

# EMR – Our First Year

AAOE Annual Meeting  
New Orleans  
Ann Hulett, CMPE, COE  
Rocky Mountain Eye Center, Inc  
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## Presenters

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Practice Administrator

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## First Things First

Every practice is different in their size, office numbers, sub-specialty and tech savviness.

Our motivations, financial conditions and therefore our priorities are all different.



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## Our Disclaimer

This is not a session on the “best” way to do anything.

This is not a session on the “best” system to buy.

This is simply a case study.



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## Background Factors Structurally - Who We Are...

Medium to Large Practice – 8 MDs, 4 ODs  
Needed a Retail Module - Optical Shops  
Multiple Locations - Eight  
Own and Manage our ASC – Two  
Entities with Single Database  
110 Employees – Training Issue



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## Background Factors Culturally – Who We Are...

- ◆ Large organization with multiple locations.
- ◆ Entrenched in our form-driven documentation procedures.
- ◆ Low tolerance for “out of the box” templates, drop down menus, logic, etc. We want it to be our way.
- ◆ Pragmatic – not much looking back or second guessing.
- ◆ We have common patient charts.



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## Where we were.....

- ◆ PRISM – Old time practice management system going down the tubes. No longer supported. Not capable of handling HIPAA electronics. Had to move the EPM.
- ◆ No optical inventory/sales software
- ◆ No EMR
- ◆ All WYSE terminals (Increased hardware cost)
- ◆ UNIX based – We were used to the machine that NEVER stopped and was never broke.
- ◆ Real-time connected at all locations – partial frame relays already in place

Cheap, Mostly Great But Had To Go



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## How We Shopped

By Committee  
*Patient Accts. Mgr*  
*Patient Service Mgr*  
*Administrator*  
*Lead Physician*



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## Selection Process

- ◆ Request For Proposal Process  
Necessary but only sort of useful – educates you and the doctors more than it distinguishes one vendor from another.
- ◆ Telephone/Web Demonstrations  
We found this helpful only from an appearance point of view. Appearance can be important when it comes to appointment screens or EMR home pages.
- ◆ In-Clinic Demonstrations-Six Vendors  
We did them at noon to expose as many docs as possible

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## Selection Process

- Preliminary Price Quotes-Six Vendors  
Difficult to see apples to apples but it gave us an understanding of how the various companies charge. It did provide a fairly accurate price relativity.
- Site Visits for Three Vendors  
Doctor involvement is CRITICAL. The value of site visits is to not only see the system but to see how the patient flow is handled. The doctor can also talk to another doc using the system.
- Recommendation to the Board

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## Our Priorities At The Time

- ◆ Integrated EPM and EMR  
*This turned out to be a good choice for us.*
- ◆ An appointment system that accommodated multiple providers going to multiple locations in an easy to visualize manner.  
*I think they all do these days.*
- ◆ A one page summary history that could be immediately visualized for each patient.  
*We got it but have had to customize it ourselves.*

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## If We Were Selecting Again

- ◆ Work Processes
- ◆ Take every piece of paper you use in the office and have the rep show you where it will be entered and where it will be viewed.
- ◆ If the rep can't show you where, then it will probably have to be scanned in.

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## If We Were Selecting Again

Interfaces and/or Image Viewing  
There is a difference.

Work and work until you understand what you can  
and can not have.

What models are supported.  
Show me the picture man.  
Call people.

Very few programs will have the interoperability we  
want within the standard EMR offering.

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## Pricing Variables

How is the software product priced...

- Per provider
- Per user
- Per concurrent user
- Per location
- Per product

How do they charge for second companies?

How will part-time providers be handled?

How will new doctors be handled?

Do they place the bulk of the cost in the training?

Can you control how much training you buy?

What enhancement software do they have that you will  
have to pay extra for? Are they pricing you everything  
they are showing you?

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## Our Contract Concerns

Staging in acquisition costs. Did not want to buy all  
of the software and equipment for EPM and EMR  
at once but wanted to lock in the price.

Not paying for maintenance until we started using  
the product. We went live on EPM, one year  
before doing our EMR conversion.

Protection in the event the install and conversion  
did not "work".

Being held hostage five years from now and not  
being able to access patient records.

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## Contracting for Training

- ◆ Contracted for what we thought was minimal.
- ◆ Including training in initial contract allows for financing but exposes to over-purchasing.
- ◆ For income tax purposes, training gets written off in year one.

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## The Costs

- ◆ Building Preparation – wiring and server closet
- ◆ Data Conversion – demographics from the old system
- ◆ Application Software Purchases – the product
- ◆ Hardware Purchase – likely to be greater than you think
- ◆ Network Software Purchase – no wonder Bill Gates is rich
- ◆ Point to Point Set-up – multiple locations only
- ◆ Security – big responsibility now
- ◆ Training and Staffing
- ◆ More hardware....

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## Application Software Costs

We purchased the package of EPM, EMR, Scanning and Optical.

This portion of the conversion was only about 31 percent of the total.

We paid for interfaces in our initial purchase. We would probably not do that again. Interface cost, the PC, the labor can cost more than the instrument did. Consider scanning.

Scanning software is great – priced separately???

Little things that hack you off...buying ICD9/CPT files, buying RVU files, buying Crystal reports, drug formularies.

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## PC Specs

We opted for PCs and not thin clients due to Citrix concerns, image viewing, manipulation, etc.

The cost differential between higher-end thin clients and PCs was about \$260 at the time.

We bought custom-built PCs in the first installation. We are buying DELL now. We are not buying big monitors.

We paid for initial install and set-up labor costs: We now purchase and install our own.

Ideal exam room set-up remains a mystery.

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## Hardware... Equipment Underestimates

- ◆ We started with PCs with too little memory. PCs with peripherals such as scanners need more memory. We are buying 1gbg with the smallest hard drive now.
- ◆ We needed more PCs than we thought. Fax manager software needs a pc, each interface needs a pc, televox, etc.
- ◆ We thought we would upgrade more of our existing administrative pcs than we were able to.
- ◆ We needed far more scanners and printers than we had anticipated.
- ◆ Business office people need more desktop scanners
- ◆ Proximity of printers, scanners, is key in the lane areas.

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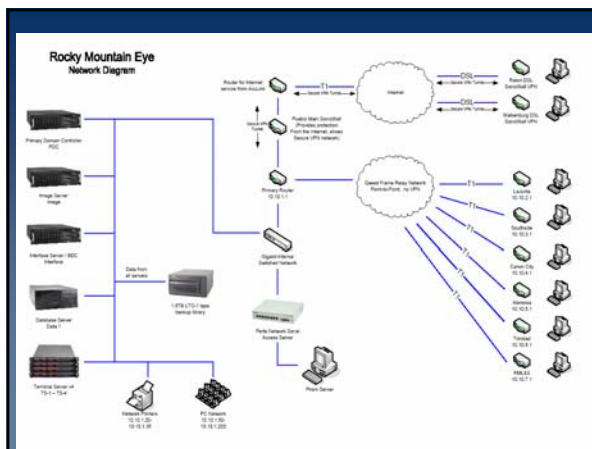
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## Wireless Access

- ◆ We opted "against" wireless for our user stations due to potential loss of speed. Obviously, you would not need as many units if you go wireless.
- ◆ We opted "for" wireless as redundant access for physician tablets in the lanes and OR.
- ◆ We established policy against any downloading of data to laptops and pdas.
- ◆ "Off the shelf" wireless setups can be problematic in a larger office due to loss of connection between access points.

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## Total Project Breakdown

Application Software (EPM, ICS, EMR, Optical)	30.7%
Networking Software	19.2%
Hardware	37.8%
Building, Conversion, Communications	12.3%
Total	100.0%

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## Incremental Costs of Adding a Doc

An additional (not replacement) provider will cost us \$10,000 - \$14,000 in electronics cost.

This is for new licenses for all applications and a work station – probably an expensive one (laptop/tablet).

EASY to overlook when you are projecting the financial impact of an associate.

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## Financing...the hard part

- ◆ Multiple loans/leases in order to stage in acquisition.
- ◆ We leased to avoid contributing capital.
- ◆ Four year lease.
- ◆ We bought all of the software at once.
- ◆ Paid cash for small software apps, building preparation, communication lines, new doctor licenses, printers, scanners

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IT TOOK US TWO YEARS  
TO MAKE A DECISION AND  
TO BE FINANCIALLY AND  
CULTURALLY READY  
TO TAKE ON A  
TOTAL CONVERSION



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Insert Joke Here...



We tried...



We couldn't find anything funny  
about EMR

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## Biggest Challenges

- ◆ Physician Buy-In
  - Buy-in does not inherently happen just because you spend a lot of your own money on a system.
- ◆ Staff Buy-In
  - Took a while for everyone to realize they were a part of this project. No one gets an out for age, tenure or lack of interest.

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## Training

- ◆ Each person attended...
  - Telephone call documentation training
  - EMR Training One and Two
  - EMR Hands On Practice Session(s)
    - ◆ Ten Full Visits Into Test Data Base
  - EMR Actual Data Entry session
    - ◆ Advance entry of actual meds and med histories on upcoming patients.
  - Scanning Training
  - Scanning Day
  - Rotation Thru EMR Live Pod

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## Our Implementation Process

- ◆ Took one to two doctors approximately every two weeks thereafter.
- ◆ Six months for twelve doctors to implement
- ◆ All patients in nine months
- ◆ Took new patients first.
- ◆ Did not "advance scan" records.
- ◆ Agreed upon what historical records would be scanned.

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## What We Scanned

- ◆ Last 3 Years of Exam Forms
  - Forms, notes, procedure logs, prescriptions, tests, test logs, consents, flow sheets and correspondence
- ◆ Most recent CL and Optical Orders
- ◆ Med Log
- ◆ HIPPA signature, signed disclosure forms and lifetime Mcare auth form
- ◆ All Refractive Procedures

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## Our Implementation Process

- ◆ One lead physician served on the core group for system selection and counseled on template and document design.
- ◆ We took him live in Oct., 2006
- ◆ Day one, 19/41 patients entered as electronic patients
- ◆ Day four, 41/47.
- ◆ Ran 45 mins to an hour slow during this period.
- ◆ Week three, all patients electronic.
- ◆ All techs in the pod required to enter work-ups.
- ◆ Allowed six weeks before taking the second doctor.

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## Implications for Patient Flow...

- ◆ Are we going to cut the schedule?  
We chose to not do this if we could avoid it.
- ◆ Who is going to enter the work-up data?
- ◆ Who is going to enter the exam data?
- ◆ Who is going to finish the record while the doc moves on to the next patient?
- ◆ Is the office staffed and doc accustomed to having an assistant in the room always?
- ◆ Or is the doc going to do the entry?

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## The Transition – Messy-inevitable

- ◆ Some docs electronic – some not – call implications.
- ◆ How do we keep track of the patient?
- ◆ No chart in the bin to look at.
- ◆ Loose papers everywhere.
- ◆ Looking for the chart when there isn't one.
- ◆ New correspondence procedures
- ◆ Continuing to want to pull the old chart.
- ◆ What goes to surgery?

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## Pragmatics

Changing intake processes and forms to match the flow of the EMR system may be easier than revising the EMR template.

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## Critical Issue

Who is going to enter the data?

A busy provider will be slowed down by having to enter more than just their impression and plan.

A less busy provider may be slowed even more.

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### Critical Issue

New doctors are coming out accustomed to EMR from academic hospital systems and the VA system.

We have been functioning in a scribe environment for a long time. The cost/benefit of a medical assistant to enter data and keep the doctor moving is worth doing.

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### Critical Issue

Knowing who is in the exam lane

There is no chart to do a cursory review on when entering the room.

We use the fee sheet and note on the fee sheet what the patient is here for. Some offices have a review station outside of the exam rooms for the doctor to look before entering.

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### Critical Issue

What do you take to surgery?

We own the ASC so we have a HIPAA partnership agreement that allows us to access patient records from the center, even in the OR.

When going elsewhere, the surgeon must work with the staff to print out what they need to take along.

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## Critical Issue Limbo

- ◆ Interfaces...difficult when some patients are still paper and some are electronic.
- ◆ Interfaces...just not available for instrumentation that is not the latest model.
- ◆ Telephone calls...you end up printing them out for all of the charts that are not electronic yet.
- ◆ Some docs live, others not...you need a system for knowing when an electronic record needs to be printed out.

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## Beautiful Things

No one is looking for a chart

Not just the medical records staff person but so many others are no longer looking.

Surgery Schedulers have the information they need.

The Billing Office can print what they need for insurance companies.

Chart audits can be done in a snap from the desk.

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## Beautiful Things

Remote Protected Access

Doctors can remote into the system from home.

Doctors can remote into the system from another office.

Doctors can remote into the system from the surgery suite.

No data is moving from the servers.  
Nothing is downloaded.

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## Beautiful Things

Patient Data  
Pulled Forward More Easily

Med Logs  
Graphing of Key Data  
(IOPs, Blood Sugars)

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## Beautiful Things

The data can be "mined" to protect the doctor and practice from liability.

Non-compliant patients can be found via sorting on fields of your choosing.

Weekend and nighttime pt. communications can be better supported and documented.

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## Beautiful Things

Standardized Care or Compliance with Protocol Care is Easier

System can be customized to prompt for completion of all steps in the protocol.

System reminds the doctor on the home page when a patient is due for various types of follow-up care. Last IOP, last dilated exam, last OCT, etc.

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## Beautiful Things

Documentation is honestly and ethically better.

Doctors must "sign off" charts.

Elements of the HPI are prompted.

Internal auditing process tells you how many systems were reviewed.

Impressions and corresponding plans are WAAAYYY better documented.

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## Beautiful Things

Our Transcription Cost is Almost NIL

Diabetic Letters, Primary Care Letters,  
Referral Doc Letters, Plaquenil Letters,  
Surgery Follow-Up Letters

Can all be generated from a template,  
edited by the doc and auto faxed.

No typist, no envelope, no postage.

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## Optical Shop

We sacrificed some reporting functionality in exchange for integration and a single vendor.

Patients receive only one statement.

Bar scanners cost money too.

The dispensing stations had to be reworked.

The workflow changed.

Printing Patient Rxs in the Optical Shop.

We are now ordering direct from the fitting station via Vision Web

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## On-Site IT Knowledge

- ◆ We found that we needed to know “something” about Sequel even just to monitor the backup process.
- ◆ We took a bright and experienced technician with limited tech knowledge and turned her into our in-house IT Coordinator.
- ◆ We used our Head Tech to manage the back-office culture change.
- ◆ Crystal reports for dummies needed here.

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## Recurring Costs - Monthly

- ◆ Software Support—recurring percentage of initial purchase.
- ◆ Network support that is off-site.
- ◆ Clearinghouse costs
- ◆ Communication lines
- ◆ Dedicated staff
- ◆ Replacement of equipment
- ◆ LARGE lease payment

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## The Responsibility

We now have the entire patient record, for which we have an enormous responsibility to care for and protect, resting in a stack of servers. The pressures for “uptime” and security management feel much greater.

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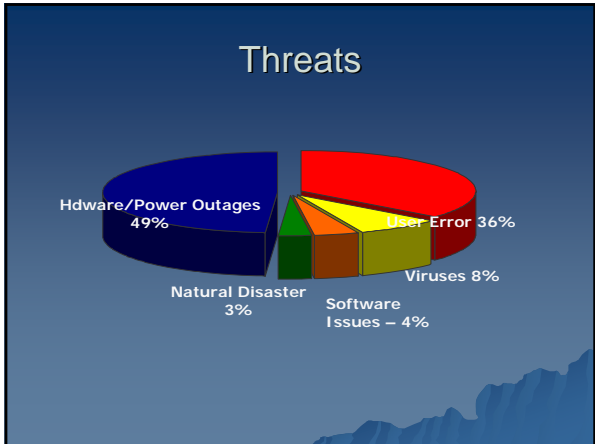
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### Things we aren't doing yet

- Auto coding/auto filing
- Using a Provider Approval Que
- Interfacing all equipment
- Patient tablet signatures on consents, waivers, etc.
- Automated the ASC

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### Respect for our Responsibility

Constant diligence. User education on personal responsibility.

We are working on organization wide respect for the integrity of the system and patient data. Personal desires for convenience and access are secondary.

Ethics in clicking.

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## Would We Do It If We Knew...

- ◆ The doctors are not all "thrilled" BUT
- ◆ We accepted the move to electronics as inevitable.
- ◆ Once we have had the taste of fast access to a lot of data, we would not go back.

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## Is It Easier?



In many ways...YES

In many ways...NO

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## Is It Cheaper?



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Is It Better?



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