RESPECT – Radiology Employees Striving for Productive and Effective Communication
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PURPOSE
Effective teamwork is predicated on good communication between team members. Recently, the technology in our department improved in increasing number of negative interactions between radiologists and technologists. A baseline survey identified that only 45% of technologists would describe their interactions with radiologists as very good or excellent. The purpose of this improvement work was to change the culture in our department, with the specific goal of increasing the percentage of technologists who describe their interactions with radiologists as very good or excellent from 45% to 80% by the end of 2019.

METHODS
This project took place in a large academic radiology department of a tertiary care children’s hospital between June 2016 and the present. The radiology department consists of 26 faculty radiologists, 10 pediatric radiology fellows, and 165 technologists. Imaging is performed across the region in 10 different locations. Radiologists work on-call 24 hours, 7 days a week. Technologists communicate on telephone at offsite locations and in person and via telephone when radiologists are on site.

A multi-disciplinary improvement team was created to improve interactions. The team included radiologists and technologists from all divisions in the department as well as child life specialists and nursing assistants. Based on the comments obtained from the initial and subsequent surveys, multiple recommendations were created. Two subgroups were then formed to address each of the issues. Each subgroup worked on identifying the root cause of negative interactions, and then initiated a series of interventions to attempt to reduce the frequency of negative interactions and increase the frequency of positive interactions. The detailed interventions for each subgroup are presented in Table 1. Interventions were tracked using a self-instructional change, and, if deemed to be effective, were quickly implemented throughout the department. Interventions were either modified or abandoned if specific intervention was not implemented. Thus, any improvement was considered to be the result of a series of interventions.

RESULTS
Over the course of this improvement project, multiple surveys were sent to the 195 departmental staff. On average, there were 51 respondents per survey, ranging 48-72, for a mean response rate of 26%. The percentage of technologists who describe their interactions with radiologists as very good or excellent increased from 45% to 90% by August 2019. This improvement occurred gradually through the series of interventions. Through the course of the project we have received 663 free-text comments from the surveys of these, 450 comments (68%) have been positive.

Individual radiologists were offered the opportunity to review comments via a one-on-one meeting with one of the project leaders, a Vice Chief in the Radiology Department. During the review session, the project leader shared the themes of comments with the radiologist but withheld identification of the radiologist. During the discussion, the project leader offered suggestions on ways to improve interactions. Radiologists identified as outliers with regard to the number of negative comments were coached on that milestone during the year and the following annual review process.

Through this improvement work, we identified two themes which we believe lead to negative interactions. First, a power gradient exists between radiologists and front-line staff. Second, as workloads have increased, and the department has become distributed over multiple physical locations, there are fewer informal interactions between radiologists and technologists. The combination of a buyer-seller relationship and front-line staff knowing each other on a personal level. Because of this, small interpersonal shortcomings, such as tone of voice, lack of eye contact, an inability to identify oneself (technologist) and name and title at assessing the phone from greater importance and are a common cause of negative interactions.

While we achieved our goal in August 2019, we do not believe that our work is complete. We aim to continue to improve interactions so that very good and excellent interactions are routinely part of our culture. During the second year of improvement, we plan to focus on inter-team communications and creating a culture of feedback.

CONCLUSION
Quality improvement methodology can be used to improve culture. Through a series of interventions, we have been able to improve the percentage of technologists who describe their interactions with radiologists as very good or excellent from 45% to 90%.

Figure 1. Bar chart showing the frequency of positive and negative comments during the project. Each color of the bar represents data from an individual survey.

Figure 2. Bar chart showing the frequency of positive interactions by radiologist. Each bar represents the number of times a specific radiologist was identified as a positive comment by a technologist. The different colors within each bar represent the survey where the positive comment occurred.

Figure 3. Bar chart showing the percentage of very good and excellent interactions between technologists and radiologists.

Figure 4. Line chart showing the percentage of very good and excellent interactions between technologists and radiologists at time.