



Tools for growing and measuring a safety culture in Radiation Oncology

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Introduction

The purpose of this study is to assess how quality and safety programs (QSP) can utilize patient safety tools such as reporting, situation-background-assessment-recommendation (SBAR) and Kamishibai cards (K-cards) to create a safety culture in a large academic radiation oncology (RO) practice.

Aim

To modify known patient safety tools such as the Serious Safety Event Rate (SSER), SBAR and K-cards to fit a radiation oncology practice where there are significant events that impact patients but rarely rise to the level of serious harm (death, severe permanent harm, moderate permanent harm, or significant temporary harm as defined by Healthcare Performance Improvement (HPI)). The goal in repurposing these tools is to improve and measure our safety culture.

Method

In 2015 and 2018, our large, single institution radiation oncology practice, which today is comprised of about 1000 employees assessed the safety culture by utilizing the Agency for Healthcare Research and Quality (AHRQ) Culture of Safety survey. Based off 2015 survey results and beginning in July 2016, a new electronic incident learning system (ILS) was implemented for reporting safety concerns. As part of this ILS, individuals can report anonymously and they receive direct feedback when the report is closed.

In May 2018, we modified the SBAR tool, often used for handoffs, as a way to communicating significant event that occur within our practice. This notification goes out to all employees usually within the first 24 to 48 hours of event notification to allow for transparency and any immediate risk. In addition, in 2018, as part of our effort to reduce override fatigue for therapists, K-cards were utilized to improve compliance and understanding of best practices.

Effectiveness of our QSP efforts is monitored via a modification of SSER which we call the significant event rate (SER). SER uses a rolling 12-month average of significant events per 10,000 fractions. Based on our ILS leveling, anything leveled “1” (state reportable) or “2” (dose variance >5% or <20%, shows risk of serious harm to patient, etc.), is considered a significant event.

Results

The 2015 AHRQ survey serves as our baseline data for most categories; however, some new categories were added after 2015. After implementation of a new ILS, training for leadership, and a restructured QSP, the 2018 survey showed improvement in all areas except teamwork across units and handoffs. The three most improved categories were error reporting frequency, communication openness, and feedback about error. Our 2020 results show that our 2018 implementation of the SBAR tool, K-cards and other division safety initiatives allowed for an increase in all categories except a 1% drop in most employees report events and perceptions of safety. The largest gains from 2018 to 2020 were seen in communication openness, feedback about error and employee safety. Results of these efforts are also reflected by our decreasing SER, which peaked in December 2018 at 0.64 and as of May 2020 is at 0.37.

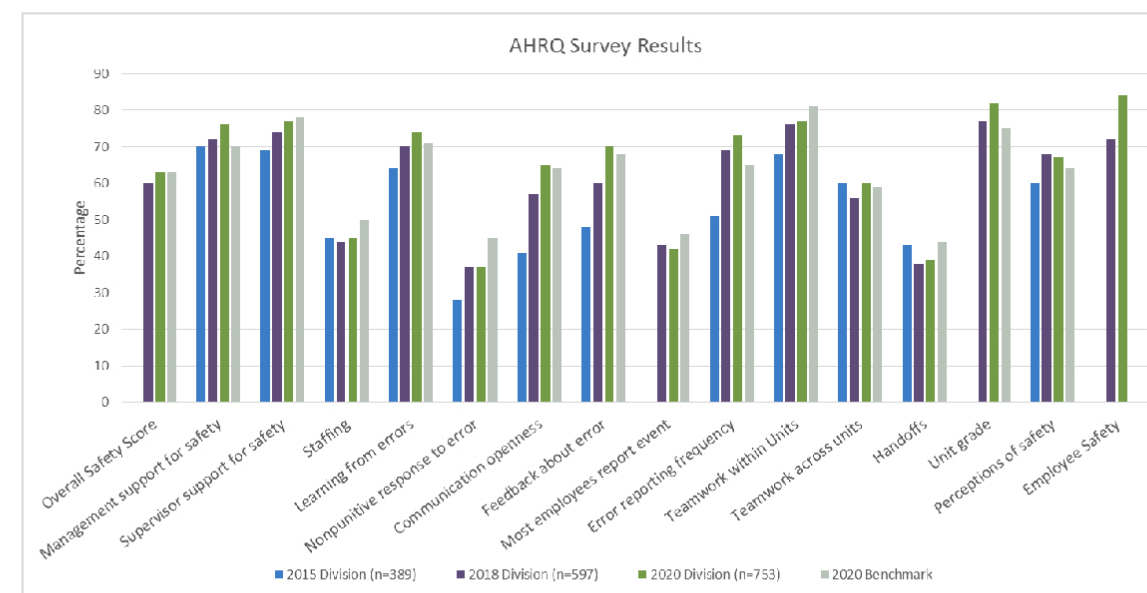


Fig. 1 The AHRQ survey results for our radiation oncology practice from 2015, 2018, and 2020 all compared to the 2020 benchmark.

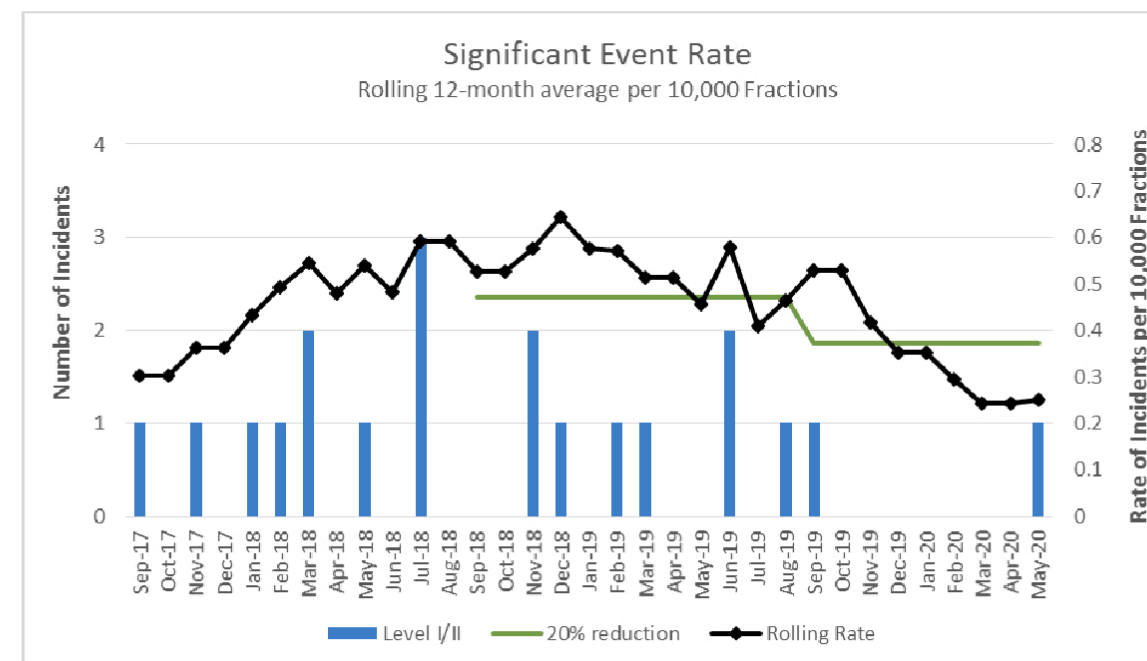


Fig. 2 As our safety culture improved, our SER increased at first and then as error prevention tools were utilized and open communication about lessons learned from our events, the SER decreased. Of note, there were about 700 safety reports in our ILS in 2016 and in 2019 it was up to about 1300.

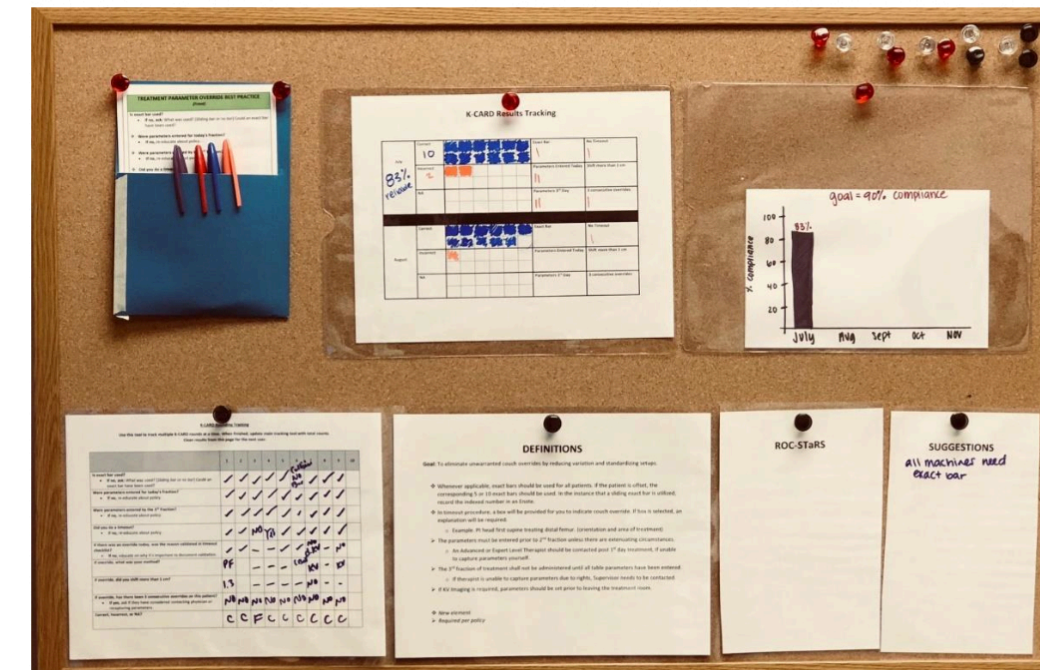


Fig. 3 The K-cards provided non-punitive training to therapists as well as recognized a job well done.

Conclusions

Based on Culture of Safety surveys and SER, the tools utilized have been effective at growing the safety culture and reducing errors within a large academic RO practice.

References

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