

## The ROI of EMR Explained, Part 2: Show Me the Money

Source: Dr. Michael Koriwchak (October 5, 2010).

It's time again to face the Doubters, those physicians who would dare question the benefits of EMR to the medical practice. Incredibly, the Doubters are unimpressed by EMR product literature containing pictures of beautiful providers holding shiny tablet PCs taking care of happy, smiling (are they even sick?) patients. They have the audacity to want to know their return on investment.

In the first part of this series I tried to explain how EMR uses parallel processing to liberate workflow, improve care and reduce costs. But any good Doubter recognizes that those arguments are only theoretical. The Doubter asks for real world examples and hard numbers. So I gave it a shot. For many of our perceived cost savings the hard numbers are much harder to find than I thought. I am no expert at financial analysis...but few physicians are.

The examples are in 3 categories. **Direct savings** clearly go straight to the bottom line. **Space savings** have a well-recognized financial value. **FTE savings** are by definition estimates; the effect on overhead (payroll) is difficult to measure.

### 1. Direct Savings.

- A. **Transcription Costs.** Our transcription cost for a busy physician was \$750-\$1000 per doctor per month. With the cost of printing and filing transcribed notes in the paper chart, the cost was easily \$1000 per doctor per month. We were paying 10-12 cents per line not only for the content of the note but the patient name, date of birth, etc. With EMR this cost disappeared. We save \$12,000 per doctor per year. Over 4 years, 48,000 after tax dollars are worth far more than the 44,000 taxable dollars offered by the Medicare "meaningful use" incentives paid over the same period.
- B. **Paper chart supplies.** A paper chart needs a manila folder, paper, labels, etc. A rough estimate is about \$1.20 per chart. We see about 17,000 new patients per year. Savings is thus about \$20,000 per year, or \$2200 per doctor per year.

### 2. Space Savings.

- A. **The empty file room.** After 2 years of EMR our paper charts were gone. We have 5 offices each with a 100 square foot file room, which became available for other purposes. Our rent is expensive, about \$25 per square foot per year. So 500 square ft x \$25= \$12,500 per year. (\$1400 per doctor per year)
- B. **Teleworking.** Our surgery schedulers and some of our collectors now work from home; to do their job all they need is a cell phone and secure Internet access. We have 3 schedulers and 2 collectors; each was using a standard cubicle 8 ft square, so roughly 300 sq ft or another \$7500 per year (\$833 per doctor per year).

### 3. FTE Savings.

- A. **Paperwork Automation.** Shortly after getting settled with EMR we began to automate the process of preparing preoperative paperwork. This includes the surgical consent, the preoperative history and physical (H & P) and some internal forms for routing data to our surgery schedulers. A staff member needs 10 minutes (1/6 hour) to complete these forms by hand. At an hourly rate of \$20 per hour (including benefits) it costs about \$6.50 per patient. With 400 cases per doctor per year the total savings is \$ 2600 per doctor per year.
- B. **Employee savings.** Our telecommuters come to work one day a week so their transportation costs go down 80%. Assuming a 40 mile round trip to work with a variable cost of \$0.30 per mile we get about \$2400 after tax dollars saved per year per telecommuter, or \$12,000 total.
- C. **Workflow automation.** Our patient phone call protocol is a good example of how to re-engineer a workflow to leverage EMR technology. This protocol uses 2 EMR workflow concepts that paper charts can't offer: remote access and parallel processing.

In our paper chart era phone calls from patients were handled in an unstructured, ad lib manner. I received phone calls in many different ways. Every office, every employee and every physician had his/her own personal preferences. Training everyone in a new protocol would work for no more than a few weeks at a time.

Our administrator designed an excellent EMR-based protocol for patient phone calls:

- A. The phone system was configured to route all patient phone calls (except appointment requests) from all 5 offices to a single experienced, trusted staff member. That is all she does.
  - She triages each call in one of the following ways:
  - Handles the call herself
  - Forward the message via EMR to the appropriate physician's staff
  - Forward the message via EMR directly to the physician (copy appropriate staff)
  - Call staff directly
  - Call physician directly
- B. Regardless of triage method a phone note would be entered in the patient's EMR chart and routed to the appropriate physician or staff EMR desktop for review.

Phone calls were delivered much more efficiently. Patient complaints about unreturned phone calls disappeared. Responses to phone calls were much easier since the chart was always available to everyone, all at once. Our guess is that we saved about one FTE across our 9 physician, 5 office practice, saving about \$40,000 per year including benefits, or about \$4,500 per MD per year.

We have similar processes in place to automate outbound faxing and our patient web portal.



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**The totals:**

- A. **Direct savings:** \$14,200 per MD per year. Take it home.
- B. **Space savings:** \$2,233 per MD per year. Grow your practice without paying extra rent.
- C. **FTE savings:** \$8,500 per MD per year. Intuitively, we are convinced that the FTE savings are by far the greatest financial benefit from EMR and are far greater than this figure would suggest. We have barely scratched the surface of workflow automation.

This remains a work in progress. I welcome all comments including corrections, better estimates, omissions...anything. And if anyone can help me nail down the FTE savings better I would be most grateful.

Thanks again for reading.

**Source:** Dr. Michael Koriwchak (October 5, 2010), retrieved from <http://www.wiredemrdoctor.com/2010/10/05/the-roi-of-emr-explained-part-2-show-me-the-money/>