

The Effects of Formalized Team Training on Key Patient Outcomes in an Otolaryngology- Head and Neck Surgery Residency

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BACKGROUND

- Errors in medical care have consistently been linked to communication failures among team members. TeamSTEPPS® is a team training system which was co-developed by the Department of Defense and the Agency for Healthcare Research and Quality (AHRQ) which provides a full curriculum of ways to improve patient safety through four main skills: communication, mutual support, leadership and situation monitoring¹.
- Training in these skills through TeamSTEPPS® has been shown to improve patient safety and outcomes by reducing destructive barriers within the healthcare field such as poor communication, conflicts, ambiguous responsibilities of each team member, hierarchical constraints and work overload. In addition to providing a full curriculum to create efficient, highly functioning teams, TeamSTEPPS® provides support for implementation into one's own healthcare system. Numerous studies have shown positive effects of team training with TeamSTEPPS®.
- We provide the various steps taken by our department to proactively improve patient care so other institutions can use as this as a model for implementation of TeamSTEPPS®.

METHODS

- A prospective study was conducted starting in February 2014.
- TeamSTEPPS® program was implemented in an Otolaryngology department in November of 2014.
- Otolaryngology residents, physician extenders, and the otolaryngology inpatient multidisciplinary team comprised of Speech pathology, nurses, nutrition were trained in TeamSTEPPS® from November 2014- January 2015.
- Additionally, the sign-out format was modified to reflected TeamSTEPPS® principles and tools.
- Differences in the return to operating room rate, hospital length of stay, and unplanned readmission rate were examined between the pre- and post TeamSTEPPS® implementation intervals.

CAUSE ANALYSIS OF POTENTIAL BARRIERS

Membership

- Lack of established multidisciplinary team
- Limited communication between oto service and ancillary teams

Process

- Lack of consistent set time for group meetings
- No established protocol for process improvement
- Limited oto resident presence at meetings due to clinical responsibility and OR cases

Materials/ Training

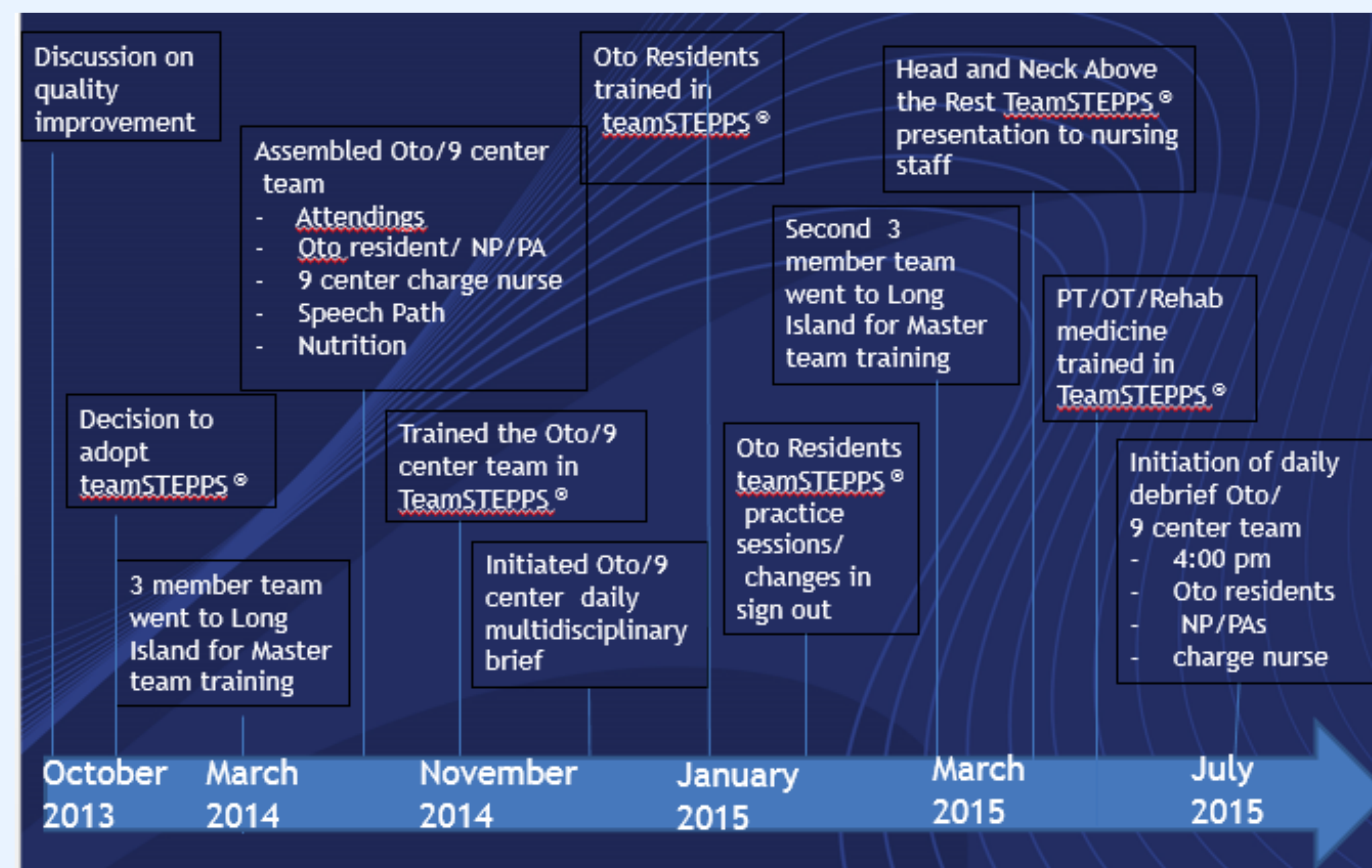
- Lack of formalized training on team work and communication skills for residents, nurses and multidisciplinary team
- Lack of a structured sign-out format

Environment

- Lack of meeting space
- Inconsistent meeting location
- Interruptions
 - Pagers going off
 - Ongoing clinical responsibilities

Miscommunication and potential medical errors

PROPOSED INTERVENTION: TeamSTEPPS® Training and Implementation



RESULTS

- Following implementation of team training with TeamSTEPPS®, there was a decrease in the unplanned readmission rate (0.11 versus 0.19 readmissions/day).
- A decrease was seen in average length of hospital stay from 3.58 to 3.52 as well as return to operating room rates from 2.0% to 1.4%, although these differences were not found to be significant (p=0.562 and p=0.084, respectively).

Outcome	Pre	Post	OR	CI	P-Value
Unplanned Readmission Rate	0.19	0.11			
Length of Stay	3.58	3.52	1.03	(0.94-1.13)	0.562
Return to OR rate	2.0%	1.4%	1.46	(0.95-2.23)	0.084

Table 1: Pre-training versus Post-training Patient Outcomes
OR: operating room, CI: Confidence interval

CONCLUSIONS

- Making changes within a healthcare system are challenging and require department wide support.
- Implementation of TeamSTEPPS® with formalized team training promoted patient safety by decreasing the unplanned readmission rate.
- Despite not reaching statistical significance for reductions in unplanned return to the operating room and length of hospital stay, both of these showed a decreased trend in the post training group.
- This project serves to outline the various steps taken by our department to proactively improve patient care that other programs and large institutions can use as a model for implementation of team training.
- Future directions of this research include examination of patient satisfaction scores as well as teamwork and safety climate survey in the pre versus post training groups.

REFERENCES

1. TeamSTEPPS 2.0 Core Curriculum. Agency for Healthcare and Quality: <http://teamstepps.ahrq.gov/> accessed: 7/2015