

Here's how  
conquering this  
"final frontier"  
can affect your  
practice — from  
a doctor who's  
done it.

# WHY Computerize Medical Records? YOUR

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**T**hree years ago, our 200-doctor, multi-specialty clinic decided to go paperless. At a cost of \$24 million, we developed a stable power supply and installed 1,200 work stations and a redundant fiberoptic network. We chose software from five different vendors. We also hired additional information systems employees and outsourced some technical jobs. Has it been worth it? The answer from our staff and administration is an unequivocal "yes!" What follows are the reasons why, from a perspective that you and your staff might appreciate.

## Reduced costs

Why should you bother with computerized medical records? Because we're in the middle of a technological revolution. The cost of labor is getting progressively higher, and the cost of technology is dropping.

For example, when you go to the grocery store, the clerk enters your items in the cash register with a laser scanner. Many gas stations let you use your credit card at the pump, without talking to anyone. Businesses have adapted these innovations to save money. In each case, a computer does the work that was previously done by a person.

What does this have to do with ophthalmology? Medicine, like any business, is becoming more competitive, and we're being asked to increase efficiency and productivity. With current technology, computers can't replace doctors, but they can replace the clerical help we rely on to move and maintain our medical records. For example, in the average practice, it takes 5 minutes to find a chart, prepare it for the doctor and then re-file it. If a practice sees 12 patients an hour, then filing charts becomes a full-time job for one person.

In our practice, we've eliminated a full-time job of mailing,

receiving, labeling and filing color slides and fluorescein angiograms by investing in a digital imaging system. All of our images are stored on a computer network that extends to all the exam rooms. Under this system, you can review images from any work station at any time.

How much cost you can save by going to an electronic medical record depends on how expensive it is for you to maintain your records now.

## Improved documentation

As the pressures of a busy practice mount, many of us find it increasingly difficult to write down every detail of a complete eye examination. In particular, many doctors may leave out negative findings because it is the positive findings that direct our care. However, cutting corners can reduce quality of care, and can also increase our malpractice liability. For example, the fact that a patient denied having a headache may be important if he has a stroke after leaving your office.

Legibility is another increasingly important aspect of documentation. As we all know, continuity of care isn't what it used to be. These days, it's increasingly common to review other doctors' records.

One way to improve legibility is to dictate your notes. This lets you communicate a lot of information both quickly and legibly. You can streamline the process by creating a preset word processing document, called a template. If the entire examination is normal, you can dictate "normal examination, per template" and your transcriptionist and you can save time by using preset blocks of text called "macros."

There are, however, significant problems with dictation. First, it's difficult to assure the accuracy of a dictated clinical note. Second, dictating numbers can be very difficult. For example, something as simple as entering a patient's eyeglass prescription becomes a nightmare with dictation. First, your technician reads

## HOW A COMPUTER SAVES ON DIAGNOSTICS

### PAPERLESS PERIMETRY

How many visual fields (VFs) are performed and printed per week?	35 avg.
Total time to process and print each exam result	x 6 min.
Total time that can be saved with a computer	= 210 min.
Divide by 40 min., the avg. VF time per patient	÷ 40 min.
Total number of additional VFs per week	= 5 VFs
Additional VFs performed per week	x \$35/field
Potential savings	= \$175

### DIGITAL PHOTOGRAPHY

How many photographs are taken and developed each week? (include fundus camera, B-scan, slit-lamp camera)	30 avg.
(Average material and expense per image is \$1.25)	x \$1.25
Potential weekly savings	= \$37.50

the lenses with a lensmeter and writes the prescription on a piece of paper; you read the prescription into a tape recorder or digital recording system; and finally, a transcriptionist listens to the string

of numbers and types it into your note. A task that involved only one person in the past now involves three people.

In our practice, we solved this problem by interfacing a semi-automated lensmeter with a computer program. This lets one staff member enter lensmeter measurements directly into the medical record without writing anything.

### Increased efficiency

Electronic medical records have undoubtedly increased my efficiency. Whether or not they'll improve your productivity will depend on how you're performing now. Let's consider a few examples.

As you know, when you write a prescription, you have to record the information both in the chart and on the prescription pad. If the information is in an electronic format, many software programs will let you easily print the prescription from the information that's in the chart.

If you have to spend a lot of time looking for charts or looking through charts for assorted data, then you'll find that putting your charts on a computer is another way electronic medical records can save you time. Imagine this: When your office takes calls from patients, their medical records will be instantly at your fingertips.

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# HouseCalls

Patient Appointment Reminder System

- Recognizes Accents
- Integrated with the Practice
- Patients Can Leave Messages
- Uses Multiple Voices & 99 Message Options
- Multiple Response Options

## HOW A COMPUTER SAVES ADMINISTRATIVELY

### CHART HANDLING

How many patient visits or charts per day?	50 avg.
(5 minutes to locate, deliver, retrieve and refile a chart)	x 5 min.
Total staff minutes that can be saved with a computer	= 250 min.
x the number of days the practice is open per week (5)	x 5
Total staff hours that can be saved	= 21 hrs.
x an average hourly wage of \$17.50	x \$17.50
Potential weekly savings	= \$367.50

### DICTIONATION AND CORRECTING

How many letters per day does the doctor dictate?	15 avg.
(average per Patient Record is 3 minutes)	x 3 min.
Total doctor minutes that can be saved	= 45 min.
x number of days doctor see patients per week (4)	x 4 days
Total hours that can be saved	= 3 hrs.
x doctor's hourly wage (\$93.00 per hour = \$200K salary)	x \$93.00
Potential weekly savings	= \$279

### TRANSCRIPTION

How many letters per week are transcribed?	40 avg.
(national average is \$4.00 per letter for transcription.)	x \$4.00
Potential weekly savings	= \$160

## HOW A COMPUTER INCREASES EFFICIENCY

### AUTOMATED INSTRUMENTS

Average time per patient to perform pre-screening	7-9 min.
Average time per patient saved with a computer	1-1.4 min.
x number of patients per day (50)	x 50
Total time saved in the pre-screening area	= 70 min.

### DOCUMENTATION AND DATA ENTRY

Average time to complete documentation of a record	2-3 min.
x 40% savings with a computer	x 40%
Average time saved with a computer	= .8-1.2 min.
x number of patients per day (50)	x 50
Total time saved in the exam lane by documenting with a computer	= 60 min.

### PATIENT FLOW

Total time saved in the pre-screening area	70 min.
Total time saved in documenting	+ 60 min.
Total time saved	= 130 min.
Divide by 15 min.. (average time per exam)	÷ 15 min.
Total of new patients that can be seen per day with a computer	= 8
x \$30.00 average charge per exam	x 30
Total additional income with more productivity per day	= \$240
x days the practice is open per week (5)	x 5
Total additional weekly income	= \$1,200

## Your Input Affects Our Output

Thank you for taking the time to read the premier issue of *Ophthalmology Management*. Our goal is to help you improve your practice with in-depth practice analysis and effective management strategies. Your input is important to us. Please take a few minutes now to write your comments on the attached card and mail it back to us.

We look forward to hearing from you.

**OPHTHALMOLOGY  
MANAGEMENT**

Another way you can save time with electronic medical records is by using computer-generated letters. If the data in your medical record is in a database format, the fields can be inserted into a preset word processing document to produce a letter that's sent to a patient's referring physician.

Communicating with your staff can also be simplified. If you are treating Mrs. Smith and you want your secretary to call the patient to set a date for surgery, you can make the request from your workstation without picking up the phone or looking into the hall.

### Putting it into practice

The process of incorporating electronic medical records into your practice can be one of short-term misery for long-term gain. Choosing the right hardware and software, for example, can be both intimidating and expensive.

What works well for one practice, may not work at all for yours. The products you purchase must be based on an analysis of your current practice. The sample "productivity analysis worksheets" can give you an idea of how to calculate what computerized medical records can save your practice in terms of time and money.

Other factors you must consider include how to train your staff to use computerized patient records and who to use for technical support. You will also have to become familiar with the legal requirements for maintaining electronic medical records in your state. The regulations vary, so make sure you have someone check. Another important consideration: You'll have to make provisions for securing and backing up your system.

The transition from paper to computerized patient records can be painful at times, but switching to an electronic medical record system may mean staying competitive in the future. It's a choice only you can make. **OM**

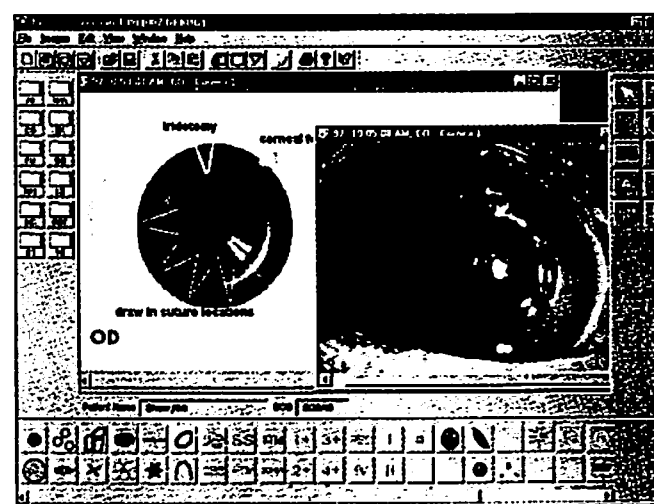
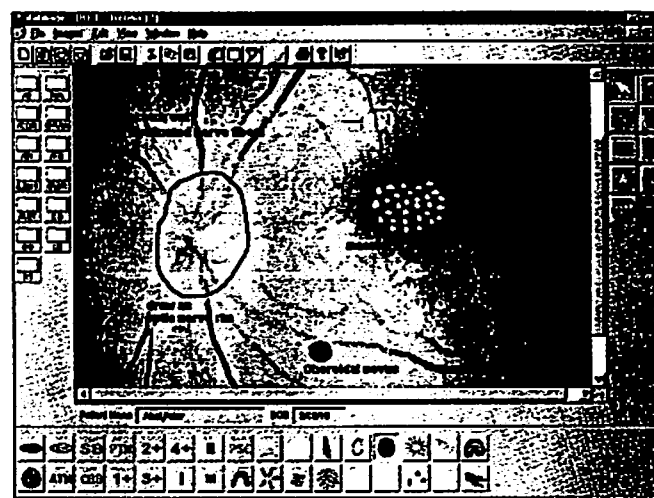
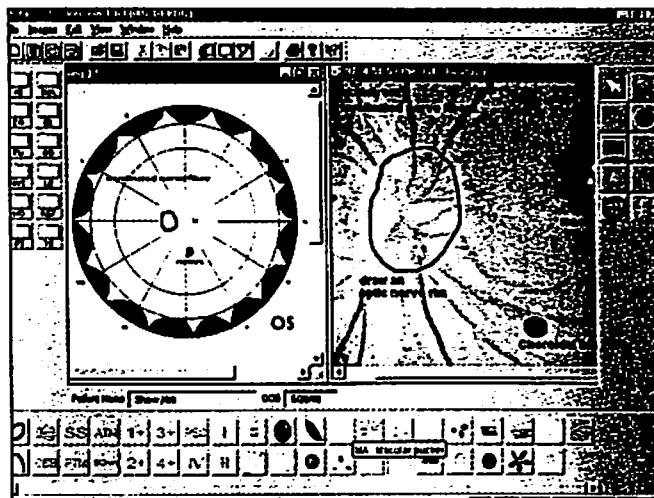
Dr. Bolling is an ophthalmologist at Mayo Clinic Jacksonville. He's a retinal specialist and has been using computerized medical records for 2 years.

## HOW A COMPUTER PAYS FOR ITSELF

Estimated cost of computer investment*	\$51,280
Average monthly support (based on 1% of software cost per month)	\$250
Anticipated weekly savings from productivity analysis (total of savings from chart handling, dictation and correcting, transcription, additional VF, digital photography, increased patients)	= \$2,219
x 48 practicing weeks per year	x 48
<b>Total annual savings</b>	<b>= \$106,512</b>
<b>Approx. # months to pay off investment</b>	<b>6</b>

\*Note: These estimates are based on an example of a six-station network configuration with medical records, patient accounting, pen tablet hardware and software equipment interfaces, video imaging hardware and software, visual field analysis, statistics and the computers' workstations and file server.

Information for all four sidebars was provided by IFA Systems Eyecare Software.



## Digital Pathology

DIGITAL IMAGING PROVIDES EASY ACCESS TO VISUAL DOCUMENTATION FOR SURGICAL CASES, MONITORING DISEASE PROGRESSION, CO-MANAGING PATIENT CARE- AND TELECONSULTING. IMAGES, SUCH AS THE FUNDUS AND CORNEA DRAWINGS AND PHOTOGRAPHS SHOWN ABOVE, CAN BE SCANNED IN FROM A SLIDE OR IMAGED DIRECTLY ONTO YOUR COMPUTER FROM A CAMERA, AND THEN STORED BY DISEASE TYPE OR SYMPTOM.