

Optimizing an EMR for the cardiologist and other specialists



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FACULTY/PRESENTER DISCLOSURE

- **Faculty:** Dr. Maheswaran Srivamadevan
- **Relationships with commercial interests:**
 - **Grants:** none
 - **Speakers Bureau/Honoraria/Research Support:** Abbott, Boehringer Ingelheim
 - **Consulting Fees:** none
 - **Advisory Board:** none
 - **Clinical Trials:** Amgen, Bayer, Pfizer

DISCLOSURE OF COMMERCIAL SUPPORT

This program has received *No Commercial Support*

- Potential for conflict(s) of interest:
 - No conflict of interest

MITIGATING POTENTIAL BIAS

- There is no commercial involvement in the development of this program or its content and no potential bias

Objectives

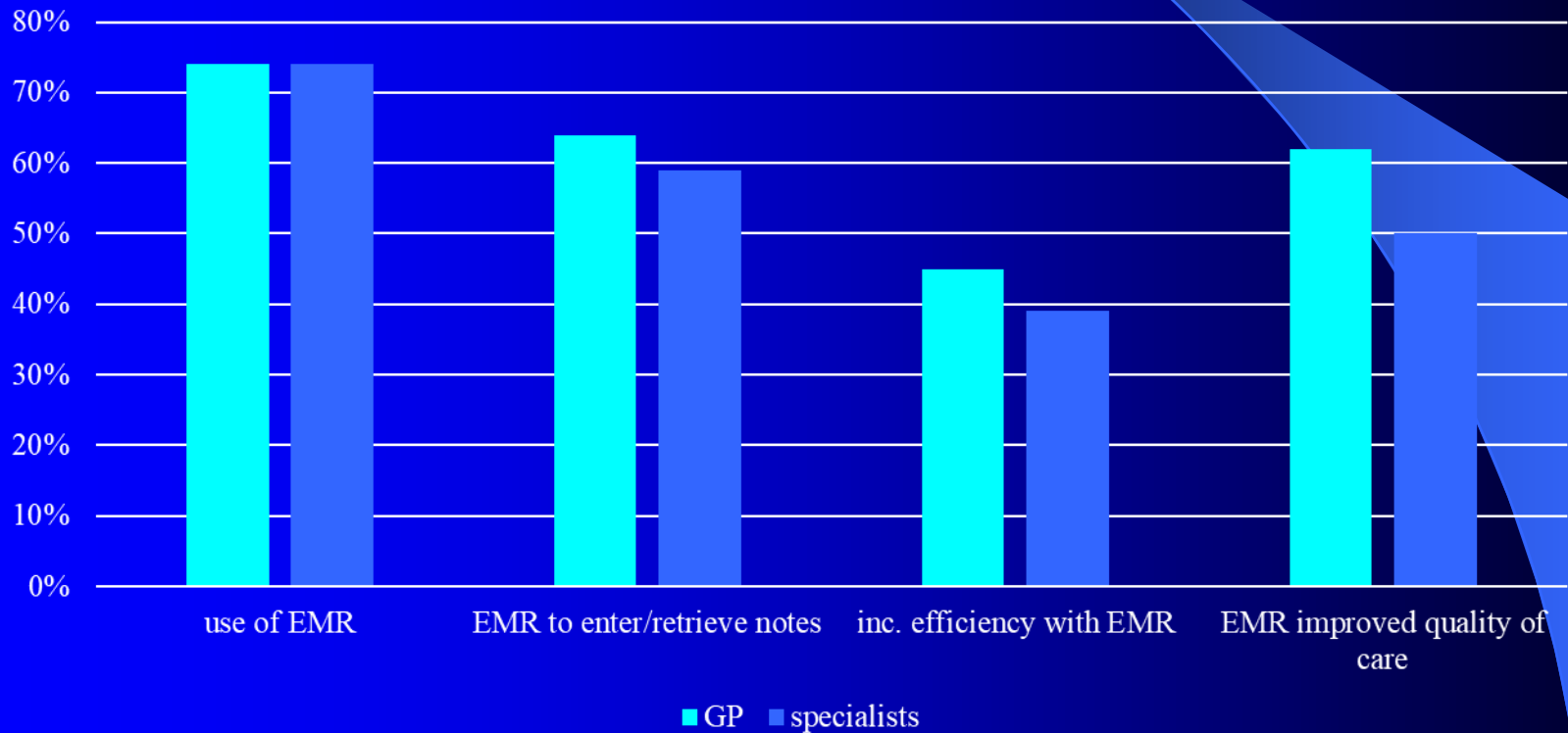
- Customize an EMR for cardiology and other specialties
- Integrate Medical Algorithms into the EMRs to optimize patient care
- Customize EMR into a stand-alone solution for cardiac diagnostics reporting & data-integration

The value of electronic medical records

- **Track** data over time
- **Identify** patients who are due for preventive visits and screenings
- **Monitor** how patients measure up to certain parameters, such as vaccinations, LDL and blood pressure readings
- **Improve** overall quality of care in a practice

Specialists vs GP EMR use

May 2014 CMA discussion paper on enhanced use of EMRs



How to bridge the gap

- Customization to the specialty
 - Data collection
 - Diagnostics & Therapeutics
- Customization to the specific user
 - Preferred language / referral centers
- Integration of evidence based medical algorithms
 - Framingham/ASCVD/Q-risk
 - Charlson comorbidity index

Vendors will be vendors...

- ? time do I need to devote to customizing?
- What parts of the EMR can be customized?
- Can we (the practice) do the customization?
- How much training does the doctor's office need to do the customization?
- Do we need to learn computer programming skills in order to customize?

The best kind of **specialty EMR** is not the one that has to be **customized** just for you, but the one you can easily **customize** yourself.

OSCAR EMR

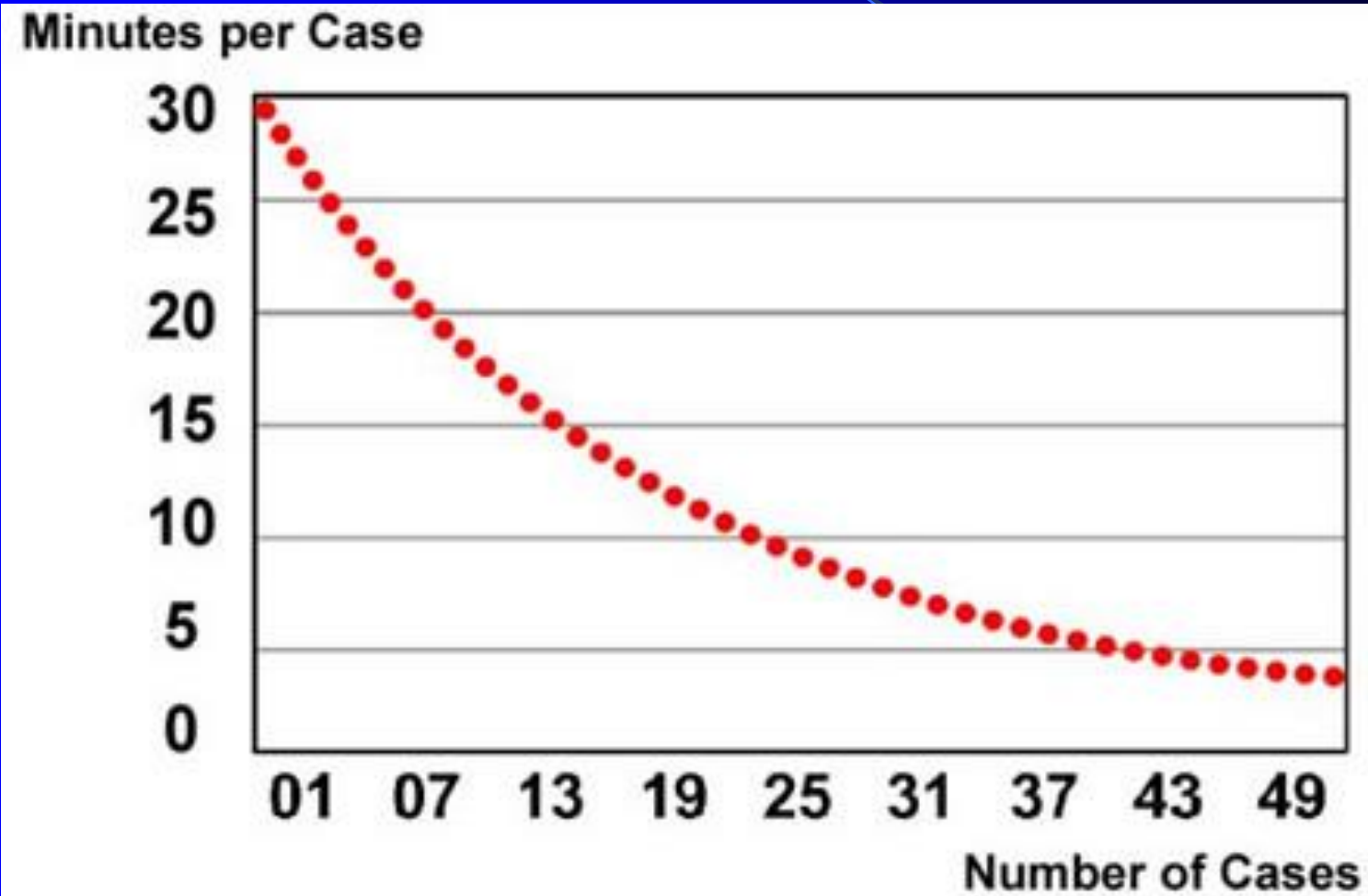
Open Source Clinical Application Resource (OSCAR) Electronic Medical Record (EMR) Incorporated

- A not-for-profit technology / software corporation
- Governed by Users (clinicians, academic institutions, industry experts) and Service providers
- Open and transparent operations (source code, features, bugs, manual are publicly assessable)
- ISO 13485 certified / OntarioMD-certified

OSCAR at ORHC/BCDC

- OSCAR certified service provider
 - Sets up and runs the server/database
- 3 receptionists
 - Processing of patients, billing
 - Uploading incoming faxes, outgoing faxes
- 3 staff cardiologists
 - customization
- 2 ECG technologists
- 3 Echsonographers
- 1 physician assistant

? time do I need to devote to customizing?



What parts of the EMR can be customized?

- Scheduling
- Data collection/integration
- Letter generation
- Applications/Eforms

Rewards of optimization

- Time spent with patient encounter
 - Slight increase with typing up plan
 - Offset by savings in automation of prescription writing, lab work and other documents
- Time spent completing chart/letters
 - Most benefit here
 - Time per patient cut from 8 minutes to 2 min.
 - 60 minutes saved on average 10 patient $\frac{1}{2}$ day

Before EMR

- Dictation – 4-5 min. (physician time)
- Integrating test/lab results – 3-4 min.
– TOTAL 7-9 min.
- Faxing and filing – 3 min. office admin time

EMR without customization

- Typing letters – 3-4 min (physician time)
- Integrating test/lab results – 2-3 min.
- Faxing and filing – ½ min.

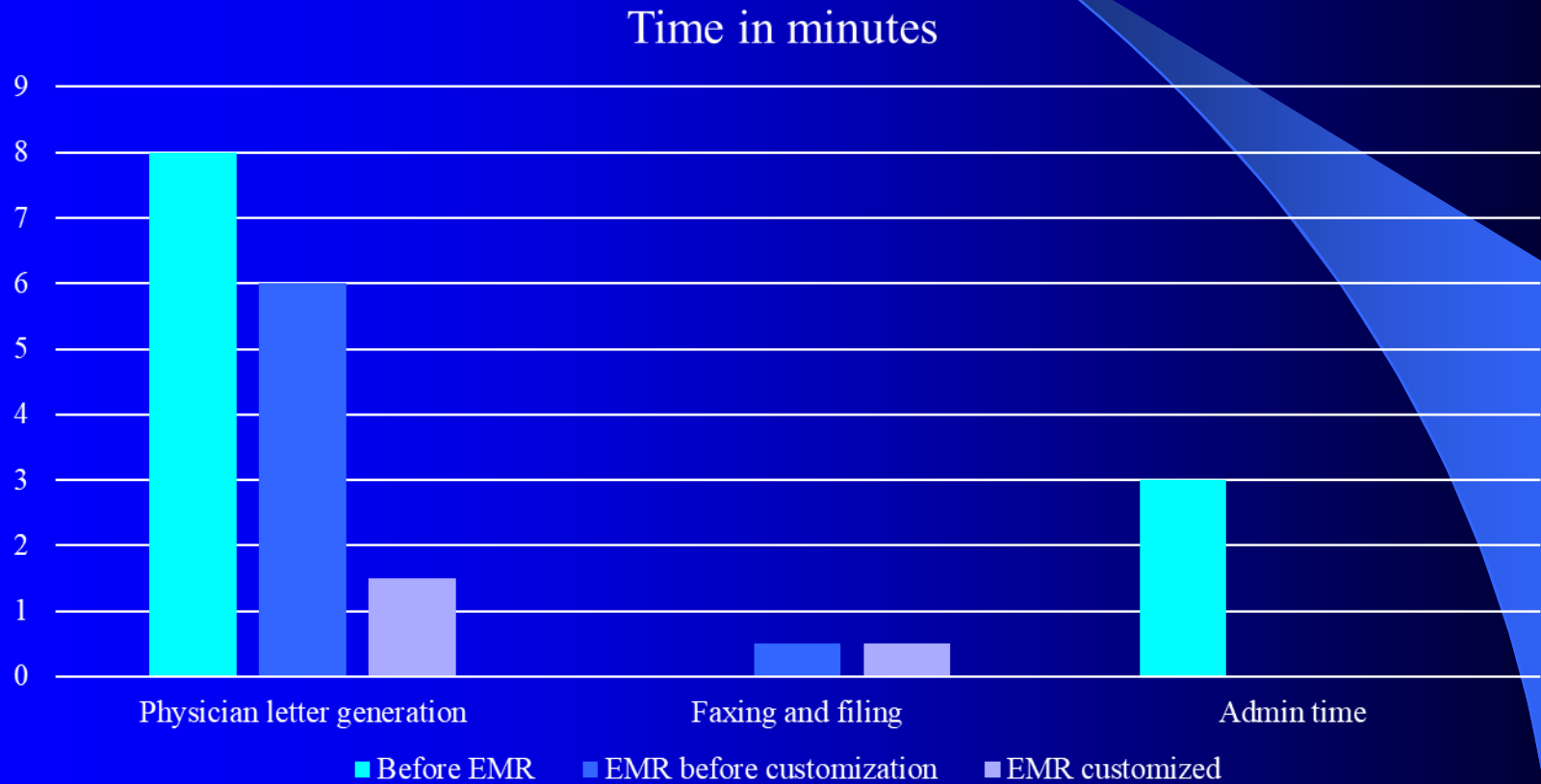
– Total 5 – 8 min

Save 3 min. admin time per patient

EMR with optimization

- Letter generation (typing already done at encounter) – ½ min.
- Integration of test/lab results – 1 min.
- Faxing and filing – ½ min.
 - Total 2 min. on average
- As per previous, 3 min. admin time saved per patient.

Time savings

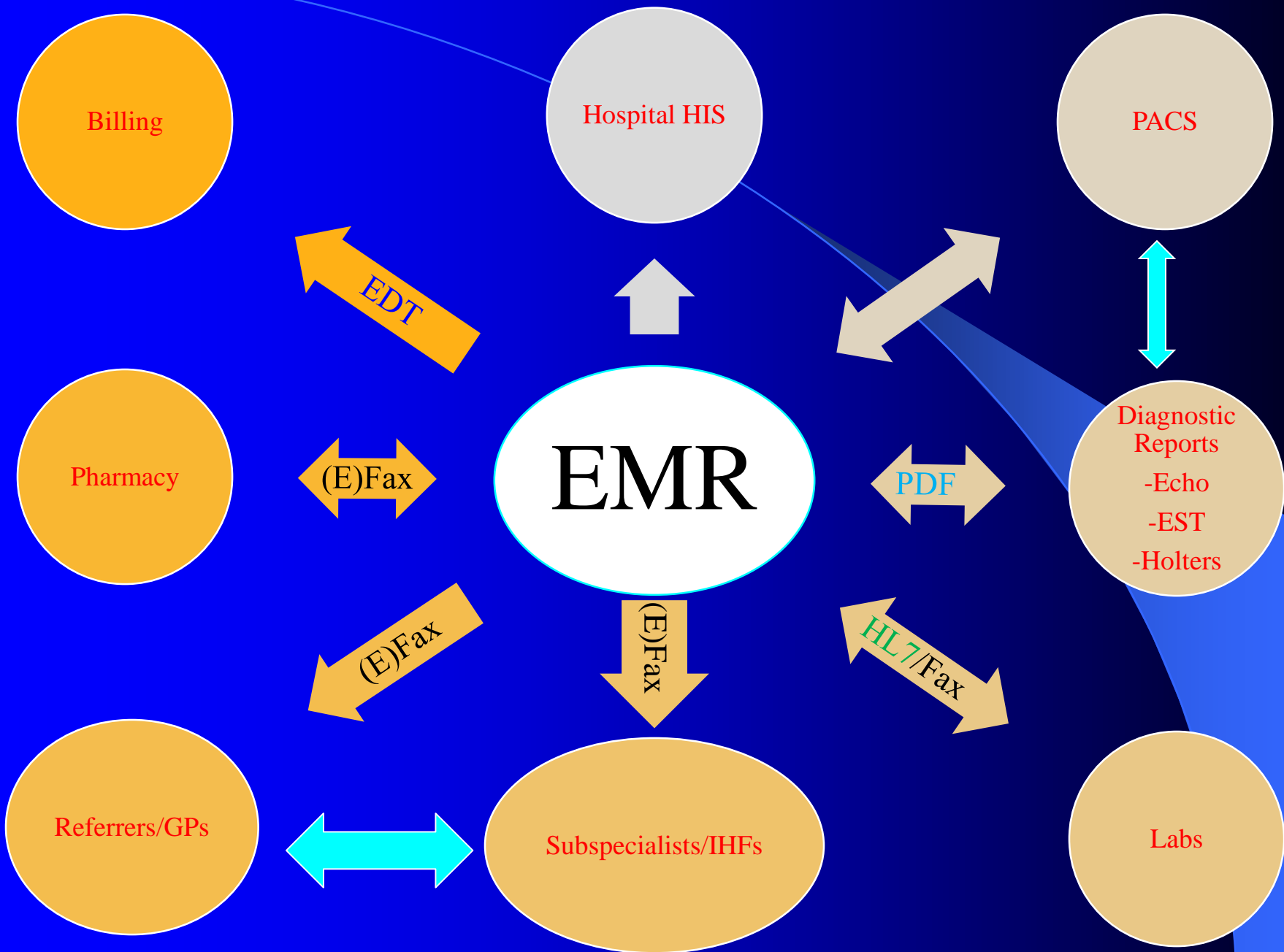


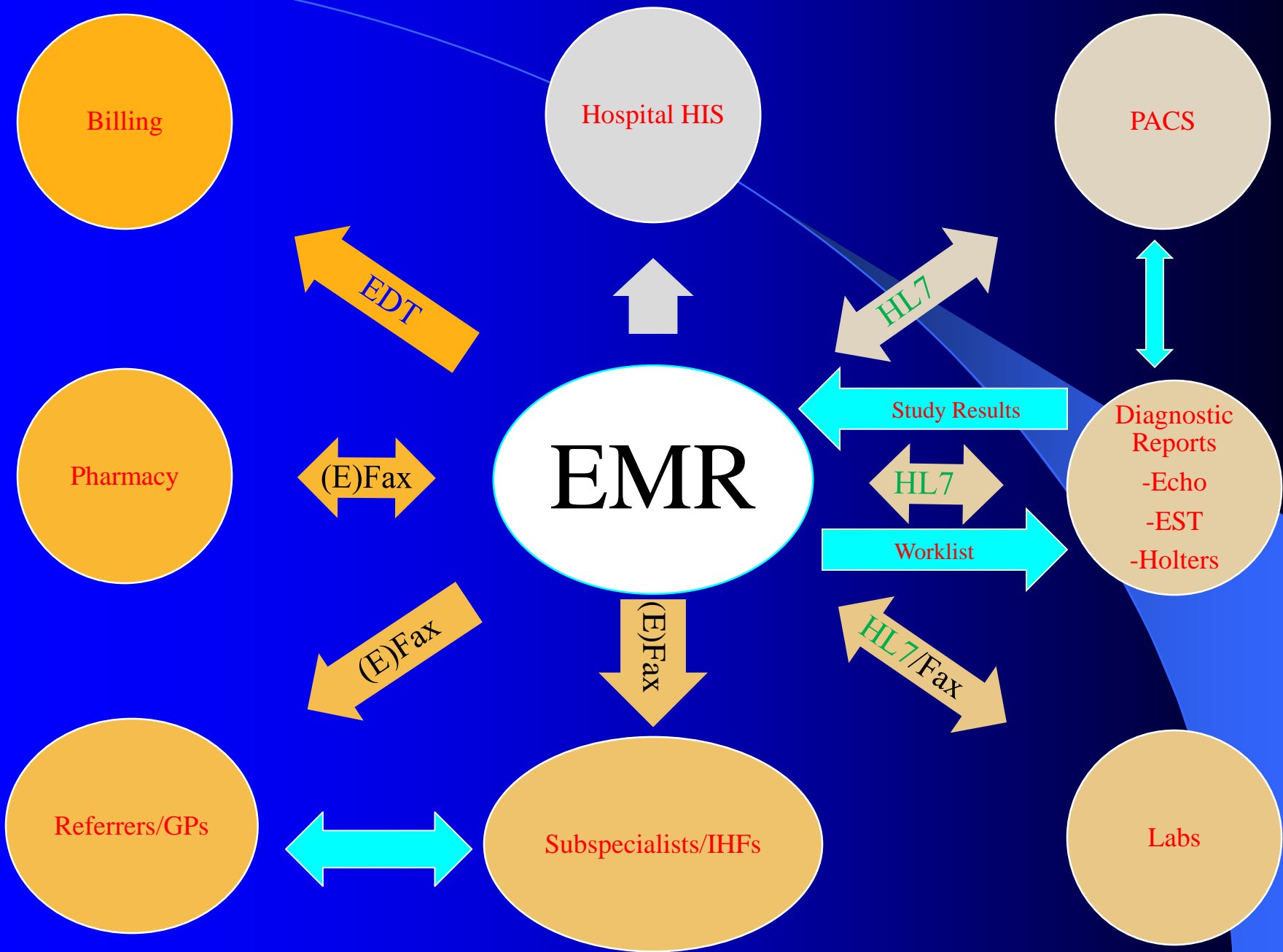
Enhanced patient care

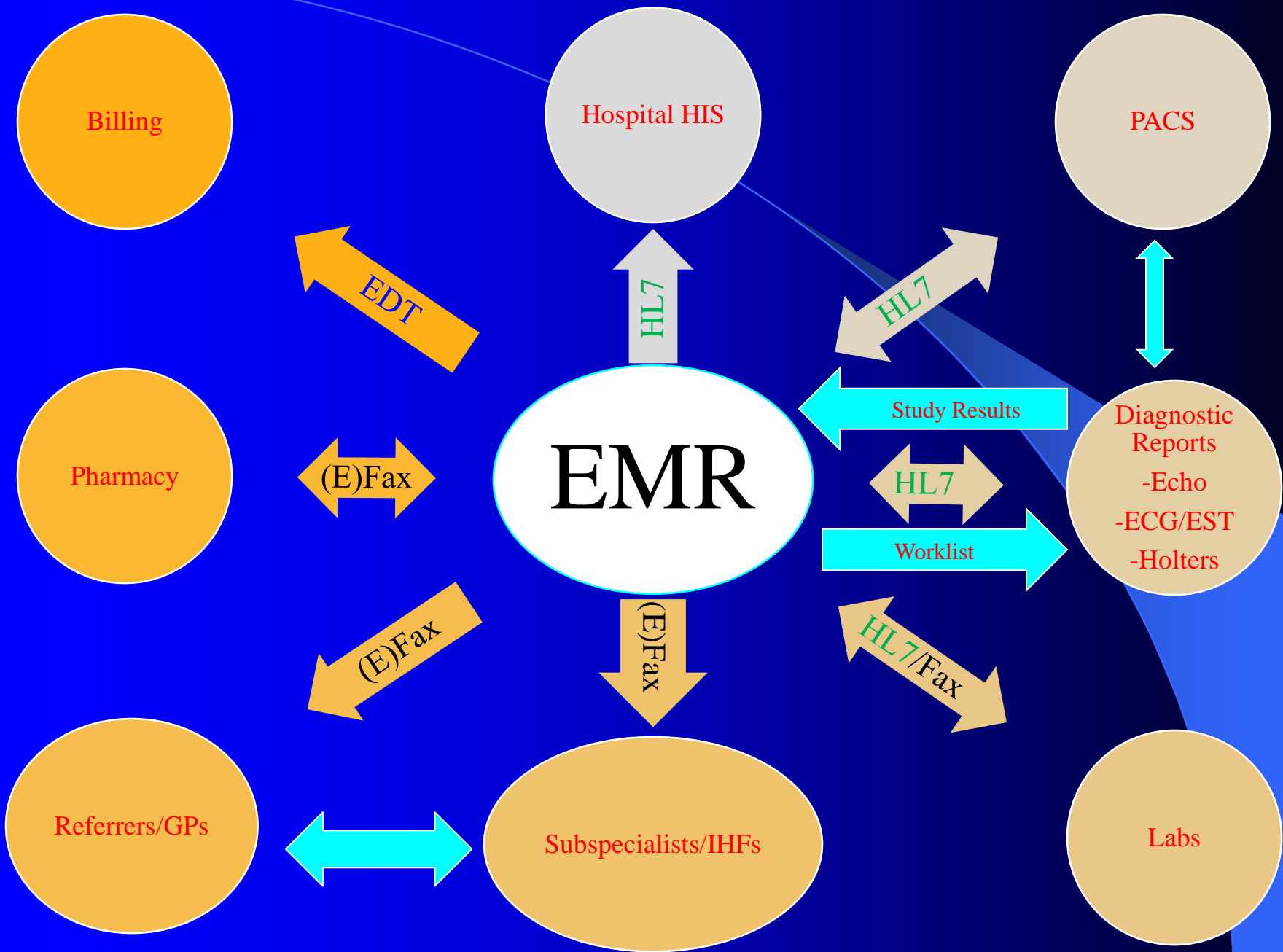
- Integrated evidence based algorithms
- Automated and personalized risk assessments

Further optimization at ORHC

- Turning the open source EMR into a stand alone solution
 - Integrate diagnostics data
 - Echocardiogram (automating parsing of CSV [excel] data to HL7)
 - All reporting of tests (echos, stress tests, Holters, ECGs) to be done through EMR
 - Presently reported through separate solutions and PDF report uploaded to the EMR







Final points

- Customization easy to do and very rewarding
- Can improve quality of care by incorporating medical algorithms
- Work needed to be done:
 - Integration of diagnostics via HL7
 - Currently offered by several solutions (very costly)
 - An open source solution would be beneficial in the current economic climate