

Our Journey to Digital Radiology

**MULTI-OFFICE
CHIROPRACTIC PRACTICE**
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Case Study

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Like many of our colleagues, we have watched the growth of digital radiology. We had the same questions as you: why, when, if and how? Six months ago we installed PACS and DR technology in three of our five offices. In the next six months, we will convert our remaining clinics. Since our entry into the digital world, we have never looked back, and the benefits to our practice are greater than we ever expected. This article outlines what we did, what we learned, the benefits we have already received and the additional benefits we expect to receive in the future.

Our practice began when my father graduated from Life Chiropractic in 1974. Since I joined the practice in 1990, we have expanded to five offices in the Jacksonville, Florida area. Our practice focuses on wellness with an integrated MD and DC approach. We have seven doctors in our group and thirteen health and business support staff.

Before going digital, each office had a typical film-based set-up using wall-bucky x-ray equipment, film processors and a variety of film viewboxes. We took mostly 14" x 17" images, but also some 14" x 36" x-rays. To provide the most efficient workflow, two staff members were involved taking x-rays, helping to properly position the patients, processing the films, labeling the images, annotating the anatomy and filing the films. On average, a seven view study took 25 minutes. Today, with our PACS system it takes just 5 minutes...an 80% time reduction!

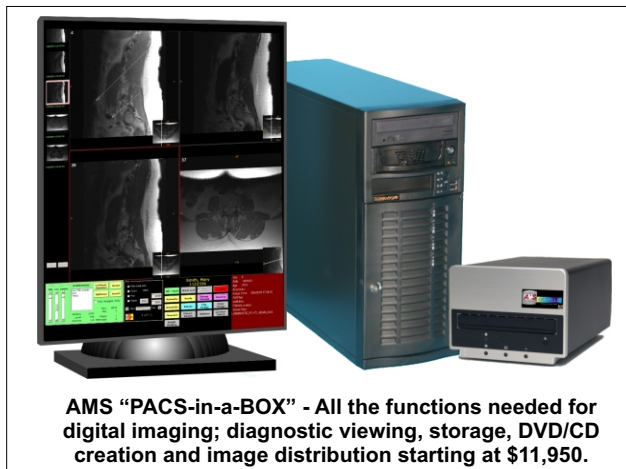
As our equipment aged and service costs increased, we faced some choices. Outsourcing radiology was never an option. We wanted a more efficient imaging process and one that would increase the quality of patient care. The choices were either CR or DR technology. We quickly focused on DR because 1) for the large number of patients we see, DR allowed us to speed up our workflow, and 2) since our doctors are always involved in taking the x-rays, DR best utilized their time.



The next decision was the PACS - the system for storing, distributing and viewing the x-rays. This was an area in which we had little knowledge. There are many alternatives, from just viewing the x-rays on the DR monitor to having a very complex, networked system. The first would not provide diagnostic quality viewing and the latter was overkill for our practice and was cost-prohibitive. We opted to install a mini-PACS system that was

developed by a long-time supplier to the chiropractic community, American Medical Sales ("AMS").

Currently, each office has its own DR x-ray unit and PACS. One advantage of the AMS PACS system is that we can integrate our separate digital operations at a later date. Eventually, we will be able to read images anywhere and at any time, and we can set it up to have multiple back-up copies of patient image files in case of a disaster. After all, we practice in Hurricane Alley. However, the low cost of our individual PACS solutions makes it possible to maintain the "stand-alone" nature of our offices.



AMS "PACS-in-a-BOX" - All the functions needed for digital imaging; diagnostic viewing, storage, DVD/CD creation and image distribution starting at \$11,950.

We have been very pleased with our move to digital for the following reasons:

1. It has paid to go digital. Although we had some initial cash outlays, the costs of running a digital operation (including our ability to reduce x-ray support staff by 50%) are less than our film-based practice and more than justify our investment.

2. No retakes. Our system eliminates retakes (a significant savings) and patient radiation is reduced. Patient positioning is easier with our new x-ray equipment, and the viewing tools of the PACS allow us to get much more diagnostic value from the images we take.

3. Business benefits. The elimination of our darkroom, its chemicals and film storage has improved our work environment by doing away with hated work tasks. Equally important, the PACS' instant access to patient films has eliminated one of the most disruptive aspects of our practice...hunting for patient records.

4. Improved patient care. Eliminating retakes reduces patient radiation, and as we gain experience with our digital equipment and our PACS' diagnostic workstation, we are finding that we can lower the radiation dose (this can increase our x-ray tube life - another

cost savings). Also significant is the ability to apply the PACS' image manipulation tools. Digital tools, such as magnification, changing the image contrast and brightness (window/level), and applying measurement tools, lines and angles, increase the value of the images we take. Since we keep a viewbox next to our PACS workstation, we have direct evidence that our PACS images provide great value over film images.

5. Patient education. Our PACS allows us to measure and annotate images so quickly that we provide our diagnosis to patients almost immediately and in a way that helps them better understand our treatment plan.

6. An unexpected marketing advantage. Our patients are impressed that we are innovators and leaders in patient care. When they see how quickly we produce quality images and how easily we bring them into the diagnostic process, they have a high level of comfort about their treatment. *Having digital imaging separates our practice from others and it will be highlighted in our marketing plans.*

Installation and integration of digital imaging went very smoothly and was done in just a few days. There were some "bumps in the road" but our equipment and PACS vendors were there to help. We believe that our success in integrating digital into our practice is due to the fact that our suppliers are the manufacturers of their equipment and software (we did not discover this important fact until after we had made our selection). What this means is that there is no "passing the buck" when issues arise (and they will). Although we may have a local distributor for our day-to-day needs, we know that we can contact our PACS supplier when we have a question our local support cannot answer. We typically get answers within minutes or hours, not days or weeks. This should be a key factor in deciding how to go digital.

Would we do it again? Absolutely! The only question is why did we wait so long.



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