Innovation in Practice: Exploring the Impact of Practice Redesign, Quality Improvement, and Information Technology on the Economics of Physician Offices

Michael S. Barr, MD, MBA, FACP
Dawn Cooke
Jacqueline W. Fincher, MD, FACP
Christopher J. Mays, MD, Member
Pam Shivers, CPC

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Disclosure of Financial Relationships

Jacqueline W. Fincher, MD, FACP

Has relationships with the following proprietary entities producing health care goods or services.

Consultant - BMS-Sanofi
Honoraria - Novartis, Abbott
Research Grants/Contracts - none
Speakers Bureau - none

Disclosure of Financial Relationships

Pam Shivers

Has no relationships with any proprietary entity producing health care goods or services consumed by or used on patients.

EMR Implementation: Practice in Evolution

Jacqueline W. Fincher, MD, FACP              Pam P. Shivers, BS, CPC
Managing Partner Practice Administrator

McDuffie Medical Associates
Thomson, GA
Internal Medicine, 2008
Washington, DC

Motivating Forces for Implementing EMR

- Documentation needs for proper coding
- Improved charge capture
- **To get paid for what we do**
- Need for legible charting by all physicians & staff
- Elimination of chart pulling and chasing
- Maintenance of current problem list and medication list

Who are we?
McDuffie Medical Associates

Motivating Forces for Implementing EMR

- Improve workflow and deployment of staff
- Minimize prescription errors
- Remote access to record from home or laptop
- Anticipating pay for performance (P4P)
- Create protocols for screenings & immunizations.
- Enable blinded data mining for quality indicators and other purposes, i.e. drug recalls.
**Hardest Decision to Make**

**Which EMR to Purchase?**

**Which EMR?**
- CCHIT – 3 year Certification Commission
- Resources for help: ACP, AAFP, State Medical Association, State Medical Care Foundation, MGMA
- Solid company with secure background
- Software support
- Integrated Practice Management (PM) system and EMR data base

**THE COST**
- Should not be the deciding factor
- You get what you pay for
- Cost of EMR – hardware & software
- Cost of Training
- Hidden Costs
- First year of software support
- Add-ons to the product

**Certification Commission for Health Information Technology – (CCHIT)**
 www.cchit.org

**Questions to ask an EMR Company**
1. Tell me about your company. How long have you been in business? How many employees do you have doing development and offering technical service?
2. How many physician practices do you serve? What size are they? May I speak with a few of them?
3. How do you license your product – for a term or perpetually, by physician or user?
4. What are your maintenance or support fees? Do they cover product upgrades?
5. What are your service policies and guarantees?
6. In addition to what I can expect from CCHIT Certified interoperability, what will I pay for other desired interfaces to products or sources of information?
7. Are there third-party costs for modules or components bundled with your product? Will I need to buy some third party products independently to make your product perform as demonstrated?
Certification Commission for Health Information Technology – (CCHIT)

Questions to ask an EMR Company
8. Tell me about your implementation and training services. What do they cost? How long will it take until my practice is successfully up and running using your product?
9. Are you willing to put these terms in a sales agreement?
10. What are your plans for staying up-to-date w/ CCHIT’s certification requirements?

Challenges
- Financing
- Personnel
- Change of Workflow

Challenges: Financing
- Lines of Credit
- Present Debt
- Decreasing payment by insurers
- Loss of Volume
- Loss of Revenue

What did we spend?
- Remodeling the Building $ 25,000
- Cost of the EMR w/ first year support 74,000
- Cost of Hardware 78,000
- Misc Cost
  - Air Conditioner 5,500
  - Wiring Building 10,000
- Total Cost $ 192,500

Estimated Return on Investment
ROI estimated at year 4 based on:
- Revenue past 3 years
- Estimated overhead cost for the next 3 years

Challenges: Personnel
- Physician buy in – CRITICAL- All or none!
- Staff buy in – Change of workflow and job functions
- Significant variation of computer skills of staff and physicians
- Technical support – within practice & local community
**Challenges: Personnel**

!#$&% Happens

These situations actually happened to us while in stage one of implementation.

- Front office employee retired
- Nursing staff manager returned to school
- Nurse lab manager developed a brain tumor

**Challenges: Workflow**

Reconfiguration of Physical Building

- Server Room
- Front Office
- Halls
- Work Up Rooms
- Lab
- Nurses’ desks
- Exam Rooms
  - PC or tablet
  - Wiring
  - Location of computer
  - Position to patient

**Challenges: Workflow**

Transformation of Staff & Physicians

- Writing to typing
- Prescription writing to typing/faxing
- Manual chart search to automatic digital protocols for health screenings & immunizations
- Verbal/sticky note ordering to physician order entry for labs, x-rays, referrals with appropriate diagnoses
- Stacks of charts and paper to organized/prioritized documents on desktop

**Challenges: Workflow**

Communication with Organizations

- Interfaces with labs, hospitals, radiology
- Hospital cooperation with new documentation of orders, charts, etc
- Pharmacy cooperation/communication for prescription faxing or electronic prescribing

**Where to Begin**

- **Make a timeline** - start 5 months before the “Go Live” date – and **stick to it**
- Administrative steps
- PM / EMR interface
- Talk to primary labs & hospitals about interfaces
- Set up fax server

**Getting the Team Ready**

- Take it slow
- Meetings, Meetings, and more Meetings
  
  *Communication is the key to success*
  
- Plan the implementation around a slow time of the year (Primary Care : May – Sept time frame)
- Appoint “Super Users” and start their training 2-3 months prior to “Go Live” date
- Reduce physician schedules to half around “Go Live” date for first month then by one third for next two months.
Training Requirements
Superusers need 3 days offsite training to learn the system and:
- Learn how to set up:
  - Custom lists - meds, referrals, x-rays, pharmacies, order sets for labs
  - Flow sheets
  - Obs terms
- Assign tasks
- Understand and create work flows

Lab Draw Workflow
When the pt comes in the nurse verifies the orders. She hands the pt an forms that are needed, such as pick a lab, or sign an ABN (if needed.)
Once the lab queen prepares the specimen to go out, she changes the status to “In Process” which prints an order to accompany the specimen.
The blood is drawn and the nurse documents in the chart and on the superbill. The chart is sent to the lab queen under an “Admin Hold” status.
The lab queen checks a daily report to verify that all labs have been received and changes the order to “Complete” once we have the results.

Getting Started
- Start first with intra-office communication - “flags”
- Second, phone communications – “phone notes”
  - Medication refills
  - Patient phone calls, requests
  - Communications from other clinics, nursing homes, hospitals, etc

Chart Set Up
- Start loading charts in the order patients are scheduled
- Diagnoses/Problem List - push from Practice Management side
- Doctors and Clinical Staff need to preload
- Preload
  - Problem list
  - Medication
  - Pertinent past medical history
  - Pertinent reports – last labs, x-rays, ekgs, diagnostics
  - Health screenings- last pap, mammogram, PSA, etc
  - Immunizations

Chart Set Up
- Quick text recurring words, sentences, instructions
- Custom list – medications w/ instructions
- Pharmacies – fax, phone, address
- Referral docs – fax, phone, address

The chart set up gets everyone navigating within the new system without the pressure of a live patient in front of them.

Countdown to “Go Live”
- Write down “workflows” and walk through them literally
- Mock patient visits
- Have weekly meetings to communicate and assess how everyone is doing
- Don’t spend time on changing systems and processes – go with what you have
- Don’t be afraid to move “Go Live” date if absolutely needed
**GO LIVE** DATE

- Very light schedule
- EMR Representative and IT person on site
- “Super-users” in place
- Delay clinic opening ~2 hours
- “Go live” meeting that morning
- Mock patient walk through
- Communicate to patients about the new system and the extra time it will take initially

**Measuring Success**

- Dramatic coding improvement
- Capturing missed charges
- Streamlining charge posting
- Never go back to paper
- Implement tracking of quality indicators
- Minimal staff turnover during implementation
- Accuracy of tracking system for labs and referrals

**Future Goals**

- Forms
- Improving processes – physician side
- Staffing- constant re-evaluation
- Reporting quality indicators
- Integrating with hospitals, labs, radiology, and other practices
- Data sharing/benchmarking with other practices

**In Retrospect…**

Two things:

- OBS terms (Terminology used by your IT and software people) making sure all parts of the EMR are using the same one
  Example: forms, flowsheets, labs, etc. – use 1 OBS term
- Don’t spend a lot of time on Forms in the beginning

**Our Advice to You**

- Get Practice Management component first, several months before the EMR component. PM component is not nearly as difficult to implement and generates the billing and your payment!
- PM component can “push” the diagnoses list to the EMR component, saving some effort/time
- Preloading Charts – make a worksheet of specific items needed from old chart (problem list, meds, last labs, immunizations, preventive/screening tests done, etc)

**Our Advice to You**

- Have everyone, including the doctors, preload charts
- Do NOT scan in the whole paper chart, only scan significant documents (consults, diagnostic tests, etc)
- Minimize schedule first week (1-2 pts/hr)
- Use your EMR to its fullest – Only 15% of all EMR users use it to its fullest
Our Advice to You

**Get Going!**

- Do something!
- If you are doing nothing, you’re already behind
- Look at your PM (Practice Management) product and find out with what EMR products it may or could already interface
- Start looking at different EMRs
- See what other physician practices or hospitals in your community have or are considering
# ADULT MEDICATION SHEET

<table>
<thead>
<tr>
<th>Date</th>
<th>Medication</th>
<th>Dose / Route</th>
<th>Frequency</th>
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</thead>
<tbody>
<tr>
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</table>

**DATE** | **SHORT TERM MEDICATION** | **DATE** | **SHORT TERM MEDICATION** | **DATE** | **SHORT TERM MEDICATION**
---|--------------------------|---|--------------------------|---|--------------------------
|              |                          |              |                          |              |                          |
|              |                          |              |                          |              |                          |
|              |                          |              |                          |              |                          |
|              |                          |              |                          |              |                          |
|              |                          |              |                          |              |                          |
Vaccine Administration Record for Adults

Before administering any vaccines, give the patient copies of all pertinent Vaccine Information Statements (VISs) and make sure he/she understands the risks and benefits of the vaccine(s). Update the patient's personal record card or provide a new one whenever you administer vaccine.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Type of Vaccine (generic abbreviation)</th>
<th>Date given (mo/day/yr)</th>
<th>Route</th>
<th>Site given (PA, LA)</th>
<th>Vaccine</th>
<th>Vaccine Information Statement</th>
<th>Signature / Inflts of vaccinator</th>
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</thead>
<tbody>
<tr>
<td>Tetanus and Diphtheria (e.g., Td, Tdap)</td>
<td></td>
<td>11/12/2023</td>
<td>IM</td>
<td></td>
<td>IM</td>
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<tr>
<td>Hepatitis A (e.g., HepA, HepA-HepB)</td>
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<td>02/02/2024</td>
<td>IM</td>
<td></td>
<td>IM</td>
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<tr>
<td>Hepatitis B (e.g., HepB, HepA-HepB)</td>
<td></td>
<td>03/03/2025</td>
<td>IM</td>
<td></td>
<td>IM</td>
<td></td>
<td></td>
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<tr>
<td>Measles, Mumps, Rubella (MMR)</td>
<td></td>
<td>04/04/2026</td>
<td>SC</td>
<td></td>
<td>SC</td>
<td></td>
<td></td>
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<tr>
<td>Varicella</td>
<td></td>
<td>05/05/2027</td>
<td>SC</td>
<td></td>
<td>SC</td>
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<tr>
<td>Pneumococcal, polysaccharide (PPV)</td>
<td></td>
<td>06/06/2028</td>
<td>IM+SC</td>
<td></td>
<td>IM+SC</td>
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<tr>
<td>Meningococcal (MCV4, conjugate; IM MPSV4, polysaccharide)</td>
<td></td>
<td>07/07/2029</td>
<td>SC</td>
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<td>SC</td>
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<tr>
<td>Influenza (e.g., LAIV)</td>
<td></td>
<td>08/08/2030</td>
<td>SC</td>
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</table>

Other

1. Record the generic abbreviation for the type of vaccine given (e.g., PPV, HepA-HepB), not the trade name.
2. Record the date given for each vaccine as well as the date it is given to the patient. According to federal law, VISs must be given to patients before administering each dose of TD, MMR, varicella, or HepB vaccine. Use of the VISs for hepatitis A, influenza, and meningococcal vaccines will become mandatory later in 2005.

3. For combination vaccines, fill in a row for each separate antigen in the combination.
4. Give MCV4 via the IM route and MPSV4 via the SC route.
5. Give LAIV via the IM route and LAIV intranasally (IN).

Chart number: __________________________
Birthdate: ____________________________
Patient name: _________________________

Immunization Action Coalition • 1573 Selby Ave. • St. Paul, MN 55104 • (651) 647-9009 • www.immunize.org • www.vaccineinformation.org
## Health Maintenance/Preventative Care

<table>
<thead>
<tr>
<th>Physical Exam</th>
<th>Date</th>
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<tr>
<td>CPE</td>
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<tr>
<td>Prostate</td>
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<tr>
<td>DRE</td>
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<tr>
<td>PAP/Pelvic Exam</td>
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<tr>
<td>Breast Exam</td>
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<tr>
<td><strong>LABS/SCANS</strong></td>
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<tr>
<td>EKG</td>
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<tr>
<td>CXR</td>
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<td>PFT</td>
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<tr>
<td>DEXA Scan</td>
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<tr>
<td>Mammogram</td>
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<tr>
<td>Colonoscopy</td>
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<tr>
<td>SOB</td>
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<tr>
<td>Lipids</td>
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<td>HbA1c</td>
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<td>PSA</td>
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<td>CBC</td>
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<td>Urine protein</td>
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<td>Creatinine</td>
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<td>Other Tumor Markers</td>
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<td>Name:</td>
<td>Allergies:</td>
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<td>Smoke:</td>
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<tr>
<td>(c)</td>
<td>Alcohol: Rec. Drugs:</td>
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<td>Insurance primary:</td>
<td>Occupation:</td>
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<td>Insurance primary:</td>
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<td>Insurance Secondary:</td>
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<tr>
<td>First Visit:</td>
<td>FH: Father:</td>
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<tr>
<td>Advanced Directives: Y N</td>
<td>Mother:</td>
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<tr>
<td>Living Will:</td>
<td>Other:</td>
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<tr>
<th>ICD Code</th>
<th>Past Medical History/Outpatient</th>
<th>Date</th>
<th>Past Surgical History</th>
<th>Date</th>
<th>Acute Medical/Hospitalizations</th>
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**ABNORMAL RESULTS CONTACT SHEET**

PATIENT NAME:

DOB:

URGENCY OF CONTACT:

ABNORMAL RESULT(S):

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PRACTITIONER INITIALS

**PATIENT CONTACT INFORMATION:**

TELEPHONE NUMBERS:

(H) (W) (C)

ADDRESS:

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<table>
<thead>
<tr>
<th>1&lt;sup&gt;st&lt;/sup&gt; PHONE CALL</th>
<th>MESSAGE</th>
<th>SPOKE TO</th>
<th>RESPONSE</th>
<th>FINAL RESULT</th>
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</table>
PHYSICAL EXAMINATION: Circle, check, cross out as appropriate; NL = normal; [ ] = choices; write in comments where appropriate

APPEARANCE:
☐ WD WN INAD

HEAD:
☐ NC AT No lesions

EYES R/L:
☐ Sclera-white, Conjunctiva - pink, Lids - NL, PERRLA, Iris-NL
☐ Fundi-sharp disc, nl vessels, no exudates or hem.

EARS R/L:
☐ NL-ext. insp., no lesions, mass, EACs-NL [dry, red, cerumen]
☐ TMs-NL [congested, dull, red, bulging] Hearing-NL.

NOSE:
☐ NL-Ext. inspection, no lesions, mucosa/ septum/turbinates

MOUTH/THROAT:
☐ NL-lips, teeth [dentulous dentures], gums, oropharynx
☐ NL-salivary glands, palate-hard/soft/mucosa/tongue
☐ NL-post. Pharynx [red, exudates, tonsil swelling, nasal drainage]

NECK:
☐ Supple symmetrical, no adenopathy, trachea midline
☐ NL-Thyroid size shape consistency no masses

CHEST:
☐ NL-Insp., config., symmetry, wall motion/expansion, [dec]
☐ NL-Excursion [decreased]

RESPIRATORY:
☐ NL-Resp. effect-retractions acc., muscle use
☐ NL-Diaphragm movement [decreased]
☐ NL-Percussion [dull hypertension]
☐ NL-Tactile fremitus [decreased]
☐ NL-Auscultation [crackles wheeze rhonchi lung stridor]
☐ NL-Airflow/breath sounds [decreased fair poor]

CARDIAC:
☐ NL-Palpatation size PMI [medial lateral] no thrills
☐ NL-Auscultation [rub click murmur]
☐ Regular rhythm [irregular, regularly irregular]
☐ NL-Sounds S1 S2 [S3 S4]

VASCULAR:
Pulses (r/l) Car / _ Rad / _ Fem / _ DP / _ PT /
☐ No Bruits [abdominal femoral] NL-amplitude [decrease increase]
☐ NL-Abd. Aorta [pulsatile enlarged nonpalpable]

GASTROINTESTINAL:
☐ NL-Inspl., soft, nl bowel sounds, no guarding rebound masses ascites
☐ NL-liver, spleen
☐ No hernia

LYMPHATICS:
☐ NL-Neck Axillae Groin Epitrochlear Other

EXTREMITIES:
☐ No clubbing cyanosis edema ischemia inflammation

MUSCULOSKELETAL:
☐ NL-Gait station muscle strength mass tone
☐ No atrophy flaccid cog wheeled spasticity
☐ Head neck Spine ribs pelvis/RUE/LUE/RLE/LLE
☐ (circle if examined)
☐ NL-Inst. palp. alignment symmetry muscle strength tone movements
☐ No crepitation deformity tenderness contractions dislocation laxity

SKIN:
☐ No rashes papules vesicles macules ulcers redness lesions
☐ No induration subcutaneous nodules tightening

NEUROLOGIC:
☐ NL-CN II-XII DTR Babinski touch pin vibration sensory visual acuity fields fundi III, IV, VI-pupils eye movement V-face sensation corneal VII-face symm. Strength VIII- hearing IX-spont/reflex palatal movement XI-shoulder shrug tone XII-tongue protrude
☐ NL-Att span conic naming repeat phrase speech knowledge
☐ NL-Coordination finger heel ant. movements

PSYCH:
☐ NL-Judgement insight oriented x 3 recent remote memory
☐ NL-mood/affect [depression anxiety agitation]

RECTAL:
☐ No hemorrhoids [external/ internal]
☐ NL-Sphincter tone [decreased increased] perineum rectum
☐ Negative heme test [positive]

MALE:
☐ NL-Serotum testicles penis [mass lesions]
☐ NL-Prostate [enlarged symmetrical nodular tender masses]

BREASTS:
☐ NL-Symmetry nipple [discharge mass tender scar retractions]

FEMALE:
☐ NL-Ext. genialia hair estrogen effect [discharge lesions]
☐ NL-Pelvic support [rectocele cystocele]
☐ NL-Uterus [mass tender scarring] Bladder [full tender masses]
☐ NL-Cervix appearance [lesions discharge]
☐ NL-Uterus size contour position mobility consistency support
☐ NL-Adnexa/parametrium

OTHER:

DIAGNOSTICS:
Spirometry: / / Normal Testing
Obstruction: ☐ mild ☐ moderate ☐ severe
Restriction: ☐ mild ☐ moderate ☐ severe
Urine Dip:
EKG: ☐ Normal ☐ Other

LAB/Radiology Results: