



Case Study: Medical and Financial Records

Cardiovascular Center of Lompoc
Dr. Barry Coughlin went into private practice on July 1, 1993, and opened the Cardiovascular Center of Lompoc. This busy Center provides patients with non-invasive diagnostic studies of the heart, venous and arterial systems. Patients are referred to the Center by local doctors.

The Problem

Karen Munoz handled the billing for the Cardiovascular Center of Lompoc (CCL) out of her home office. Each day she would go to CCL to retrieve the center's billing paperwork. When she returned home, if the paperwork she needed to complete the billing wasn't in the files she had retrieved, she'd have to call the center and have someone tell her the information, or have it faxed to her.

Karen recalls a conversation she had with a representative from Pinnacle Office Systems who had come to service her copy machine. They talked about all the hassles of working with paper records, and how having those records converted to electronic images and then organized on a PC would be a far more efficient way of working.

Although nothing happened after that conversation, a few years later she spoke again with the same Pinnacle representative. She expressed that the abundance of paper wasn't only a problem for her, it was a problem for the entire Cardiovascular Center. The rep understood, and recommended a program called DocuWare.

CCL spent a lot of time and money filing and storing patient records. CCL was a growing practice, treating more patients every year. Each new patient meant more records to process, track and store. "It takes a lot to keep the patient records in order," says Karen. "It's tedious work to file and organize these records and it never ends. There are always new patient records coming in."

Not only are patient records difficult to manage due their large sizes, but also because CCL is required to keep these records on file for seven years. CCL had so many, they were forced to keep the overflow in an off-site storage facility.

Another problem for the office was the labor-intensive and time consuming task of having the daily patient records prepared for the doctor. Given the number of patients and records, it was becoming a difficult process retrieving the files.

Another major issue was the amount of paper being generated from the fax machine. Each day the office received requests for medical records, referrals, prescriptions and EKGs for its patients.

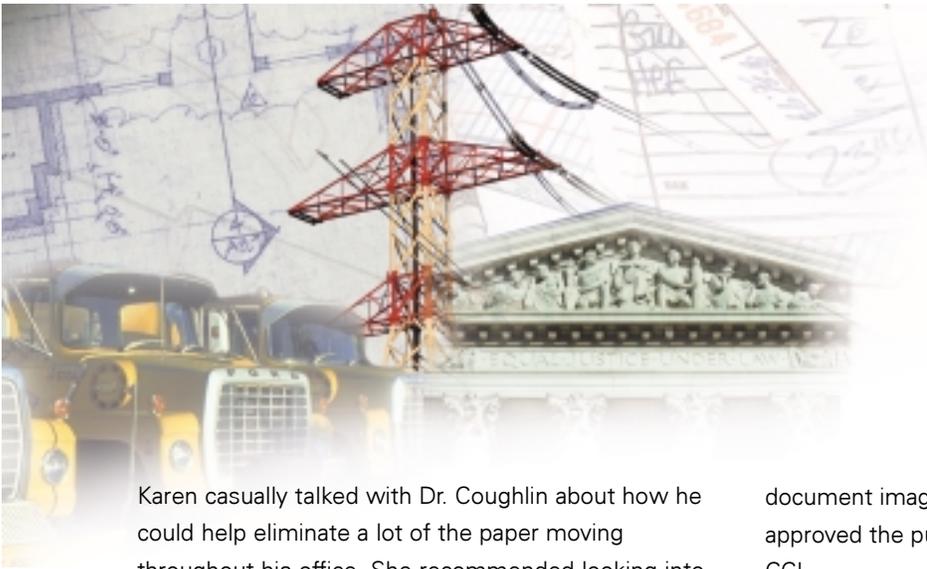
Industry:
Medical

Application:
Patient medical and financial records

The Problem:
Information from paper records was time consuming to access and hard copies were expensive and difficult to maintain.

The Solution:
DocuWare document management system

The Benefit:
Doctors and administrative personnel have secure and immediate access to patient records, plus they have eliminated many costs associated with paper



Karen casually talked with Dr. Coughlin about how he could help eliminate a lot of the paper moving throughout his office. She recommended looking into the electronic document management software program recommended by Pinnacle called, DocuWare. "He hopped all over the suggestion," recalls Karen. "He wanted me to get him more information about the DocuWare system from Pinnacle Office Systems."

Dr. Coughlin knew that he was going to have to do something to improve the patient/file situation, and an imaging and document management solution sounded perfect. When he heard Karen describe the DocuWare system, he thought it "sounded like a dream."

The Solution

"DocuWare was easy to understand. In fact it sounded deceptively simple," recalls Dr. Coughlin. "I had to see it in action." As a result, Dr. Coughlin and Karen went to Pinnacle Office systems to see a demonstration of the DocuWare document management system.

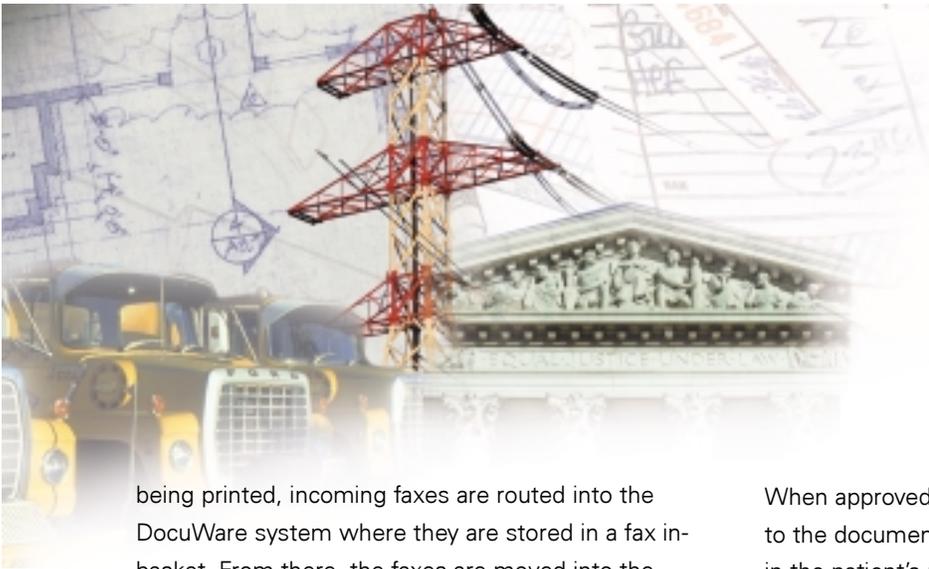
During the demonstration, Greg Schumacher, from Pinnacle, reiterated the benefits of working with DocuWare: easy and fast access to information, improved record security and the elimination of on-going costs associated with maintaining paper files. One of Dr. Coughlin's primary concerns was to find out if DocuWare could easily integrate with the software his office was already using, specifically for patients' records, scheduling and word processing. Schumacher showed Dr. Coughlin and Karen how DocuWare worked with these other software programs. Seeing this convinced the doctor that

document imaging was the way to go. Dr. Coughlin approved the purchase of a DocuWare system for CCL.

After the purchase was approved, Dr. Coughlin and Karen sat down with the folks at Pinnacle to customize a system and pick applications that fit their specific needs. One unique design request was to incorporate Dr. Coughlin's laptop computer so that he could access DocuWare files remotely from any location. To meet this request, Pinnacle simply loaded the DocuWare software on to Dr. Coughlin's computer and added wireless networking capabilities.

Because CCL's office computers were all stand-alone systems, Pinnacle installed a local area network before installing the DocuWare software. To insure a smooth transition to DocuWare and to minimize the disruption of the office, Pinnacle did the installation and testing of the system over a weekend. DocuWare was installed on every PC, and then the PCs were put onto a network. Now records could be retrieved in the office regardless of which computer an employee was using. The following week, Pinnacle provided a training session for CCL employees on how to use the software. "The DocuWare system is very intuitive which makes it easy to use," recalls Karen.

Today CCL is moving almost every type of document they have into their DocuWare system. Once in DocuWare, these documents are easily retrieved by typing in key pieces of information. For example, a CCL employee types in a patient's name, or study, a study date, or a patient's date of birth. In a few seconds, DocuWare displays the file on the computer. CCL is also using a DocuWare application to handle the faxes the office receives each day. Rather than



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Dr. Barry Coughlin

being printed, incoming faxes are routed into the DocuWare system where they are stored in a fax in-basket. From there, the faxes are moved into the appropriate DocuWare file cabinet for follow-up and storage.

DocuWare Results

DocuWare is used daily by Dr. Coughlin, and everyone else in the office. It has been so well received, because it has eliminated the frustration of having to deal with so many paper records, and simplified many daily tasks.

“I can do billing from my desk without having to get up to find a chart or make a phone call to get the information I need. I have everything I need at my fingertips,” says Karen. “It’s made my job so much easier!”

Dr. Coughlin agrees, “It [DocuWare] has exceeded my expectations, especially in terms of its reliability. I’ve always found the documents I need, when I needed them.”

The DocuWare system has made a number of changes – all for the better for CCL.

Patient Encounter Reports Go Digital – Today, CCL no longer generates paper during the creation of patient encounter reports. Technicians record an ultrasound on a VHS tape, Dr. Coughlin then reviews the tape and using a Dictaphone, he dictates the results. Finally, an assistant listens to the dictation, transcribes the doctor’s comments by typing them into one of several DocuWare templates created specifically for these reports. After the report is in DocuWare, Dr. Coughlin can open and review it.

When approved, he attaches his electronic signature to the document, and the report is ready to be stored in the patient’s record folder in DocuWare. Now more easily than ever, it can be faxed or e-mailed directly from DocuWare to the patient’s primary doctor. According to Karen, everyone is thrilled with the new paperless process.

Respond to Doctor Calls On the Spot – Because all the patient studies are available at the click of a mouse, Dr. Coughlin can take calls from patient’s primary doctors, pull up the patient’s study on the computer and discuss it with the their doctor. “By the time I’ve exchanged pleasantries with the referring physician, I’ve opened the patient’s file and I am ready to discuss the study results.”

Patient Records available 24/7 with DocuWare’s INTERNET-SERVER Module – Dr. Coughlin no longer has to stop at his office to pick up a patient study while on his way to the hospital. Instead, he can access his studies any time – day or night, using DocuWare’s INTERNET-SERVER module. Patient records are now available remotely. Through DocuWare, INTERNET-SERVER provides Internet or





intranet access to documents stored in a DocuWare file cabinet at the center. Dr. Coughlin can plug-in his laptop computer or use a PC with a secured Internet connection to access his patient's files via the Web. The remote access provided by the INTERNET-SERVER module is especially useful for emergency situations and during hours when the office is closed.

DocuWare has Reduced the On-going Costs Associated with Patient Records – Because of DocuWare, CCL no longer has to store their older records off-site, or have the extra expense of additional employees to maintain them.

CCL Uses Less Paper – Records no longer have to be printed because CCL employees can look at documents anytime on their own computers. This has resulted in less printing and photocopying. In fact, Dr. Coughlin noted that one month after they began using DocuWare, the number of photocopies made on his copy machine had decreased by 3,000 copies.

CCL's fax application also helps to reduce paper use in the office. Because all incoming faxes are now automatically routed to a central DocuWare workstation, the office has eliminated the automatic printing of faxes.

Future Plans

CCL and Pinnacle Office Systems are working on another ambitious project for DocuWare. CCL has hundreds of videotapes that are created during the patient studies. Pinnacle is working on a way to attach a streaming digital video file of a patient's ultrasound to the patient's record in DocuWare. When successful, these files can be viewed on a computer

and, CCL will be able to eliminate the tapes. In addition, CCL is considering replacing their preprinted forms and worksheets with scanned ones. CCL scans the necessary forms into their DocuWare system, then they can print them as needed. This function is less expensive than the preprinted forms.

The DocuWare system has proven to be a good addition to CCL. "It's much more wonderful than I expected it to be," says Karen. "I expected that it [DocuWare] would just be a better way to store patient records, that it would replace the file cabinets in the office. But it's turned out to be so much more."

Dr. Coughlin gives high marks to DocuWare as well. "DocuWare has helped extend my work as doctor for another ten years," says Dr. Coughlin. "That's how much stress it has eliminated for this office."

Tool Box:

Computers: Client PCs are a combination of Windows 98 and Windows 2000

Server: Windows NT

Database: SQL 2000

Software: DocuWare Version 4.1a

DocuWare Modules: RECOGNITION and INTERNET SERVER

Scanners: Fujitsu ScanPartner b/w 27 ppm

Storage: Fortra RAID Tower 105 Gig, 8 bay