

Purpose

A significant challenge faced by large radiography departments is that of translating a recognized need for improvement into actual improvement. Traditionally, the department manager is responsible for overseeing the quality of the radiographs. This is just one of many of his or her responsibilities, which also include payroll, scheduling, budgeting, facility and equipment management, and personnel oversight. Our radiography department consists of 78 technologists stationed at 8 different locations overseen by 3 managers.

Usually, when an area of suboptimal performance is identified, this has been communicated to the radiography manager, who has communicated the performance deficit to the technologists via meetings, email, and signage.

We found the effectiveness of this method to be highly limited for a number of reasons. Foremost among them was our hypothesis that performance improvement in radiography is optimally achieved through coaching and deliberate practice, analogous to other skills such as athletics, music, or mathematics.

The purpose of this project was to develop a coaching model that could rapidly and sustainably achieve performance improvement in a large radiology department.

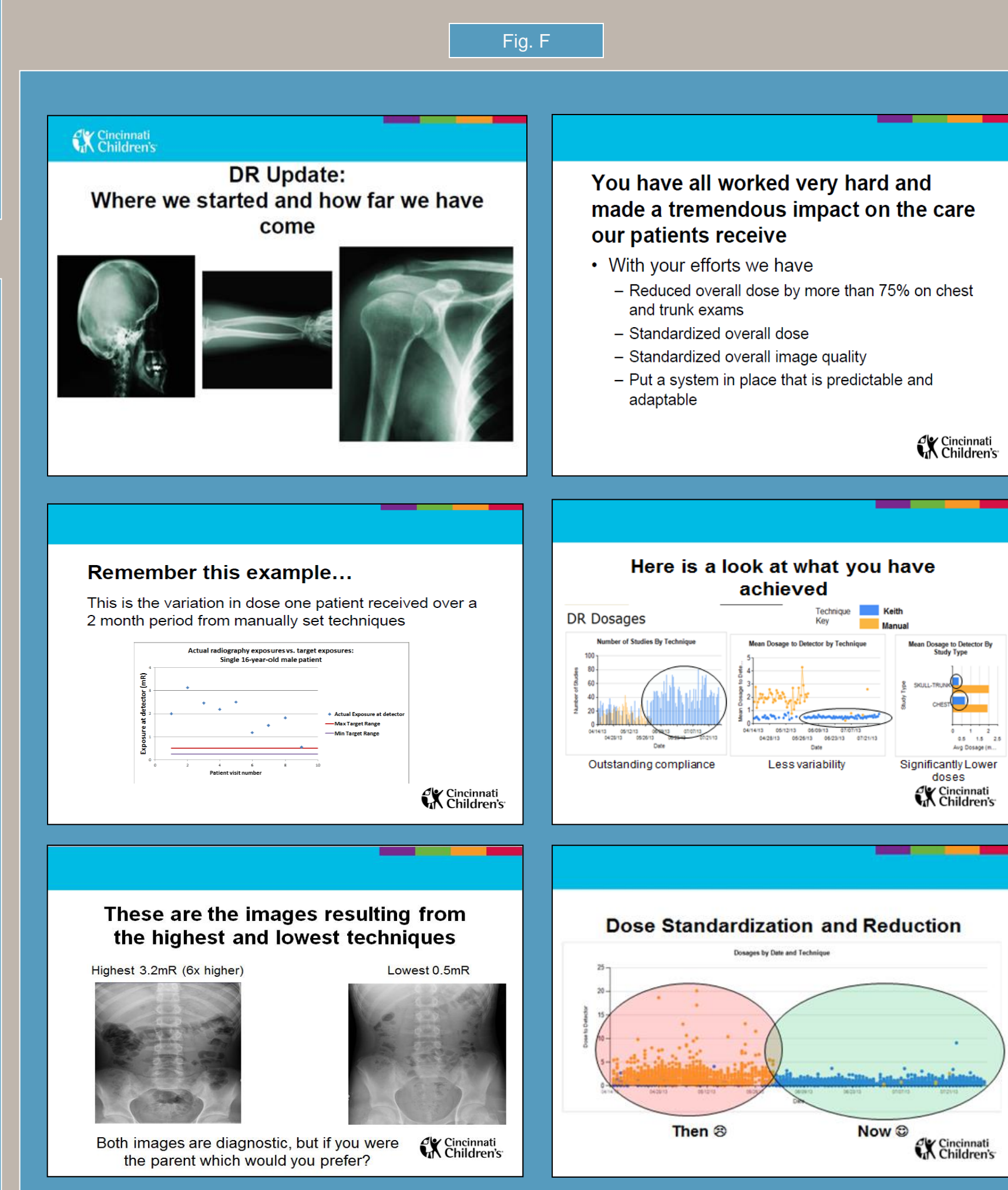
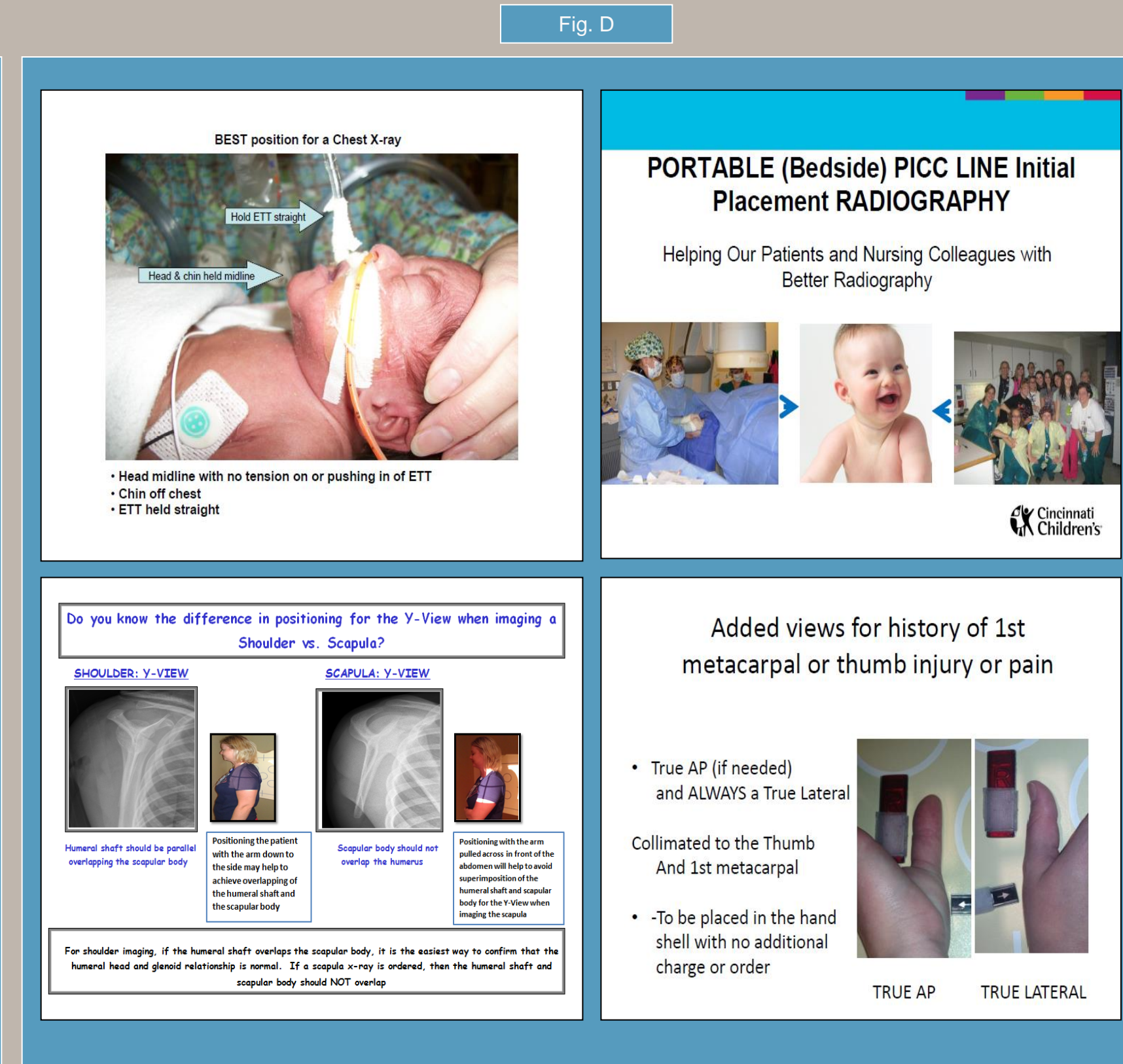
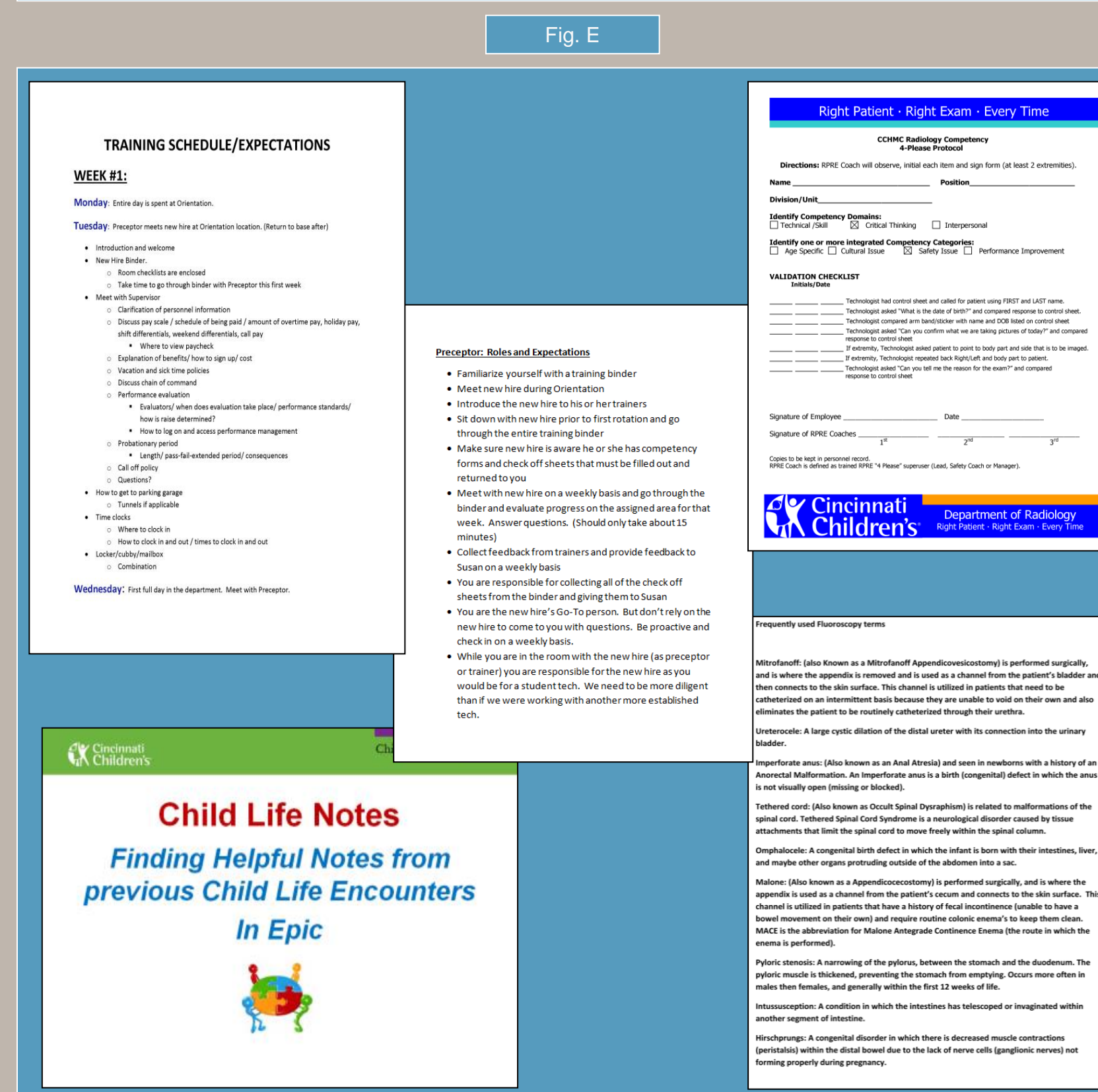
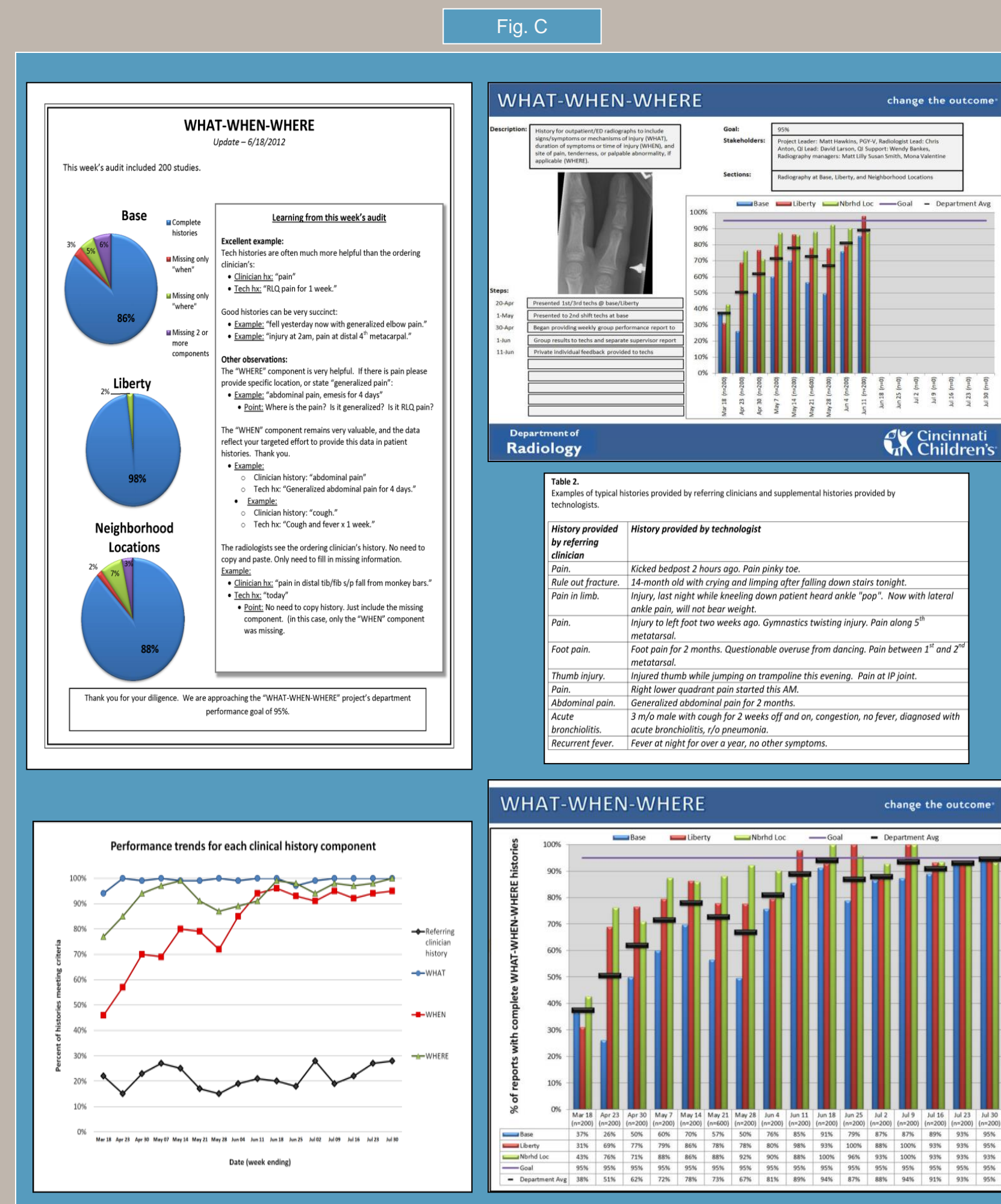
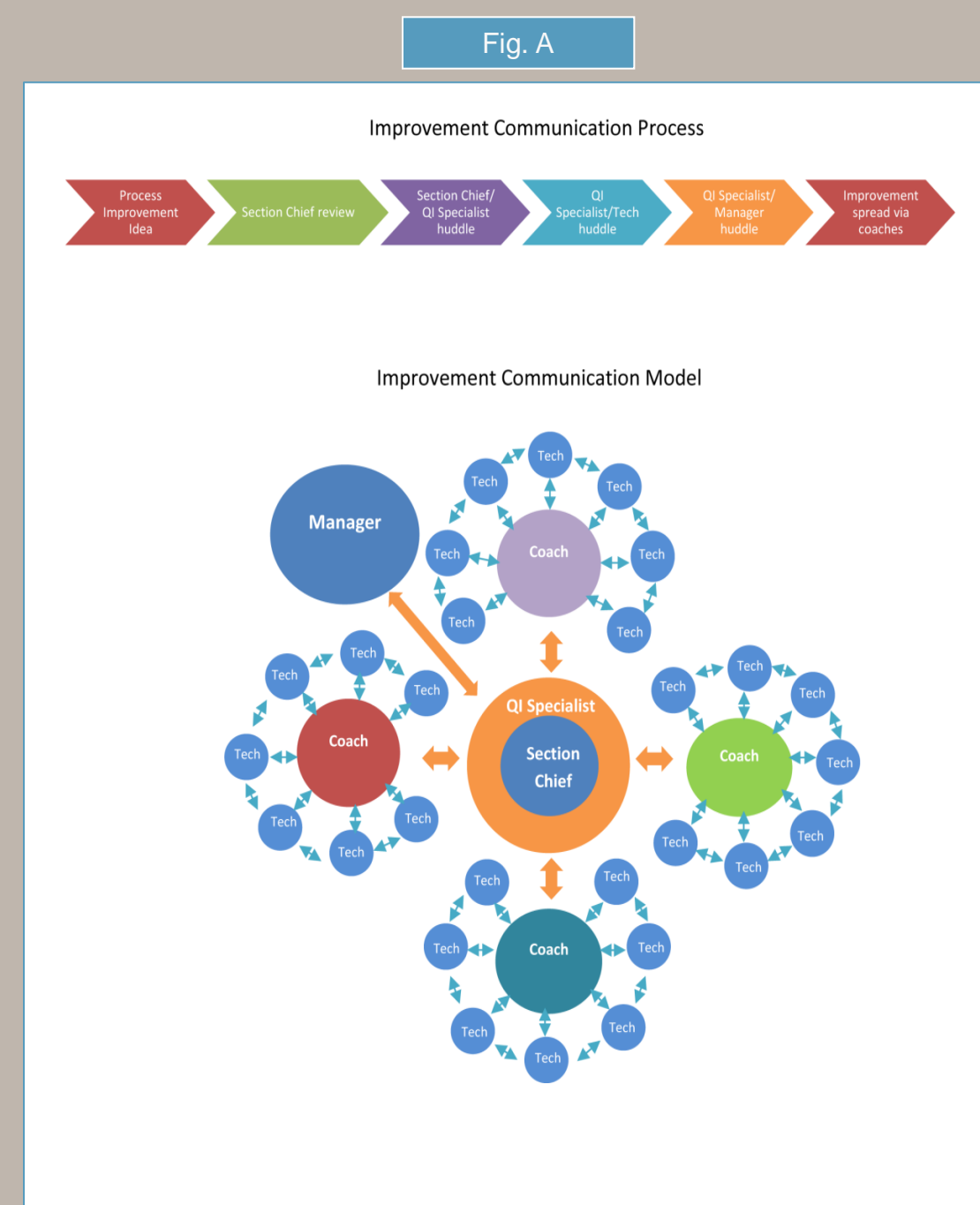
Methods

We hired a front line technologist to serve as Radiography Quality Improvement (QI) Specialist, targeting an individual who was well respected and trusted by the staff, had excellent communication and organizational skills, and a passion for process improvement. The QI specialist recruited several front-line technologists to serve as coaches to be available on all shifts and locations to provide one-to-one coaching to technologists, discussing issues with individual technologists, providing pointers and feedback, and observing that actual technologist performance matched desired performance.

The Radiography QI Specialist was given 60% of her time to work with the Radiology Division Chief and the department manager to translate a recognized need for improvement into actual improvement according to the following process (Fig. A): 1) an opportunity for improvement is communicated to the Radiography QI Specialist, 2) the QI Specialist discusses the issue with the division chief and department manager, 3) the QI specialist discusses the changes with the coaches at a weekly meeting and a plan is established for communicating changes to all technologists, 4) results are observed and reported back to the QI specialist and division chief. The QI specialist continued to work clinically as a frontline radiography technologist 40% of the time.

The Radiography QI Specialist utilized a project management software application, Trello (Fog Creek Software, New York, NY) (Fig B.), to make assignments, track progress, and establish accountability in ensuring that all technologists were properly trained.

Trello played a key role in no tech left behind, ensuring each technologist was updated personally and checked off for each specific protocol update.



Results

The Radiography QI Specialist was hired 12 months ago. Since beginning in the position, she has recruited 12 radiography technologists to serve as coaches. Coaches began their service with an introductory session, discussing the responsibilities of their new roles.

The QI Specialist has held huddles with the coaches on a weekly basis to discuss quality issues and initiatives needing attention in the department. She has utilized Trello to make assignments, track progress, and establish accountability in ensuring that all technologists are properly trained.

The coaching model has been used to implement over 25 quality improvement initiatives, including a patient history project (Fig C.), improvement with technique, shielding, and positioning issues (Fig. D.), development of a new employee orientation process (Fig E.), and a major initiative to standardize digital and computed radiography techniques and doses (Fig F.).

The coaches have anecdotally reported satisfaction with their involvement in the improvement process. The technologists have anecdotally reported improved clarity and reliability of communications, increased ability to contribute to the decisions in the department, and increased consistency in department policies and techniques. A survey of the staff revealed a score of 4.07 on a 5 point likert scale (5 being the highest) in regards to an improvement in clarity and reliability of communication in the department.

Conclusion

By using a coaching model for improvement, we have successfully executed several improvement projects in the department, enabling more rapid and accurate dissemination of information and increased technologist satisfaction. We have spread the coaching model to MRI and hope to utilize this approach in all divisions within the next few years. In addition, other departments throughout the hospital have asked for our assistance in developing a similar model in their areas.

Legend

- Figure A: Coaching Model Diagram
- Figure B: Trello Screenshot
- Figure C: What When Where
- Figure D: Positioning Education
- Figure E: Technologist Orientation
- Figure F: DR Dose Standardization and Reduction

Reference:

Consistent availability of appropriate clinical history associated with radiographs in a large pediatric radiology department

Hawkins CM, Larson DB, Bankes W, Leach A, Zeno M, Pryor R, Anton CG