

#### BayArea Retina Associates

Diseases and Surgery of the Retina and Vitreous

### Selecting an Electronic Health Record System: Step by Step

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### Disclosures

- No corporate sponsorship
- No EHR vendor support or involvement

### **Electronic Health Records**

#### Good reasons to adopt

- Increase practice efficiency
- Improve chart documentation
- Reduce audit liability
- Increase patient safety
- Reduce practice costs
- Medicare penalties in 2015

#### **<u>Bad</u>** reasons to adopt

- Incentive money
- Everyone else is doing it
- I can get a good deal right now
- Local hospital uses this system

E-Rx incentives and EHR incentives are mutually exclusive. E-Rx incentives depend on Medicare volume.

# What If I Do Nothing?

- No change in practice efficiency
- No change in practice liability
- No change in Medicare payments until 2015
- Software will improve with time
- Providers will probably consolidate

# What If I Choose the Wrong EHR?

- Reduced productivity
- Increased practice costs
- No reduction in practice liabilities
- Wasted time and money
- Difficulties regaining possession of data
- Switching back to paper or another system is disruptive

# How Can An EHR Help?

- Increased productivity
- Reduced audit liability
- Reduction of medical errors
- View trends/patterns/comparisons
- Data backup
- Access to charts anytime/anywhere
- Reduced time dictating after hours

# Financial Benefit/Cost

#### **Benefits**

- Long-term productivity growth
- Value of decreased liability
- Reduce practice overhead
- Stimulus money

#### <u>Costs</u>

- Short-term productivity drop
- Training fees
- Hardware
- Up-front EHR costs
- Ongoing EHR costs

Most of the **benefits are difficult to quantify**. Most of the costs are known or predictable.

# The EHR is Part of A System

Doctors



Patients

#### Electronic Charts





Electronic Technologies



Data Infrastructure





Data Input Devices Staff

### The Entire System Must Work

- A cloud-based EHR is useless if you lose internet connectivity...
- Complete documentation is useless if default normals reduce accuracy...
- An EHR fails if it causes doctors to retire early or seek psychiatric help...
- Clicking a mouse 5,000 times a day can cause repetitive stress injuries...

# Which Players Should Be Involved In Evaluating EHR Systems?

#### This is NOT a multiple-choice question

- Doctors
- Front desk staff
- Technicians and photographers
- Practice administrator(s)
- Billing staff
- Contract consultant/lawyer

We chose 1-2 from each category based on skill and enthusiasm.

# Step 1: Identify Goals

- Reduce financial liability in case of audit
  - Millions of dollars may be at stake
  - Little recourse in event of penalty
- Improve patient care: quality and safety
  - Less redundant data entry = fewer mistakes
  - Chart data available in any office or on call
- Implement fully before Medicare penalty
  - Identify a realistic timeline starting at the end
- \* These goals will differ by practice/specialty

With **multiple offices and doctors**, our primary concerns were good documentation and accessibility.

# Step 2: Identify Threshold For Adoption

- All key players must be committed to the process
   All doctors, not just the EHR champions
- If no system meets minimum criteria, then no transition to EMR



# Step 3: Identify The Team

- Physician champion(s)
- Front desk champion(s)
- Technician champion(s)
- Photographer champion(s)
- Administrator(s)
- Billing staff



#### CHAMPIONS

- ≻Learn quickly
- Understand technology as well as clinical needs
- ≻Ask questions
- ➤Teach others with patience and enthusiasm

# Step 4: Evaluate In Stages

- Web demos for as many products as possible = survey the space
  - To pass this round: Not horrendously bad
- On-site demos for products that pass the first cut, with in-house evaluation team
  - To pass this round: No major deal-breakers
- Second round of on-site demos for products that pass the second cut, for all partners
  - To pass this round: All docs willing to use it
- Site visits for short list of contenders
  - Decision: adopt or hold off









# Minimum Criteria

- EHR company must demonstrate an understanding of ophthalmology needs
- EHR must be installed and working in the offices of comparable practices
- EHR company must perform demos based on our specifications, not theirs
- Every part of the EHR must work correctly today

# Minimum Criteria

- EHR must create intelligent connections between data:
  - No need for redundant data entry
  - Links between findings, diagnoses and ICD-9
- The interface must be intuitive
- Critical information accessed in 2-3 clicks
- Typing should be an uncommon input
- Letter output should be good enough to forego dictation

# **Product Evaluations**

➢ CompuLink ➢ GloStream ➢ Hill NextGen ≻ ifa ➤Integrity > IO Practiceware > MD IntelleSys ► MD Office ≻ MedFlow ➢ NextGen ➤ VersaSuite And more...

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#### Detailed, uniform criteria for evaluation

### **Examples of Unacceptable Flaws**

- If a doctor wants to add to tech's history, he/she must erase the entire history and start over
- Drawings have only one graphical layer
- Findings mixed up with diagnoses:
  - CME is listed under DR or RVO, not freestanding
  - Lack of connection between diagnoses and ICD-9 codes

### Site Visits Were Invaluable

- Staff and doctors at host sites described the pros and cons of their systems honestly
- Hosts recommended changes to the implementation process
- Different practices use the same software in very different ways
- Unrelated to EHR evaluation, clinical observation was highly educational

### Interlude: Parallel Decisions

- Stand-alone EHR vs. integrated with EPM
  - Best-in-breed versus convenience
  - Integrated may have less robust PM functions
  - Stand-alone may require upgrade of EPM
  - Stand-alone requires investigation of data bridge

### Interlude: Parallel Decisions

- Cloud-based EHR vs. Client-server EHR
  - Dependence on internet connection vs. local server maintenance
  - Cloud-based requires internet uptime guarantee or redundant connectivity
  - Client-server requires dependable local IT service and more variable costs for maintenance and service
  - Security of data backup versus data possession: do you trust what you cannot see, and do you have it in writing?

# **Small EHR companies**

### Good

- Willing to customize
- Personal service
- Lower cost (in general)
- More willing to spend time building a data bridge with your EPM

#### <u>Bad</u>

- Willing to customize
- May fold if unsuccessful
- May be acquired if successful
- May not have previously built a data bridge with your EPM

# **Step 5: Final Review**

- Confirm decision with stakeholders
- Confirm adequate support provided
- Analyze integration with PM system
- Confirm full certification to avoid penalty
- Review contract terms:
  - Cost, data ownership, etc.
  - Independent contract review



We took our contract review to a consulting firm that specializes in EHR contracts.

### Integration With Practice Management Software

#### HL7 bridge

- Requires reasonably modern EPM
- Works best if both EHR and EPM vendors cooperate on the development

Additional data bridge?

• Some useful data may not be included in the HL7 bridge

# **Step 6: Plan Implementation**

Timeline for preparations

• Hardware, internet, HL7 bridge

Staged rollout versus all-at-once

- Start with physician and staff champions
- Start with slower office(s)

Unlike EPM implementation, EHR implementation can be rolled out slowly rather than all at once.

# **Implementation Preparation**

Upgrade internet connections to all offices

- Business level of service from one company
- Redundant connections
- Adequate speeds for EHR



HL7 data bridge discussions

- Review of specific data variables
- Commitments from both EHR and PM sides

MD IntelleSys requires: **2** MB/s down and **1** MB/s up. Comcast Business Cable starts at **12** down and **2** up.

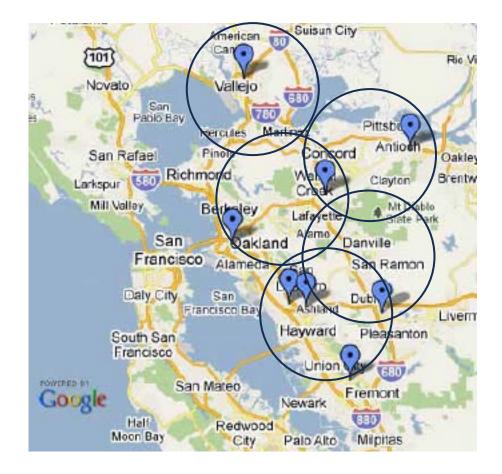
# **Implementation Preparation**

- We are part of a national community
- We can learn from the mistakes of others
  - We contacted colleagues who had recently implemented MD IntelleSys
  - We compared notes and learned from each other
  - We are setting up a working group with others who are implementing MD IntelleSys to facilitate ongoing discussion and learning

# **Implementation: Staged Rollout**

The challenge:

- 8 Offices
- 6 Doctors



# **Speed of Implementation**

- Add new office(s) every month after the pilot phase, if all goes smoothly
- Start each doctor on EHR for only a few patients a day initially
   Each doctor will learn MDI at a different pace
  - Each doctor has a unique clinic flow



# **Speed of Implementation**

- Rushing is a bad idea...
- Maximum incentive payment if complete implementation by Q3 of 2012
  - Cost of waiting extra 1 year: ≤\$5k/doctor
  - Cost of rushing: More than \$5k/doctor...



# How Much Initial Exposure is Right?

- When a doctor first starts using EHR:
  - Transitioning the entire workday is risky
    - Loss of productivity due to slow pace
    - o Physicians, staff, and patients' frustration
- Transitioning too slowly is problematic too
  - Inadequate exposure to build basic skills/comfort
  - Need psychological commitment to the new system

# **Existing Patients: Data Transition**

- How much data from the paper chart should be entered into the EHR?
  - New patient note
  - Procedure notes
  - Surgery notes
- Set up a protocol for staff to follow



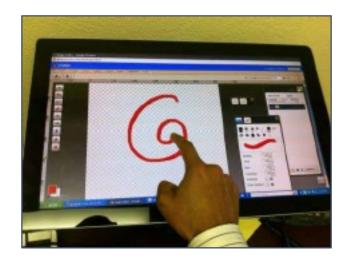
• Paper charts will remain for reference during a transition period of at least 6-12 months

# **Usability: Factors to Consider**

- Inputs: mouse, keyboard, finger, stylus
- Ergonomics: how does EHR change the exam room?
- Face time: how will EHR change doctor positioning and patient eye contact?
- Scribes: do you use them / need them?

Watching other docs in action during our **site visits** provided valuable information about usability.

### Hardware / Ergonomics









# Summary

- Step 1: Identify goals
- Step 2: Identify the threshold for adoption
- Step 3: Identify the team
- Step 4: Evaluate in stages
- Step 5: Final review
- Step 6: Plan Implementation

# Summary

- A detailed, systematic approach may reduce the chance of a bad decision
- Different practices may have different needs and goals:
  - Integration of optical shop or other services
  - Relative frequency and complexity of diagnostics and procedures
  - Different perceived liabilities
  - Differential willingness to invest in new system
  - Potentially different timelines based on valuation

# Summary

- Using a common system has potential benefits if it makes sense for everyone
- Sharing what we learn along the way can only benefit the entire community
- We all want to be careful and thoughtful, without reinventing the wheel

