



FLORIDA HOSPITAL CANCER INSTITUTE

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Quality Improvement: Outcomes Report

Regionalization of Physics and Dosimetry; A Review of the PRC

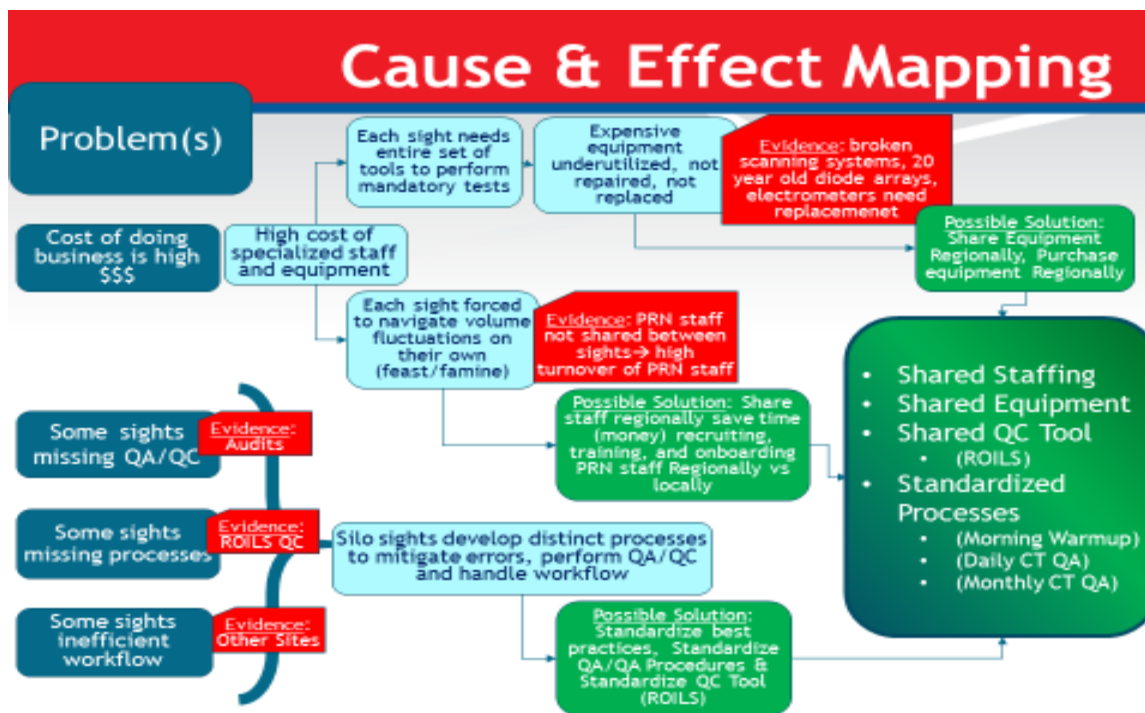
The desire to regionalize Physics and Dosimetry stemmed from the understanding that doing so offered the potential to positively impact each site's efficiency, quality, and safety. Implementing such a performance improvement (PI) project required a clear understanding of how to best proceed with change initiatives that would be identified. Best practices for this process were unabashedly borrowed from a publication of the Advisory Board.

GOALS

1. To gain efficiencies through staff and resource sharing
2. To identify and adopt best practices and improve quality at all sites
3. To improve safety by rolling out a root cause analysis tool called the Radiation Oncology Incident Learning System (ROILS) to allow failing processes to be identified and improved.

Goal 1 Staff efficiency and resource sharing.

This necessitated that we make the deliverables Dosimetry and Physics owned at each site as similar as possible. We would then be able to gain efficiencies through staff sharing. A multidisciplinary team was formed to gather information on how Radiation Oncologists, Therapists, Physicists and Dosimetrists all worked together at each site to move a patient from CT simulation to treatment. The team purposely consisted of a physician champion and representatives from each site. A questionnaire was issued and the processes at each site were listed and analyzed. Through this exercise, a number of significant differences were identified that impacted Dosimetry and Physics tasks, as well as, communication pathways from site to site. Collaboratively, we were able to take the very best practices from each site, create a working process that could be repeated and implement changes at each site through staff education and 'go-live' dates.



Demonstrate Increased Efficiency through staff & resource sharing

- 2 staff on-boarded in intentionally Regionalized fashion:
- Equipment sharing between locations

Goal 2: Implementing best practices and improving overall quality.

The results from the team questionnaire helped us identify processes where older quality measures, which were either no longer valuable or needed due to improved technologies, could be overhauled. For these changes, positional statements were drafted and shared with Physics, Dosimetry and the Radiation Oncologists. Once buy-in was unanimous, changes were rolled out sequentially to each site. Another area of improvement we identified was the need to utilize technologies that we already had in place to strengthen communication pathways necessary between each discipline. Skype in particular was championed as a tool to be used among all disciplines, and remote desktop sharing between Radiation Oncologists and Dosimetrists. This continues to be a work in progress, but the number of individuals actively signed into, and using Skype to communicate, and especially across departments, has doubled since our initiative.

Demonstrate Increased Quality through standardization of best practices

- Morning warmup routines standardized
- All sites now require Radiation Oncologists to approve plans before Physics Review, allowing for improved quality in remote coverage by Physicist
- Standardized Electron Planning

- Ongoing:
 - Multidisciplinary team of Stakeholders created to represent each site and discipline within Region. Purpose is to further standardize Dosimetrist deliverables. Added benefit is review of current processes to make sure they are based on best practices and Regional guidelines being drafted.
- Complete:
 - Regional Drive for Physics and Dosimetry – This allows ANY Dosimetrist or Physicist to access needed programs and to upload documents to Aria FROM ANYWHERE and FOR ANYONE. Currently importing and exporting to/from Aria/Eclipse EMR is frustrating and time consuming when cross-covering for someone else.

Goal #3: Implementation of the process improvement/incident reporting tool, ROILS. This process required scheduling a staff meeting at each site to provide education about ROILS (i.e. what it was, why it was developed and how to use it effectively. The ROILS tool requires a local champion. The Physicist at each site was selected to lead the department through events that warrant going through the ROILS process. To date, two such events have occurred since the summer. Thanks to regionalization, the improvements made were shared with all staff and implemented at all sites.

After achieving these goals, there are only a few small differences that still need to be addressed. They do not limit the ability of Dosimetrists to cross-cover. In fact, for the last few months, Dosimetrists from each site have been routinely circulating in and out of departments and one Dosimetrist, after breaking their foot, was able to work remotely from home for nearly a month. This would not have been possible even six months ago and is a testament to the intentionality that has underpinned the standardization of processes and the improvements we have made in communication pathways.

These slight remaining differences will be handled in the next few months; they are not limiting our ability to work as a Regionalized team. Others have yet to be identified, surfacing sometime in the future. Thankfully we now have the ROILS tool at each site allowing future process breakdowns to be skillfully handled and solutions will be identified and implemented across the departments as a Regionalized team.

IMPROVEMENTS ACHIEVED:

- Staff able to cross-cover at any of the 4 facilities
- Standardization of processes
- Best practices implemented at all campuses
- Increased utilization of technology we already had to increase communication and implement enhanced processes, such as SKYPE for weekly meetings
- Implementation of ROILS throughout the Region
- Development of Shared Drive to allow all staff to access necessary information from any location and for any facility needing information.

CONCLUSION

The successful execution of this PRC has set the groundwork to implement change as a Region in the future. This began as a daunting task, but by breaking the transitions down into many small manageable pieces we were able to tackle a very large project. This could not have been accomplished without collaboration and trust from each site and discipline.