

Because people's lives are often at stake, healthcare is one of the most thoroughly documented industries in existence, using millions of paper forms annually. Nationwide there are more than 60 million pages of medical claims processed per day at a daily cost in excess of \$125 million. At a few forward-thinking healthcare management organizations, the use of electronic imaging, intelligent character recognition (ICR) and workflow technologies are being used to process literally thousands of medical claims a day, creating huge savings in the process.

Healthcare organizations that can set up a data management system to automate their claims processing, repricing and payment procedures are creating competitive advantages for themselves. One healthcare organization that knows the key to success lies in automating both its data management and data entry operations is a PPO named MagnaCare, based in Garden City, Long Island.

MagnaCare is a PPO network of more than 35,000 providers in more than 50,000 locations throughout the New York/New Jersey region, almost all of which are either board certified or board eligible. The MagnaCare Network includes 500 diagnostic facilities and laboratory locations.

The concept behind MagnaCare is simple: In return for directed volume, its member providers agree to significantly reduce their fees while maintaining premium quality care. Employees are free to select a conveniently located provider with little or no out-of-pocket expense. Providers increase their patient base while the healthcare plan realizes an approximate 40% reduction in costs. Contributing in no small part to the overall efficiency of the operation is the state-of-the-art, automated data entry system that MagnaCare uses to contain the costs of processing its medical claims.

MagnaCare's PPO model has proven extremely successful. Growing rapidly since 1990, MagnaCare

currently covers close to 1.3 million people through its various managed care programs. MagnaCare currently serves more than 100 self-insured clients, and has contracts with Aetna Health Plan, Provident Life and Accident Insurance Company, U.S. Life Insurance Company, Employee Benefit Plans and other organizations that recognize the quality of MagnaCare's physicians and the merits of its managed healthcare programs.

In early 1995, five years after beginning operations, MagnaCare realized in order to stay on top of its claims processing operation, it would have to find a better way of dealing with the mountains of paper forms used to apply for the vast majority of medical claims. "Manual data entry was getting expensive; and the number of claims we were processing was steadily increasing," reports Meir Weinraub, the MIS Manager in charge of the MagnaCare claims processing department. "We knew there was technology out there that could help us." So Weinraub researched applying recognition technology to help speed up MagnaCare's claims processing operation.

Weinraub found a systems integrator who recommended Microsystems Technology's OCR for Forms™ information capture software to do the job. As he worked

with the integrator to install the system, the value of the technology became more and more apparent. "It was clear that recognition-assisted data entry was going to play a significant part in claims processing as claims volume increased and OCR accuracy improved," says Weinraub. "Therefore controlling our upward migration path became critical."

Weinraub decided it was time to make a commitment to OCR technology by assigning a full-time, in-house integrator to upkeep and maintain MagnaCare's claims processing system. To MagnaCare, the control it gained over its own technological destiny made it worthwhile. After a few pilot studies, the system went online in September 1996.

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"When it came to surprises, there really weren't any but the kind you want. The best was the outstanding accuracy that OCR for Forms delivered and the way Microsystems was always there to support us. It made a big difference," observes Weinraub.

MagnaCare Moves Up the Learning Curve

At first, Weinraub focused on processing the red HCFA form because the red form "dropped out" when scanned using a red bulb, eliminating the need to use form removal technology, thereby lessening the risk of error. As he learned more about working with OCR for Forms, Weinraub started working with the black HCFA forms, using OCR for Form's form removal system to eliminate the form data and extract the physician-completed data left behind.

Currently, MagnaCare is scanning 3,000-5,000 HCFA forms per day using three scanners: a Bell+Howell model 3338A, a Fujitsu 3099 and a Fujitsu 9097. OCR for Forms modules include one recognition station, two extract stations and four operator workstations for reject repair and quality control. Each of MagnaCare's data entry operators are fulfilling medical claims data at a rate of 500 forms per operator, per eight-hour shift. MagnaCare reviewers look at every field on the form to ensure 100% OCR accuracy. A medical claim then undergoes a series of 43 individual reviews by MagnaCare's Medical Intelligence Software (MIS) system. The system monitors codes and prevents unbundling of services, monitors office visit frequency and upcoding services, cosmetic procedures, experimental procedures, assistant surgeon charges, and charges for duplicate procedures. This MIS claim review typically saves MagnaCare clients an additional eight to 10% of cost. Once these tasks are accomplished, the claim form data is electronically repriced for payment.

During the repricing, the physicians' fee is electronically changed from his/her customary charge to the negotiated MagnaCare fee. The claims are then sent directly to the employer or to the employee's insurance carrier/TPA within 24 hours for payment to the provider. The repriced, "rebundled" data can be submitted to the employer, insurance carrier or TPA either electronically via the MagnaCare BBS or

on a disk or other digital media for adjudication and payment to the provider.

Calculating the Benefits

When evaluating the cost-effectiveness of computer-based forms processing compared to a completely manual one, MagnaCare now looks at its adoption of forms automation technology as a necessary investment. "I never thought to cost out the hardware, software and integration components for a formal cost-benefit analysis to report to senior management," admits Weinraub. "For one thing, once we decided to commit to imaging and OCR technology, it became clear we should do most of the integration work ourselves. We were moving from a paper-based to image-based data entry system anyway, so the only real cost that forms automation introduced was the price for OCR for Forms and the time allotted for integration."

So what is the ROI or payback on their automated data entry system? "Since OCR enabled us to reduce the number of staff dedicated to our claims operation by at least 50%, there was never any question in my mind about the economics of the situation," Weinraub explains. "But you figure a fully burdened data entry operator in the New York/New Jersey area earns \$30,000 a year. All things considered, we expected a payback in less than one year."

Focusing on savings alone, however, ignores the rest of the cost-benefit equation. Not only does cost reduction spring from forms processing technology implementation, but so do productivity increases, better customer service and other soft-dollar and strategic benefits. For example, employee morale is improved when staff members who were previously used for data entry can be upgraded through training to perform higher-level tasks.

Moreover, productivity gains are realized by truncating and improving claims adjudication procedures, which result when OCR verification with data validation procedures are run in parallel against a 100% up-to-date database. "The combination of OCR for Forms with our Medical Intelligence Software system creates a powerful productivity enhancement tool," says Weinraub. "It ensures we can meet our data perfection objectives on time, with 100% reliability."



www.mti-info.com

Microsystems Technology, Inc.
401 East Jackson Street, Suite 1200
Tampa, Florida 33602
U.S.A.
Tel 813.222.0414 Fax 813.222.0018

Microsystems Technology GmbH
Baarerstrasse 10
CH-6300 Zug
Switzerland
Tel 041 41 729 63 33 Fax 041 41 729 63 34