

Enhancing Multidisciplinary Head and Neck Tumor Board using Performance Improvement Methodology

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Introduction

Performance improvement (PI) methodology has been used with increasing frequency to enhance reliability and decrease human-related errors.

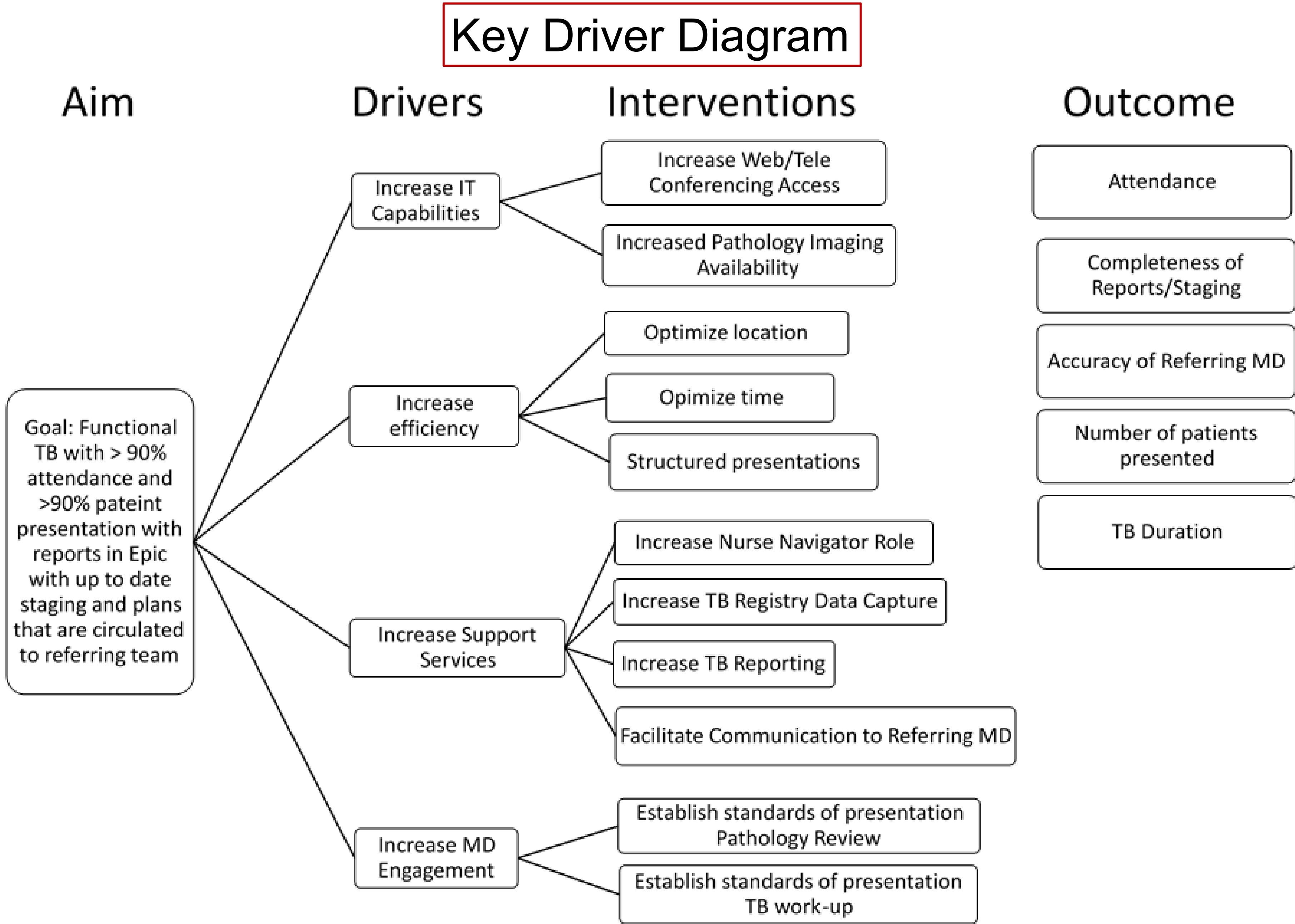
Multidisciplinary tumor boards (MTB) have become a critical component of comprehensive cancer care, but challenges related to attendance, timing of patient case presentations and accurate staging documentation still exist.

Objective

To use performance improvement methodology to optimize several key components that are integral to an impactful MTB.

Methods

Key driver diagram was used to develop standard operating procedure (SOP). Multiple Plan-Do-Study-Act cycles were used for implementation to improve primary outcome measures (proportion of cancer cases presented, attendance, recommendation for clinical trials and consistency consensus staging). A review of all cancer patients presented during the time periods of 4/2019- 6/2019 (pre-implementation of SOP) and 9/2019-11/2019 (post-implementation). Paired student t-test and Pearson chi-squared tests of significance were applied to evaluate if significant differences were observed.



Results

Overall, there were 332 number of unique patient presentations at our head and neck cancer MTB from April 2019 to November 2019 (174 cases presented pre-implementation and 158 cases post-implementation).

Prior to intervention, 53% (92/174) of cancer patients were captured through MTB, while 50% (79/158) were presented (p=0.68).

The average attendance of all disciplines combined was 10.6 (STD 2.12) persons per meeting pre-implementation vs. 16.2 (STD 3.63) post-implementation (p=0.03).

Recommendation for clinical trials was 16% (28/174) before intervention and 20% (31/158) after implementation (p=0.48). Accurate consensus MTB staging for patients rose from 56% (90/162) to 74% (109/147) (p<0.01).

Conclusions

The utilization of validated PI methods allowed for impactful changes observed in a short period of time for our head and neck cancer tumor board structure and ultimately resulted in improvements in attendance and accurately documented consensus staging.