Barco helps design the radiology reading room of the future

“A growing number of radiologists are experiencing how the right combination of optimum lighting, sound and furniture, with the addition of Barco’s medical imaging displays, can truly help increase diagnostic accuracy, decrease overall stress levels and reduce occupational stress.”

Vinay Sandhir, Senior Director, ACR Education Center

For decades, it’s been widely known that proper ergonomics in the workplace can significantly boost productivity as well as enhance workers’ health and well-being. With the demands placed on today’s radiologists, this philosophy and practice is finding a welcome home in hospitals and clinics around the country. In 2010, Barco teamed up with the American College of Radiology (ACR) and other partners to establish a Reading Room of the Future at the ACR Education Center, featuring the latest ergonomic furniture, lighting, sound and monitors. It has since become a model for optimizing the radiologist’s work environment, educating future radiologists on how to improve their workplace in order to become not only better, but happier workers.
Advances in imaging technology, combined with the growing medical needs of an aging population, have contributed to a substantial increase in the workload of today’s radiologists. Spending long workdays in front of their medical imaging displays, a significant number of radiologists have reported increased stress, fatigue and computer-related injuries. In line with its mission to maximize the value of radiology and positively influence the socioeconomics of the practice, the American College of Radiology (ACR) embraced the challenge of raising ergonomics awareness.

Leading the charge
Since its inception in 1923, the ACR has been firmly committed to making imaging safe, effective and accessible to those who need it, as well as accommodating those who deliver it. In June 2008, the ACR inaugurated a new Education Center, an innovative, interactive learning environment designed to keep radiologists at the forefront of their field. The recently installed Reading Room of the Future is the Center’s jewel in the crown.

Raise ergonomics awareness
“We believe that interpretation in a radiology reading room can be elevated to a higher level by reducing fatigue and stress-related factors,” explained Vinay Sandhir, Senior Director of the ACR Education Center. “So we came up with a bold plan to equip a fully ergonomic reading room that would raise awareness about the importance of ergonomics.” The result: “Optimizing the Radiologist’s Work Environment,” a joint initiative of the ACR, Evolve Technologies, RedRick Technologies and Barco.

Ed Parker, Managing Director of Medical Imaging at Evolve: “Since 2003, we’ve been working with clients to help them optimize their reading room environment. We felt we could be even more effective working interactively with radiologists in an educational environment at ACR, providing a lab with advanced, ergonomically designed furniture systems, seating, lighting, sound abatement and top-notch display technology.”

Comfort in motion
While Evolve supplied the digital imaging technology for the new reading room, project partner RedRick Technologies installed dedicated furniture solutions. “The number one focus of a reading room is the interaction between the radiologist and the image,” RedRick founder Greg Patrick explained. “Reading images while sitting in the same position for many hours can cause pain and injuries. At RedRick, we believe in the power of dynamic motion, and understand that radiologists have to move. The work environment must, therefore, be simple for them to manipulate. Our workstations are easily adjustable in height, to adapt for either sitting or standing up. Patrick further stresses how ambient lighting helps to reduce eye fatigue and increase visual acuity.

Coronis Fusion: multimodality viewing
Barco’s Coronis Fusion 6MP DL medical imaging displays play a starring role in enhancing viewing comfort in the reading room, with features ranging from a non-reflective screen surface to counteract eye fatigue, to Uniform Luminance Technology, which enables consistent brightness from any viewing angle. Kurt DeYoung, Director of Sales, Medical Imaging for Barco North America. “The foundation of our brand has always been to engineer top-quality solutions for mission- and life-critical applications. In the healthcare arena, we have developed diagnostic displays that help improve clinical outcomes by providing excellent brightness, contrast and color uniformity for an easily readable, and consistently high-quality image. Radiologists also prize our Coronis Fusion 6MP DL for the wide viewing angle, which enables them to view multiple images – color, grayscale, high resolution, low resolution, 2D, 3D – in a true multimodality format, on a single screen.”

DICOM compliance and consistency
This multimodality feature proves to be key in today’s reading rooms, where color images are gaining in importance. “Having color monitors without any significant compromise in luminance is key for us,” confirmed Eliot Siegel, MD, Professor of Radiology and Vice-Chair of the Department of Diagnostic Radiology at the University of Maryland School of Medicine. He praises the Coronis Fusion 6MP DL for its flexibility to be used either as two 3MP heads or as a single wide-screen 6MP display. “This allows us to organize our workspace to our liking,” he continued. “Another distinct advantage, is that the Barco displays ensure worry-free DICOM compliance, which ensures guaranteed image consistency, over time, and in every display.”

Improve productivity and reduce fatigue
“Since we implemented the reading room, our member radiologists are more aware of work-related injuries and understand that by reducing fatigue and stress-related factors, productivity and diagnostic precision increase – for the well-being of their work, their health and, most importantly, that of the patients,” Sandhir concluded.