

ONE ORGANIZATION'S JOURNEY TO READING ROOM NIRVANA - BENEFITS REALIZED AND LESSONS LEARNED

Ruby Memorial is the flagship academic teaching hospital of WVU Medicine, a 16 hospital, 1,800 bed health system spread across West Virginia. Their radiology department performs 420,000 studies annually that are read by 38 radiologists, 24 residents and 3 fellows.

A decision to redevelop the legacy reading room that was embedded in the radiology department, into much needed imaging and patient areas, put into motion a series of unexpected events with significant financial and employee satisfaction implications. This was because the design and layout of the replacement reading room did not incorporate input from the radiologists, radiology residents and fellows, or their referring physicians. As such it did not meeting the daily needs of anyone who used the space.

Because it was set up much like a call center; Maximizing the density of workstations and no control over light and noise, it drove many radiologists to work remotely or in their offices. This decrease collaboration between radiologists and referring physicians and had a significant negative effect on the quality of resident and fellow teaching by the attending staff as well as the overall service delivered to referring physicians. These negative impacts were quantified by lower scores in the annual customer and employee satisfaction survey that were obtained following the implementation of this reading room. The radiology department realized that something needed to be done and set about developing a plan to rectify the situation.

This plan initially involved gathering and analyzing data from the customer and employee satisfaction surveys from radiology staff, radiology residents and fellows, and the referring physicians that utilize radiology services. Focus was placed on understanding and highlighting the financial and clinical implications on the radiology department as well as the hospital. Once the depth of the problem was quantified, this information was then shared with radiology and residency program leadership. Ultimately radiology administrative and clinical leadership, working with hospital, medical school, and physician group leadership, determined that a new and properly designed reading area needed to be developed with input from all stakeholders, to bring all parties back together.

"Be aware of the downstream effects of marginalizing the value of radiologists and the importance of face-to-face interactions with referring physicians."

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A cross functional team was then created that included radiologists, residents, and referring physicians from each of the 9 radiology subspecialties. This team met regularly to gather input and needs from all stakeholders. In addition, the team brought in RedRick Technologies and their partner Rad Planning as outside expertise to assist with the design and layout of the reading room.

RedRick Technologies and Rad Planning worked with the internal team to build consensus around the ergonomic and architectural design needs of each stakeholder. They brought focus to details such as:

- The number and size of the reading workstations used by the residents and the fellows, to ensure teaching could be accommodated.
- Individual radiology subspecialties were allocated their own areas within the overall space to facilitate collaboration.
- Disruptions from sound were reduced by implementing sound absorbing materials, implementing curved walls, creating a dedicated huddle space for group discussion and ensuring each subspecialty area had a vestibule.
- Ambient light controls and indirect lighting was implemented to reduce reflection on the monitors and manage the overall light levels.
- A radiology concierge desk was also set up at the main entrance to the reading room to manage room access and enable referring physicians looking for a specific radiologist to quickly find that person.
- Overall access to the reading room was controlled to limit disruptions and noise from people walking through the space.

The end result is a reading room that is making everyone happy. Subsequent customer satisfaction scores have increased significantly, showing that radiologists, residents, fellows and referring physicians are all pleased with the level of service the radiology department is providing. Engagement between referring physicians and radiology has also increased dramatically. In addition, resident training has improved now that radiologists and residents are working in the same location and can easily engage with each other.

The organization has learned that ergonomics goes far beyond the keyboard, mouse, or sit/stand workstation. The architectural needs of the reading room are very different from those of any other area in radiology. Much as the operating room is designed to meet the needs of the surgical team, the reading room must be properly designed to meet the needs of the radiology department and the referring physicians who utilize their services. The Ruby Memorial radiology department is now better able to meet the goals of the American College of Radiology Imaging 3.0 initiative that encourages radiology to enhance the value of the services they provide their customers.

