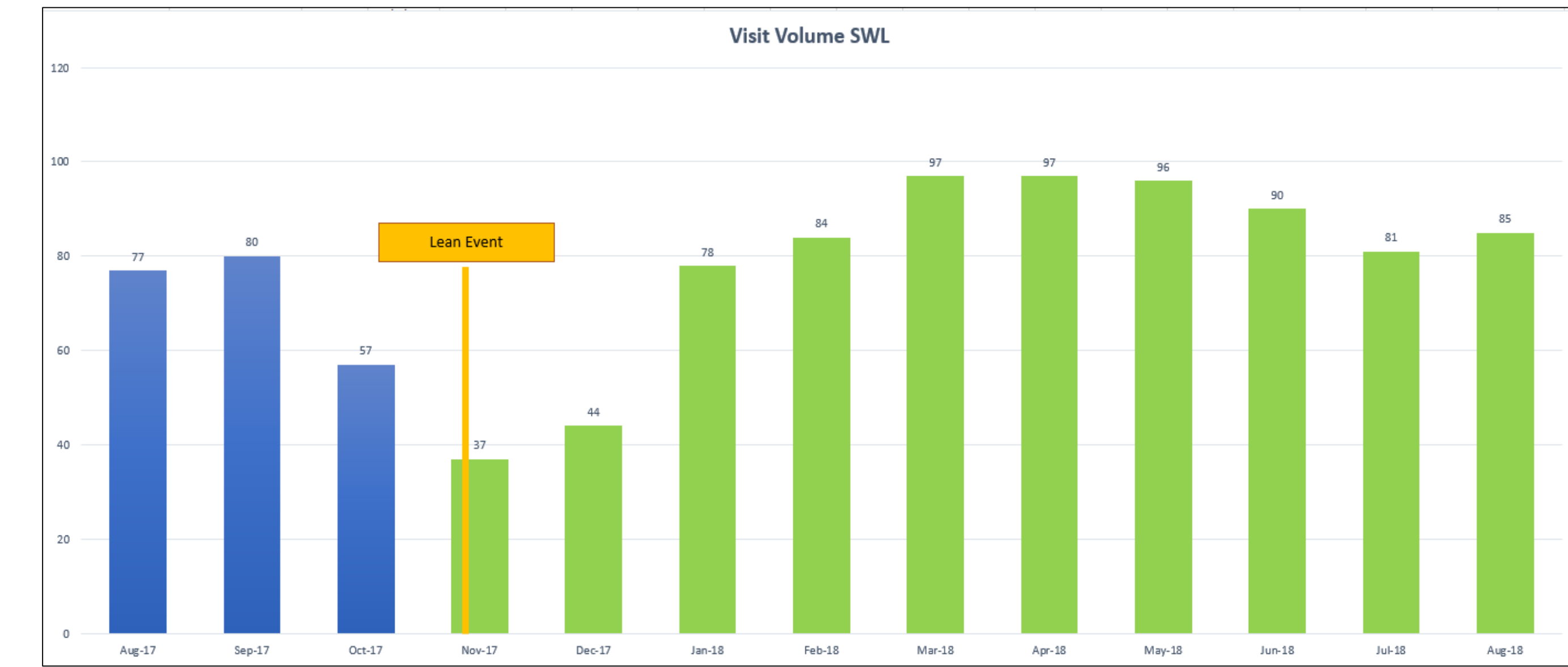
Patient Satisfaction was measured by analyzing Press Ganey data for average top box scores pre and post Lean Event. Pre Lean Event data represents surveys from visit dates falling between September 1, 2017 and November 30, 2017. Post Lean Event data represents surveys from visit dates falling between November 1, 2017 and September 30, 2018. To understand the impact the Lean Event had on patient satisfaction, we analyzed the following overall standards: Access, Moving Through Your Visit, Nurse/Assistant, Care Provider, Personal Issues, and Overall Assessment.

## Impact



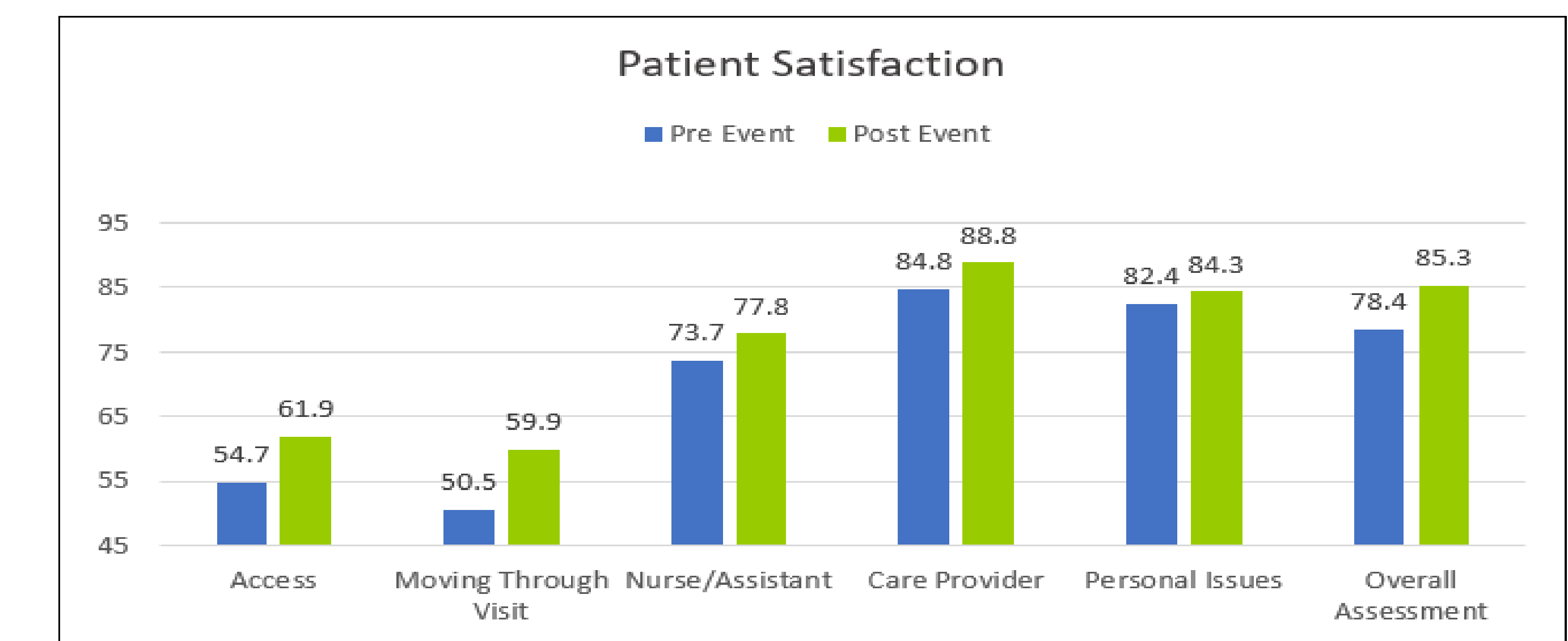
### Patient Access

The overall access for patients in the Weight Loss Center improved dramatically following the Lean Event. The data displays marked increases in outcomes in all three measured areas of Average Speed to Answer (ASA), Abandonment Rate (ABN) and Total Outbound Calls (TOC). Improvements in ASA from pre-Lean to post-Lean can be averaged to 00:03:03 (three minutes and three seconds) pre-Lean Event compared to 00:00:54 (zero minutes and 54 seconds) post-Lean. Improvements in ABN from pre-Lean to post-Lean can be averaged to 30% pre-Lean compared to 9% post-Lean. Improvements in TOC from pre-Lean to post-Lean can be averaged to 2119 pre-Lean compared to 5999 post-Lean. These positive metrics as a direct result of the Lean Event have directly correlated to an increase number of new patient volume



### Visit Volumes

The overall visits for the clinic pre and post Lean Event shows the impact after implementation of process improvement that the Lean Event identified. Visits have shown a steady increase since the event.



### Patient Satisfaction

The Moving Through Your Visit standard was impacted the most, as the top box score increased 9.4 points from pre to post event. This is primarily attributed to the new patient consult class we implemented. Previously, patients spent an upwards of four hours at their initial consult class, which involved individual meetings with the nurse, dietician, and surgeon, and pre-certification specialist. Through implementing online educational videos, staggering patient arrival times, and streamlining material, we have been able to cut this time in clinic down to one hour. Additionally, Clinic access has been significantly increased and rose 7.1 points in top box. In order to increase Access and throughput in the clinic, we redefined our phone tree options, added in a wait queue so patients could know where they are in line, and restructured our front desk staff to enable a more efficient approach to simultaneously checking in patients and answering calls.

## CONCLUSIONS

Nearly a year from the original Lean event date, tangible positive impacts have been realized across all reported/measured areas of patient access, volumes and satisfaction. The VUMC Surgical Weight Loss Clinic has experienced increased new patient and surgical volumes, higher patient satisfaction scores, and improved patient access. As a part of the work surrounding the Lean event and process improvement exercise, more than twenty standard operating procedures were created leading to a cultural shift, higher team engagement and overall improved morale. In review, it is the presenters' conclusion that the Lean event was an immensely successful method for positively impacting the clinical and administrative workspace. Furthermore, increased positive outcomes could be recognized throughout the enterprise and other organizations by following the methodology highlighted in this report.

- 94% Improvement in Patient Access
- 55% Increase in Visit Volume
- 9% Increase in Patient Satisfaction