What A Provider Wants In An EHR & How To Pay For It !

Presented by:
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www.EHR4U2.com

What Provider's Want…

Learning Objectives:

- Before the search -educate me
- Involve me & effectively use my time in the:
  - Search
  - Implementation
  - Continual Improvement
  - Return On Investment
- Focus On Patient Care

Presentation Includes Real Life Examples From:

- Experiences with my practice
- HIMSS Davies Award Winner Success Stories
- Other Articles and References

All quotes have sources referenced on the slide or in the presentation. If you see something that sparks an interest you can read the entire manuscript or article, and share the information with your providers.

HIMSS "DAVIES AWARDS"

- Recognizes healthcare provider organizations that successfully use EHR systems to improve healthcare delivery.
- Encourages excellence in the implementation of EHR systems.
- Promote the vision of EHR through concrete examples
- Understand and share documented value
- Share successful EHR implementation strategies

Roswell Pediatric Center Implemented EHR in 2001

2000, 2003, 2005 Recognized by MGMA as a Better Performer in the Performance and Practices of Successful Medical Groups

2003 HIMSS Primary Care Davies Award of Excellence Winner

2004 Impact MD "You're The Star" Video Contest Best Film Winner

2005 Practice of the Year Runner Up, Physicians Practice Magazine

Roswell Pediatric Center

- 9 physicians, 7 Nurse Practitioners (5.5 FTE)
- 45.30 FTE Staff – 21.50 clinical - 23.80 support
- 3 practice sites
- 90,000 visits a year
- 300 nurse triage calls per day

Roswell Pediatric Center "IT" Infrastructure

- 105 in-office workstations- 55 Clinical, 50 Administrative
- 19" Flat Screen Monitors, Hardwired CPU's, Clinical workstations have short UPS
- 7 Servers
- Multiple Printers (25) and Scanners (10)

"IT" Infrastructure

- **3 Main Software Programs**
  Electronic Medical Records – clinical information
  Document Management – scanning clinical and administrative
  Practice Management – scheduling and billing
- **Hardware Support:** Outside Vendor
- **Data Connections Between Locations:**
  - Routers connect our 3 locations at full T-1 speed
  - VPN supports 25 home or remote users
  - T-1's at all three locations, support the internet and voice lines.

Education Sources…. Where to start:

- **Definitions and Acronyms**
  - There are many different definitions for what constitutes an Electronic Health Record - EMR, EHR, CPR, etc., and the definitions change over time.
- **The definitions are not as important as….**
  - Identifying ***YOUR*** Provider and Clinical needs before you start!
  - Learn and teach your Providers the basics, then get good advice from knowledgeable and trust worthy resources

David Brailer, MD, PhD, 1ST National Coordinator for HIT

"Fifty percent of EHR implementations fail. Physicians don't understand the technology or the business changes required to make them work. Problems include buying the wrong products or getting the wrong contracts."

MGMA Connexion,January 2005 Group Practices Identify, Overcome EHR Barriers

Recommended Book And Resources

www.mgma.com

- MGMA Bookstore: *Excellent for overall education before you start your search.*

  Electronic Health Records: Transforming Your Medical Practice – Item # 6266
- Article Searches
- ACMPE Research Papers
- MGMA Healthcare Consulting Group
  - Rose Marie Nelson

Recommended Book

2006 Guide To Buying & Implementing an EMR

Practical And Thorough With Excellent Checklists and Support Documents

Author:
Ron Sterling, CPA
Sterling Solutions
www.sterling-solutions.com

Published by: Decision Health
www.decisionhealth.com
877-602-3835

Recommended Source

www.himss.org

- Search for Davies Award
- Click on Ambulatory Care, Organizational, Public Health, depending on your area of interest.
- Click on Individual Winners – Read Case Studies, many written by physicians.

Recommended Source

The AC Group

www.acgroup.org

Mark Anderson, Healthcare IT Futurist

Survey report is over 290 pages long, covers 6 levels of technology for the physician's office.

Certification Commission For Healthcare Information Technology

- Certification process for Healthcare Information Technology Products.
- CCHIT Certified SM seal assures you that an EHR product meets basic requirements for:
  - functionality (ability to carry out specific tasks)
  - interoperability (compatibility with other products) and
  - security (ability to keep your patients' information safe)
- Website: www.cchit.org

Recommended Sources ???

- There are many EMR – EHR websites with a wealth of information, but do you really know who you are communicating with on the internet? Make sure to get a real name and Practice contact information, then call them.
- Caution***Buyer Beware***Stick To Basics***Due Diligence
- Phone References, after narrowing down the field, site visits with a similar type practice.

The Search – Involve Me

- Ask me about my:
  - Points of pain with paper charts
  - Fears
  - Expectations
- There is "NO PERFECT SYSTEM"
- Be REALISTIC
  - Time Commitment
  - Costs
  - Return On Investment

Sample Points Of Pain:

Roswell Pediatric Center's Strategic Planning Objectives

- Provide universal access to the chart
- Improve quality of documentation
- Streamline office communication and workflow
- Efficient forms and referral processing

Address Your Providers Fears

- Find a system that can be adapted to our practice and my style. Do not expect me to change the way I practice medicine.
- Discuss with me, agreeing to make changes, if they benefit quality and/or efficiency and will fit with my practice style.
- Do not overload me with technology. Ease me into it, incrementally.

Should We Use Experts For?

- The Search
- Contract Negotiation
- Hardware Decisions/Purchase
- Financing
- Implementation
- Ongoing Needs
  - IT Support
  - Interoperability – Hospital, other work devices, immunization registry

Discuss Expectations:

- **E & M Coding Improvements- Comparing 2003 to 2005**
  - Established Patient Codes - 99212 to "3" INCREASE 17%
  - New Patient Codes - 10% INCREASE
- **Increased Efficiency with growth**
  - Patient visits increased from:
    - 311 per month in 2003
    - 500 patients per month in 2004
    - 735 patients per month in 2005
  - 2 additional staff FTE's were added to meet the increased clinical demands of more patient visits.

Wayne Obstetrics & Gynecology
Davies Award Winning Practice 2005, Access Information On Slide Number 13

Important Discussions

Do Your Providers Want To Customize Or Have An "Out Of The Box Canned Version?"

- Some software comes with an extensive medical knowledge base, some do not.
- Are templates already developed for your specialty?
- Are they easily customized?
- Does the company charge for the medical knowledge, templates, customizations, reports, etc.?
- If you develop, update, or improve the vendor's templates or product, who owns it? If they sell it do you get paid anything?

Group Culture Customization Choices

- Most EMR's will allow each provider to customize their own templates.
- Discuss and decide on the options before buying a software program.
  - Each Provider Can Have Their Own Templates
  - "Group Templates" templates are the same for all Providers in the practice.
  - In some products, the same "Group Templates" can be arranged in different ways on the screen, putting things in a different order, depending on preferences.

Customization Choices
Why Do Provider's Care?

- Garbage "In" is Garbage "Out." If clinical research is a goal, all Providers and staff should use the same templates for accuracy in data mining.
- Dictated Clinical Data will probably not be useable for research.
- Turnover and ease of use. If you are a group practice that cross trains and/or have turnover, having consistency with your templates could be essential when it comes to sharing staff and training new hires.
  - Even if I have my own nurse, someone will eventually have to cover.
  - If there is a drug recall, can I be confident that everyone entered the information in the same field in the same format?

Start The Search
Make A Checklist

- Company Background – don't discount the small guy
- Reference Checks
- Site Visits
- Training & Implementation Support
- Contract, License & Maintenance Fees
- Hardware Specifications and Costs
- Software Evaluation: ***Your*** needs

The Search & Time

- EHR Software Evaluation
  - Develop a common office visit or scenario to use for demonstrations
  - Many Specialty Societies Have Search Checklists and Tools
  - www.cchit.org has many examples
  - Do not get distracted by "bells and whistles" or gadgets and high tech toys

FOCUS ON PATIENT CARE

" The collaboration between the technical support team and the healthcare providers was close in order to be sure the system would work, and that it would be helpful in the clinical setting."

Southeast Texas Medical Associates, James Holly M.D.

Davies Award Winning Practice 2005, Access Information On Slide Number 13

The Search & Priorities

- Quality Care – Top Priority
  - When you start having to make lists and evaluate products, remember to prioritize by focusing on patient care.
- SIMPLE - Make my job easier!
  - If it is not easier to document in the EHR than in the paper chart, do not expect your Physicians or staff to use it.
- Decrease Medical Errors
  - Look for opportunities to improve Risk Management opportunities

Functionality is KEY! Is it easy to use?

- Sophisticated enough for clinical needs, but easy enough for all staff to use
- Optimizes Workflow
  - Multiple users in a chart – simultaneously
  - Notes / Highlights changes made
  - Messaging capabilities
- Flexible Templates - for add on /multiple conditions
- No duplicate data entry, demographic or clinical

If it is harder to document in the EHR, than in the paper chart, don't expect me to use it.

"I cannot stress enough: time is the issue: Time is the only thing a physician has to sell. The EHR must save the physician time.

Physicians will engage in the data entry when the process is both rapid and simple."

Cooper Pediatrics, Jeffrey Cooper, M.D. FAAP

Davies Award Winning Practice 2003, Access Information On Slide Number 13

Important Decisions….

Spend time evaluating the physical location of the workstations, especially in patient care areas.

- Will the Provider have their back to the patient while entering data?
- Will the Provider be able to use the screen to educate the patient?
- Are they conveniently located for maximum efficiency
- Do not skimp on the hardware, major cause of downtime.

Wireless Vs. Hardwired

- Wireless
  - Speed – can take several seconds to open
  - Costs
  - Security
- Hardwired
  - Fast
  - Less Expensive

✓ Consider a combination, depending on the user and location

✓ See the software application, in a practice similar to yours, on the hardware you are going to buy

No Perfect System What Should I Expect?

In 2003, a committee at the Institute of Medicine, said EHR's should be able to promote:

- **Greater Safety**
- **Quality**
- **Efficiency**

By 2010, comprehensive EHR systems should possess these 8 core capabilities:

1. **Health & Information Data**
2. **Result Management**
3. **Order Management**
4. **Decision Support**
5. **Electronic Communication & Connectivity**
6. **Patient Support**
7. **Administrative Processes**
8. **Reporting**

Access the article at: www.nap.edu – Free Copies: "Key Capabilities of an Electronic Health Record System" 2003

What My Perfect System Would Include….

- Treatment Plans
  - Disease Specific
  - Preventative medicine reminders and anticipatory guidance
  - Clinical Protocols
  - National Standards of Care
- Lab / Radiology Ordering & Results
- Medication Administration
- Electronic Prescription Writing
- Active Problem List

List & Prioritize….

- Patient Education
- Patient Instructions / Discharge Summary
- Referral Management
- Automated Forms
- Letter Writer
- Dictation
- Scanned / Imaged Documents
- Internet Access

List & Prioritize….

- Chronic illness reports and trending
- Outcomes Analysis
- Supports In Office Tests, Spirometer, EKG
- Remote Access – for hospitals, nursing homes
- Surgery Scheduling
- PACS
- Product Sales
- Inventory
- Coding Assistance

List & Prioritize….

- Patient Education – Customized
- Highlight – Pertinent Positives and Negatives
- Confidential Charting Area within “E” Chart
- Reporting capabilities: Trending, Research, Recalls
- Assist With Compliance and Security
  - All users must access information using their individualized secure log on and password
  - Privilege levels are assigned on a “need to know” basis for information restricting rights of users
  - Reporting and tracking users

Patient Web Portal

- ✓ New Patient Registration
- ✓ Existing Patient
- ✓ Demographic Updates
- ✓ Appointment Scheduling
- ✓ Prescription Refills
- ✓ Referral tracking
- ✓ Test Result Reporting
- ✓ Pay Your Bill
- ✓ "E" Nurse Triage Advice
- ✓ "E" Visits
- ✓ Messaging Capabilities
- ✓ Personal Health Record
- ✓ Interfaces w/ Demographics & Clinical?

Some Common Conditions/Areas Managed By EHR's

- Asthma
- Headaches
- Hypertension
- COPD
- Immunizations
- Cholesterol
- CHF
- Coumadin Clinic
- Diabetes
- Weight Management
- Stop Smoking
- Bone Density

Decrease Medical Errors

- "E" Prescribing
- Computerized Physician Order Entry
  - Test and order tracking systems
- Legibility
  - Easily read another Providers' notes
  - No pharmacy call backs for illegible prescriptions
  - Decrease the risk of medical errors
  - Less frustration among staff

AWARD WINNING QUALITY CARE

"SETMA has developed, hospital order sets based on national standards of care for multiple disease states…. These order sets make it possible for a provider, regardless of level of training, to initiate care with national standards of care quality as viewed by specialists in the field."

Southeast Texas Medical Associates, James Holly M.D.
Davies Award Winning Practice 2005, Access Information On Slide Number 13

Prescription Writers & Your EHR–GET DETAILS

- Allergy and Condition Interaction Checking
  - Drug-Drug
  - Drug-Food
  - Herbal Medications
- Monitor compliance with controlled medications
- Track Formularies & Samples
- Bar code inventory
- Fax Directly to Pharmacy

Prescription Writers Different Variations

- Who adds and updates new medications?
- If you do, are you responsible for adding the allergy interactions?
- If it is outsourced
  - How often do you get updates?
  - Does it cost extra?
  - Is there an easy, user friendly work around until the update is installed?

Improved Communication Staff-Providers-Patients

- Quick and easy coordination and prioritization of care
- Efficient follow up and task management
- Call backs and wait time for patients and staff reduced
- Visit outlines / templates that promote best practice
- Easy supervision of mid-level providers and staff

Contract Details
What Is Included?

- Is the License Fee charged per physician, per user, or per workstation?
  - Is there a discount for part time physicians?
  - Is there an extra charge for mid level providers?
- Does the EMR product you are considering come with a document imaging system – DIM?
  - If yes, will it meet the needs of your practice? Does it cost extra?
  - If no, how much will a DIM cost that will accomplish your scanning needs?
- Do you have to buy your hardware from the EMR vendor?
- Will the EMR vendor interface with other products or clinical equipment?

Know What YOU Need

- Evaluate cost / benefit of replacing current practice management system.
  - Interface with scheduling, demographics, and billing information.
- Practice Specific Needs
  - Educational Handouts
  - Wellness reminders
  - Easily generated referrals with legible clinical notes
  - Communication methods with patients
  - Documentation preferences, mouse driven, keying, dictation, voice recognition
- Evaluate document imaging needs, not only your practices clinical needs within the chart, but in all administrative areas.

RETURN ON INVESTMENT

- Decreased Patient Wait Time 42%
- Decreased Drug Refill Time 75%
- Decreased Telephone Call Turnaround Time 75%
- Increased Charge Per Visit 171%
- Increased Profits 102%

Cooper Pediatrics, Jeffrey Cooper, M.D. FAAP
Davies Award Winning Practice 2003, Access Information On Slide Number 13

HELP ME ! With Coding & Billing Guidelines

- Order Entry
  - The Provider enters an order one time at the time of service, once completed, the appropriate CPT code is billed.
- E&M Coding Calculator
- Local Medical Review Guidelines - properly documenting medical necessity
- Advanced Beneficiary Notices
- Linked Codes
- ICD Diagnosis Code Selection
- Mobile unit for Charge Capture from Hospital or remote site visits

RPC - E & M Coding Improvements

YEAR	99212	99213	99214	99215
2005	9%	76%	***13%***	2%
2004	10%	72%	***16%***	2%
2003	7%	85%	***7%***	1%

RPC Revenue Per Visit

Year	Revenue Per Visit
2005	**$ 91.31**
2004	**$ 93.62**
2003	**$ 83.61**
2002*	**$ 83.08**
2001	**$ 84.66**
* First Full Year On The EMR	

Value

"100% Audit Compliance. Since installing our EMR, SETMA has been audited 8 times for Health Plan Employer Data and Information Set (HEDIS) Compliance. In every case, the result has been 100% compliance."

Southeast Texas Medical Associates, James Holly M.D.

Davies Award Winning Practice 2005, Access Information On Slide Number 13

The Hospital Wants To Help With Our EHR…

Department of Health and Human Services (HHS) NEW Guidelines:

Exceptions to physician self referral laws and anti-kick back statute.

- Effective 10-1-2006
- Hospitals and other organizations can provide ***non-monetary*** remuneration to physician practices in the form of some technology.

Some specifics on HHS New HIT Guidelines:

- Electronic Prescribing Programs
- EHR programs, that include "E" Rx
- **15%** of the software cost must be paid by the physician or practice
- **No Hardware** or associated costs can be donated by the hospital or other entity
- EHR has to interoperable (no definition of interoperability yet)
- If you already have this type of technology, the hospital of organization cannot donate anything that is functionally equivalent.

Other Legislative Efforts to create exceptions:

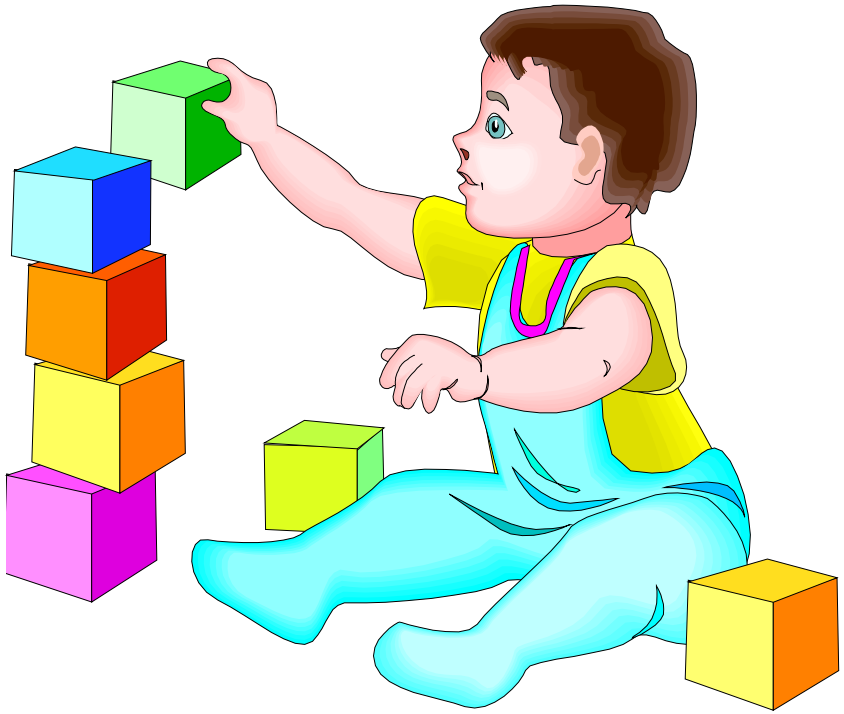
- The House recently passed a bill expanding the current rule to include Hardware, take away the 15% guideline, and define interoperability
- The Senate has passed a different HIT bill, that includes mandatory ICD-10.
- Both bills are in committee. (11-3-2006)

Thanks to Robert Tennant, MA, MGMA Senior Policy Advisor, Health Informatics for providing the information on the HHS rules and the legislative process.

Thank the Hospital, BUT… Read the Fine Print

- World Class System – do private / small physician offices need the complexity
- Realize there will be many other costs
  - Implementation
  - Training – initial and on going
  - Data lines
- Who owns the data…
  - The system does not work
  - You Close the practice, retire, move, want to sell

The Incremental EMR



- Progress Notes
- Coding & Charge Capture
- Physician Order Entry
- Patient Web Portal
- Prescription Writing
- Document Imaging
- Practice Management Billing Systems

PRO'S & CON'S

Best of Breed

- ✓ Experts in their area
- ✓ Keep Up w/Changes
- ✓ Interfaces work well?
- ✓ Problems-Finger Pointing

Proprietary

- ✓ Interface/integration
- ✓ No incentive to compete or improve
- ✓ Limited choices on related business partners $$$
- ✓ Hard to "do it all"

Evaluate Current IT Infrastructure

- Existing technology to support Practice Management System
- What will you need to upgrade your hardware for an EMR?
- Choose hardware that will be compatible with your top 2-3 software choices.

Budget Expectations Choices….$$$$

- Buy or Lease Servers $$$$ Or ASP (rent time on a remote server)
- Data room - more Air Conditioning?
- Printers, Scanners, Bar Code Readers
- Workstations….
  - Size CPU or Thin Client
  - Flat Screen, Touch screen, Handheld
  - Location
  - Wireless Keyboard & Mouse ?
  - Remote Access – from home, hospital, the Bahamas?

Choices….$$$$

- Back Ups – Tapes, Offsite CPU
- Uninterrupted Power Supply (UPS) vs. Generator
- Connecting locations and to the Internet…Routers, Virtual Private Network (VPN), T-1, Frame Relay, Voice over IP
- Security – encryption software, anti-virus software, locking or timing out workstations, physically securing the data room

Other Software Needs…

Many other programs will be needed to run a complete network.

Most at some point will need a patch, upgrade, or some type of fee for service or maintenance.

The following are some examples:

Windows NT Windows 2000 Windows XP Home or Professional UNIX Sequel Arc Serve Veritos Terminal Services Languard "Bird dog" Traffic Monitoring WinFax Educational Handouts E-Surveillance

Implementation Priorities

- Value and Reward Staff
- Encourage Open Communication
- Have "one on one" support for Providers
- Ask for input on how to roll out?
  - Big Bang – all at once
  - Incremental
- Decide how and what needs to be entered or scanned from the paper record into the EHR?

The Implementation Team Approach

Providers & Clinical

- Develop clinical outlines
- Associate procedures, medications, well care paths, diagnosis codes, to each template.
- Develop "send out" guidelines.

Administrative Staff

- Check In / Out
- Messages
- Billing
- Referrals
- Prior Authorizations
- Patient Web Portal
- Rx Refills

Make It Fun….

- Set Goals
- Reward Milestones and Successes
- Ideas
  - "Go Live" T-Shirts
  - Prizes for meeting goals and timeframes
  - Free Funny Video Roswell Pediatrics Website
- Prize Ideas
  - Dunk the "IT" nerd
  - Throw a water balloon at the Administrator

Training

- **Groups** - Train in groups with the same job responsibilities first. For example, all of the physicians together – show them all of the staff's applications, then train them on their specific part.
- **Role Play** – Next, split into groups for "role play" training. Have staff members and physicians chart the visit as they would the first time a patient comes in and they use the EHR. A staff member can pretend to be the patient.

TRAINING

"Two super users were educated at the company headquarters where they prepared to serve as clinical and administrative leads for the project. The super users provided encouragement and reassurance to all physicians and staff throughout implementation and still provide it today."

Old Harding Pediatric Associates
Davies Award Winning Practice 2004, Access Information On Slide Number 13

RPC - Customization

- On site review of OUR practice
- Workflow Analysis
  - Visit outlines
  - Telephone triage / Rx renewals
  - Forms and letters
  - Referral processing
- Our Providers averaged an hour per week, for 8 weeks, customizing the product.

THE TRANSITION

"We brought the paper record to the exam room with the patient for the first 3-4 months so that we could see the most recent history. During this time if a child had a chronic illness we would document that in the EMR. During this time my staff used down time to key in vaccine data. After 18 months we moved the paper records to off-site…"

Cooper Pediatrics, Jeffrey Cooper, M.D. FAAP

Davies Award Winning Practice 2003, Access Information On Slide Number 13

RPC - Transition

- Training On Site
  - Demo available from beginning
  - 2 hours formal training week prior to “go live”
- Input of Critical Past Medical History
  - Growth Data
  - Allergies
  - Immunization history
  - Problem list
  - Current / Chronic medications
  - Lab values

Roswell Pediatric Center's "Go Live"

- Tuesday
- Started with every third visit
  - Keep pressure off staff
  - By end of the day EHR was easier than writing
- Data Entry Day Prior To Visit
  - Hired 6 PRN data entry staff ~ 6 months

PHYSICIAN ADOPTION

"Old Harding …achieved 100% use of the EMR by day 4 of use. Physicians began gradually building up the number of patients seen in the EMR instead of paper charts during that week.

Old Harding Pediatric Associates
Davies Award Winning Practice 2004, Access Information On Slide Number 13

KEEP THE MOMENTUM GOING…

"In any organization that is going to successfully implement an EHR, there has to be …

Adequate preparation and training, but commitment to a final schedule of implementation, while others fail because excessive planning endlessly delays execution an demoralizes stakeholders."

Southeast Texas Medical Associates, James Holly M.D.
Davies Award Winning Practice 2005, Access Information On Slide Number 13

HOW TO PAY FOR IT! Return On Investment

- Increased staff costs during implementation phase
- Increased IT expense
- Decreased Dictation, Printing, Office Expense
- Lower Turnover
- Be realistic, each practice will have different needs and experiences.
- Average cost per physician for an EHR can range between $25,000 - $50,000 for initial costs.

Accurate Charge Capture

- Chart audit revealed that 14 % of the procedures performed at the point of care escaped documentation on the paper superbill.
- 2 % of encounters were never submitted
- 2 % data entry errors

Linked Coding Improvements

Procedure	**# in 2001**	**# in 2002**	**# in 2003**
Venipuncture	353	9324	10,290
Handling Fee	968	1734	2,278
Medical Mgm	1	34	54
	Prior to EMR	1st Yr on EMR	2nd Yr on EMR

Reduce Rejected Claims

- Increase Revenue
  - Properly documenting Medical Necessity
  - More specific ICD selection
  - Legibility reduces rework
- Decrease Cost
  - Reduced time to process charge tickets
  - Reduced time to process rejected claims

Decrease Cost

Administrative Process Improvement

- Chart filing
- Turn-around time for phone messages and Rx refills
- Forms processing and filing
- Medical record updates – insurance card, lab results, hospital records, history from previous physician
- Referral / medication authorizations

Chart Filing Savings

Type of Visit	Prior to EMR	After 60 days	After 120 days	After 180 days
Patient visits	82,000	82,000	82,000	47,560
Number of phone chart pulls per year (300 per day)	78,000	8,000	7,200	6,000
Medical Records Updates (1359 documents/day)	271,340	271,340	27,134	13,567
Referrals chart pulls (400/month)	4,800	2,000	1,000	400
Total Chart pulls annually	**436,140**	**363,340**	**117,334**	**67,527**
FTE Allocation	***13.00***	***10.40***	**8.20**	**5.80**

Chart pulls and file related activities estimated at 5 minutes per document, results in a savings of 7.2 FTE's after 180 days.

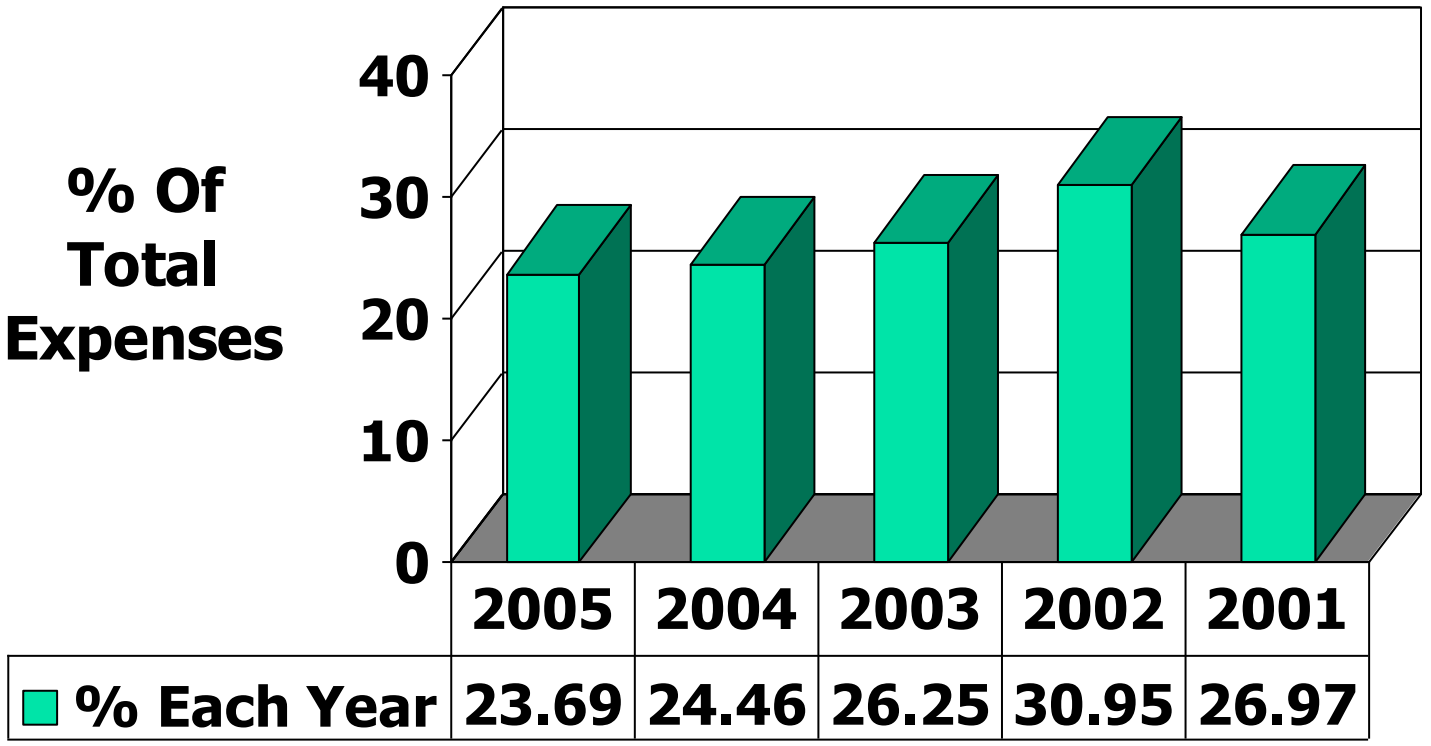
Turnover & Staffing

Year	Turnover %	FTE Producers	Staff: Producer Ratio
2005	**13.16%**	14.97	3.01
2004	**10.97%**	14.42	3.28
2003	**16.35%**	14.30	3.88
2002*	**15.45%**	14.34	4.01
2001	**20.72%**	14.00	3.90
2000	**22.34%**	12.05	3.85
1999	**21.98%**	10.25	3.90
** First Full Year*	*On The EHR*		

Decreased Staffing & Personnel Costs

YEAR	TOTAL FTE	Clinical Staff	Support Staff	Staff Biweekly Payroll W/Raise	Average Raise %
2003	58	22.6	35.4	$ 5,266.88 INCREASE	5 %
2004	47	21.5	25.5	$ 6,153.20 DECREASE	5 %
2004 Savings	11	1.1	9.9	$160,000	
2005	45.30	21.50	23.80	$5,522.28 DECREASE	4.50%
2005 Savings	1.70	0	1.70	$143,580	

RPC Personnel Expenses



Roswell Pediatric Center Actual Costs In 2001

TYPE OF COST	TOTAL	PER PHYSICIAN
EMR License, *includes Implementation & training*	$ 200,000	$ 22,222
Scan License, *includes Implementation & training*	$ 30,000	$ 3,333
Interface Fee	$ 8,000	$ 900
Hardware & IT Costs	$ 350,000	$ 38,888
Total	**$ 588,000**	**$ 65,343**
Total If Bought Today	***$ 305,500***	***$ 33,944***

Roswell Pediatric Centers Ongoing Costs

	Electronic Medical Record System Maintenance Fee	Document Imaging Management System Maintenance Fee	Practice Management System Maintenance Fee	IT Support	Total
Monthly Cost	$ 2,500	$ 442.00	$ 700	$ 2,000	$ 5,642
Annual Cost	$ 30,000	$ 5,304	$ 8,400	$ 24,000	$ 67,700

Costs for computer supplies, repairs, replacements, and miscellaneous upgrades over the last 4 years has been $86,000.00.

Comparison Sample EMR License Fees 4 Vendors & ASP in Small to Medium Size Practices

EMR COMPANY	LICENSE FEE PER PHYSICIAN	PART TIME PHYSICIAN	MIDLEVEL PROVIDERS
# 1	$ 6,800	NO DISCOUNT	INCLUDED
# 2	$ 6,500	NO DISCOUNT	$ 4,100
# 3	$ 8,000	NO DISCOUNT	INCLUDED
ASP	$ 3,000	NO DISCOUNT	INCLUDED

Comparison Sample EMR Implementation and Training Costs - 4 Vendors & ASP in Small to Medium Size Practices

EMR COMPANY	INCLUDE IMPLEMENTATION?	IF NO, HOW MUCH EXTRA?	INCLUDE TRAINING?	IF NO, HOW MUCH EXTRA?
# 1	NO	*	NO	*Implementation & Training $2,000 Per Physician
# 2	NO	*	NO	*Implementation & Training $2,000 Per Physician
# 3	NO	$ 135 Per Hour Plus expenses	NO	$135 Per Hour Plus Expenses
ASP	YES		YES	

Comparison Sample EMR Ongoing Costs 4 Vendors & ASP in Small to Medium Size Practices

EMR COMPANY	Electronic Medical Record System Maintenance Fee	Document Imaging Management System Maintenance Fee	Practice Management System Maintenance Fee	IT Support
# 1	$ 2,250	0	$ 1,833	No Data
# 2	$ 1,777	0	$ 777	$ 555
# 3	No Data	No Data	No Data	
ASP	$ 1,067	No Data	No Data	No Data

Davies Ambulatory Care Winner
1 FTE Physician - 4200 Annual Visits

Costs	**Initial**	**Ongoing**
EMR Software	$ 1,500 per doc	$300 per doc, per yr *includes technical support and all upgrades*
Hardware	$ 10,000	$ 1,500 per yr
Installation	$ 500	$ 500 per yr
Implementation Support	Part of Licensing	$ 1,200 per yr *Maintenance of computers and software other than EMR.*
Interfaces	$ 2,000	$ 500 per yr

Davies Primary Care Practice
1 FTE Physician – 4200 Annual Visits

Return On Investment	**Revenue Increase**
Chart Pulls	**$ 16,800** *just for encounters* *$4 X 4200*
New Patient Entry	**$ 1,000 - $1,400 per yr**
Transcription Service	**$10,000 per yr**
Office Personnel	**$20,000-$30,000 per yr**
Space	**$ 5,000 per yr**

Davies Ambulatory Care Winner
7 FTE Physicians - 9 Mid Level
51,000 Annual Visits - Family Practice

Cost	**Initial**	**Ongoing**
EMR Software	$ 112,000	$26,000 per yr
Hardware	$ 18,000	n/a
Implementation Support	$ 37,000	n/a
Interfaces	Included	Included

Davies Ambulatory Care Winner
7 FTE Physicians - 9 Mid Level
51,000 Annual Visits - Family Practice

Ongoing Savings	**Revenue Increase**
Front Desk Staff	2 FTE's process 330 Patients a day
Phone Traffic	Decreased by 32% with Lab portal
Referral Letters	Auto generated with complete information
First year estimated savings	$ 4,594 per day $ 1,249,568 annual
Ongoing Savings	$ 275,000 annually

Davies Ambulatory Care Winner
6 FTE Physicians
33,500 Annual Visits – Family Medicine

- Financial Overview
  - Providers Revenue now above that of Pre EMR revenue after 3rd year, in spite of an 8% to 12% reduction in HMO/PPO reimbursement.
  - Factoring in the declining discount fee for service, a complete return on investment was achieved by the 26th month of deployment.
  - We chose to take home less income for 2002 and 2003 to quickly fund the retooling effort. The total project costs, training, and temporary decrease in productivity calculated to be $42,000 per provider.

Davies Ambulatory Care Winner
6 FTE Physicians
33,500 Annual Visits – Family Medicine

- Average Charge Per Visit
  - Year 2000 - $ 65.64
  - Year 2004 - $ 83.30
- Average Reimbursement Per Visit
  - Year 2000 - $ 56.46
  - Year 2004 - $ 66.80
- Days in A/R reduced from 72 to 41

Continual Improvements

- Have accessible "IT" support available
  - On site, out source, or combination
- Develop quick and easy method:
  - Collecting ideas for Clinical Customization and Upgrades
  - Work with physicians and staff to prioritize requests.

QUALITY OF LIFE

- No more missing charts
- Peace of mind, knowing labs, tests, follow-ups don't "fall thru the cracks"
- Access to patient information from any phone in the office, at home or other outside location after hours or on call
- Alleviates charting visits at the end of the day, I can go home on time
- Flexibility of finishing non urgent tasks on my schedule
- Happier staff producing lower turnover rates

QUALITY OF CARE

"Increased Standards. The quality of care provided by SETMA, as measured by

- decreased lengths of stay in hospital
- readmissions to the hospital
- decreased morbidity of chronic conditions
- increased compliance with national standards of care and effectiveness in plan of care

has improved dramatically since the implementation of the EHR.

Southeast Texas Medical Associates, James Holly M.D. Davies Award Winning Practice 2005, Access Information On Slide Number 13

SATISFACTION

"Decreased Charting Time…75%...

With less than one minute for charting, this gives me additional quality time with my patient."

Cooper Pediatrics, Jeffrey Cooper, M.D., FAAP Davies Award Winning Practice 2003, Access Information On Slide Number 13

SATISFACTION

"Physician/Patient Satisfaction… I stop seeing patients every day at 4:30pm. I am a Pediatrician who works 26 hours a week and made $304,316 in 2002…My patients are in and out of my office in 35 minutes."

Cooper Pediatrics, Jeffrey Cooper, M.D., FAAP Davies Award Winning Practice 2003, Access Information On Slide Number 13

WORRIED ABOUT DOWN TIME ?

"High Availability. We have been using the system fully for six and a half years. Total unscheduled downtime has only been twelve hours – equivalent to a 99.987% level of availability. This is particularly remarkable in that we use the system 24 hours a day, seven days a week."

Southeast Texas Medical Associates, James Holly M.D.

Davies Award Winning Practice 2005, Access Information On Slide Number 13

Lesson's Learned

- Limit your schedule "Go Live" week
- Put short UPS on ALL Clinical Workstations
- Make a few workstations mobile, on moving carts. If a workstation goes down in a patient care area, you can move the mobile workstation into the patient care area and keep the provider moving.

Ensure Success

- What problem are you trying to solve?
- Do your due diligence on the search
- Analyze current business systems
- Determine measures of success
- Effective leadership and acceptance from all providers
- Well designed and equipped network
- Proper training and technical support
- Ongoing support, upkeep, and upgrades
- Keep patient care top priority

My advice to you… Nothing Worthwhile Is Easy!

"All of the things that were so difficult are easy; all of the things that took a great deal of time now almost seem to happen by themselves."

James Holly M.D., Southeast Texas Medical Associates

Davies Award Winning Practice 2005, Access Information On Slide Number 13

Attachments

- Pediatric Specific Search Checklist
- Critical Data Entry Checklist
- Implementation Case History Article
- Job Descriptions
- Pediatric Scenario for Demo's

Thanks and Good Luck!!!!

Free movie download

"Captain Impact Rescues Roswell Pediatrics In Record Time"

Nancy Babbitt, FACMPE

www.EHR4U2.com

ROSWELL PEDIATRIC CENTER, P.C. Search Committee	Revised 8-22-01
GOALS OF AN EMR SYSTEM	
1) An EMR system will provide each practice with the following:	**Yes / No / Comments**
· Conversion to electronic charting (point of service)	
· Improved patient care	
· Improved documentation of patient encounters (both in detail and legibility)	
· Reduction in storage space by eliminating paper charts	
· Reduced staff time that is spent pulling, filing, finding charts	
· Improved efficiency of charting and patient flow	
· More accurate "billing of level services" to reduce "under-coding" and improve reimbursement	
· Improved speed and precision of communication between office personnel	
· Physician access to charts from home or hospitals	
· Immediate access to charts from multiple office sites (if applicable)	
· Reduction in medical errors due to legibility	
· Reduced malpractice costs	
2) An EMR system will provide the IPA with the following:	
· Increased leverage in contract negotiating with insurance companies	
· Increased ability to obtain research money as research will be more efficient and less complex	
· Ability to document quality management	
· An additional service provided to its shareholders at a reduced cost through group discount	
3) An EMR system will provide patients with:	
· Improved patient care by improving	
· Efficiency	
· Chart legibility	
· Coordination of care	
· Accuracy of record keeping	
· Better patient education	
REQUIREMENTS OF AN EMR SYSTEM	**Yes / No / Comments**
1) Specific pediatric needs	
Growth curves (2000 release) with calculation of percentiles	
Birth to 36 months - length, weight, head circumference	
2 to 20 years - height, weight, and calculated BMI	
Ability to enter either metric or US units (kg, lbs, cm, inches, etc..)	
Conversion of units between metric and US units	
Immunization record	
Immunization records: how detailed? Does it include time/lot # etc.?	
Patient's signature on consent form– electronic?	
Flag or alert of missing or late vaccines	
Ability to print immunization record in state specific format	
A recall system to provide a monthly report of patients behind/due for immunizations	
Does program alert Doctors of patients who need special vaccines?	
Asthmatics and Flu Shot	
Teenagers and Tetanus	

College student and Menamune	
Automatic completion of immunization forms:	
a) Camp forms?	
b) Sports Physicals?	
c) Immunization Gold Forms?	
d) School forms?	
e) Communication with referring Doctors?	
a) Part of EMR or add-on?	
b) Handouts – where are they printed?	
c) Immunization info – printed?	
List of medications prescribed	
Calculation of pediatric drug dose- by weight	
Drug formularies - flagging of medication if off formulary	
Alert if patient has allergy to chosen medication	
How does system promote: Drug Interactions Prevention?	
i) Drug-Drug	
ii) Drug-Disease	
iii) Drug-Patient	
Electronic RX -Permit prescription to be either printed or faxed to pharmacy	
Electronic Signature	
Provides list of previoulsly prescribed and/or current drugs,(with start and end dates)	
including suspensions, chewables, etc.. (updateable)	
2) General medical requirements	**Yes / No / Comments**
Well child care (preferably with the IPA check up sheets entered as a template)	
Provides problem list and automatically updates when an encounter is complete	
Ability to view problem list by either date or specific problem (i.e. to see all "otitis media" with dates)	
Uses a "SOAP" format for documenting sick visits	
Charting Visits-specifics	
How do we document the ADHD consult or the Behavior Consult or the Constipation consult? Can we use prose?	
When reviewing pt's chart, are **pertinent positives** and **negatives** clearly highlighted or marked?	
How are Developmental Milestones tracked?	
Nurse Calls	
a) Can we track nurse calls?	
b) Can we track number of calls per nurse and quality of advice given?	
Documents clinical reasoning	
Input of third party data by scanning (lab reports, x-ray reports, consultant letters, etc...)	
Clinical Guidelines and Diagnosis/Drug Consults?	
Billing for visits	
Recommends level of service E/M Coding?	
Built in database of ICD-9 and CPT codes (updated annually)	
Charge Captures – does EMR improve missed charges?	
Charge Calculator?	
Is bill for visit a piece of paper or electronic?	
Does bill generated in exam room interface with our AR program in a paperless fashion?	
3) Practice needs	
Guarantees confidentiality	
Provides audit trails	
Each user to have own username and password	
Restricts access to only certain parts of data based on user defined security clearance	

Point of service data entry - data immediately available to view	
Allows for emailing of charts and other notes (script refill permission, signing off of nurse practitioner charts, phone nurse questions, etc.)and allows physicians to easily view inbox between patients	
Software provides simple flow through patient care (prompts next step to be completed)	
a) Does EMR keep track of time of wait, time in office, etc?	
b) Does an EMR "color code" item for emphasis? For example, strep test needed or urinalysis results are ready?	
c) How does EMR enable Dr. and nurse to communication at time of visit?	
d) Do we still have to "talk to" our nurses? [:>]	
e) How does EMR enable practitioners and nurses communicate about patients who have labs, XRY results, phone calls, problems, etc?	
f) Is there an electronic "In Box", Chart Bins for pending labs, etc?	
g) Can important labs be overlooked? What are the safeguards to prevent an email from not being read?	
Multiple Users?	
How many?	
What are the limitations of multiple users?	
Allows easy access of data – able to query data	**Yes / No / Comments**
Is data base:	
i) Relational?	
ii) Hierarchical?	
iii) Flat file?	
iv) Dynamic?	
How will data gathered by EMR enable practice to prove success of treatments:	
For purpose of better contracts with Insurance Companies?	
For purpose of improving quality of care?	
Will EMR enable us to do research?	
Experience with other clinics who do research	
Experience with institutions who do research	
Provide each practice with different options for input of data (touch screen, keyboard, mouse, voice, handheld, etc...)	
Communication with AR systems patient scheduling,and referral systems	
How does the EMR integrate with our current product?	
How does this interface technology differ from other companies EMR products who claim to interface?	
Security -overall	
Secure remote access for specified users	
4) IPA needs	
Provides for aggregated, dis-identified access of patient data for research purposes	
Provides reports of quality management (?) - such as immunization rates, etc	
5) Other information we need to know:	
· How long has company been in business?	
· How long has product been operational?	
· Number of Installs?	
· List of all installs including references of pediatric practice installations.	
· Number of de-installs and reasons?	
· Company's financial backing?	
· Company's financial health?	
· Company's annual budget for research and development?	
· What is the return of investment and how calculated?	
· What services and updates are provided before/after installation?	
· What is included in support package?	
· Length of time to implement.	

Roswell Pediatric Center, P.C. Critical Data Entry Checklist

Please use common sense, ask ?'s – do not guess

Enter all children in the family-Keep this sheet on the top of each child's chart

Critical data to be entered before the first visit:

CRITICAL DATA	***INITIAL***
1. Growth Data: if over 3 years old – all HT and WT over age 2	
if under 3 years old – all HT, WT, and HC since birth	
2. Allergies to medications, foods, bee stings, etc.: document medication or other name, type of reaction, and the date of the reaction	
3. Vaccine Dates: Date and name of immunization (not lot # -manufacturer)	
4.Problem List:	
5. Current or chronic medications	
6.Last check up lab values and all existing Cholesterol values	

Mark the chart with a year 2002 tag to indicate the patient's chart has been established in NW.

Tag & data entry done _____ _____

Signature **Date**

During the first visit:

The practitioner will review the chart and flag for different data entry areas as needed:

_____ OK as is.

_____ Back to an administrative person:

_____

_____

_____ Back to a clinical person:

_____

_____

_____ Save document to scan at a later date:

_____

_____ _____

Practitioner's Signature Date

In Record Time: Diary of an EMR Installation

Georgia pediatric practice discovers that not only is eight enough, it's the perfect number of weeks necessary for implementing an EMR.

By Nancy Babbitt, C.M.P.E.

Mention installation of an electronic medical record (EMR) to physician practices and you get one of several reactions. A few share success stories. The majority share horror stories. A handful describe their de-installation and abandonment process.

For years, the nine physicians, six nurse practitioners, 26 nurses and 40 administrative staff at Roswell Pediatric Center, P.C., in Alpharetta, GA, had wanted an EMR. With three office locations and more than 82,000 annual patient visits, we needed one, too.

With trepidation, beginning in early 2000, a four-person search team (three physicians and me) embarked on an 18-month search to find the right EMR. During the summer of 2001, we selected Noteworthy Medical Systems of Cleveland, OH, in large part for its user-friendliness, with three screens that Noteworthy guaranteed would be customized to meet our workflow and office visit patterns. We purchased the system in August 2001 and said we wanted to be live by November—and we were.

Initial Planning

After purchase, Noteworthy visited our office to begin planning the project. We discussed our expectations and the scope of the project. We established a team of super users that included physicians and key staff, and this team generated most of the input during planning implementation. The physicians spent only a few hours a week (usually on their day off) helping with customization.

Noteworthy developed a 51-page project charter, the guiding document for the entire process and a key reason we were live on our target date. It defined and assigned roles, responsibilities and timelines, and it documented an understanding among all stakeholders. Noteworthy even outlined risks and introduced a risk management plan, cautioning us about "scope creep," an attempt to change the agreed upon requirements after the project started.

To accomplish everything in eight weeks, we had to order and install hardware, build the interface with our practice management system and customize the EMR for our clinical needs. Thanks to well-defined duties in the project charter, most of these action steps occurred simultaneously. We signed the project charter on Sept. 24, 2001, and officially moved into implementation.

For more information about Noteworthy EMR, contact Natalie Haynes at 800.224.9740 or visit www.noteworthyms.com

Hardware Purchases

To effectively research our hardware options, we used outside IT consultants, EPIC IT, to help. We had to determine whether to hardwire each workstation, especially in exam rooms, or to use wireless. When we decided to hardwire, computer locations in the exam rooms became very important to the physicians.

Convenience at the point of care was significant, but physicians did not want their backs to the patients while entering data. We explored workstations with "moving arms" on walls, but some of the arms cost more than the actual workstation. We debated spending the money on a wireless keyboard and mouse for some or all of the workstations, but decided to wait, hoping prices would come down.

I ordered hardware for 105 workstations, 55 of which would be in exam rooms. We also purchased 15-inch flat screen monitors as well as servers and laser printers. We upgraded some existing cabling and also installed new cabling, and we upgraded our network to handle the increased workflow at an appropriate speed. The hardware ordering process alone took more than five weeks.

We put two computers on rolling carts in case of technical problems at an exam room workstation, stationing one in the nurse exam room and the other in our emergency room. If we experience difficulty at an exam room workstation, we can wheel in a mobile workstation, change printer assignments and keep our practitioners moving smoothly until our IT staff resolves the problem.

One hardware decision I would make differently from the start is to buy uninterruptible power supply (UPS) capability for workstations in clinical areas instead of plain surge protectors. If a practitioner were documenting in a chart and we lost power, we would lose the information on that workstation. After a few months on the system and several power blips, we purchased and installed 15-minute UPS for the clinical workstations. Now, if we lose power, practitioners have time to finish the session on their workstations, where it is saved to the main server.

Also in September, I started the process for an interface with our existing practice management sys-

tem, ProMed, from VitalWorks. We contracted with VitalWorks for its programmers to produce an interface to Noteworthy's EMR.

Avoiding duplicate entry of demographic or billing information was a critical part of the project. We also wanted to take advantage of automated charge capture functionality, with physician order entry generating appropriate charge details. On the front end, the practice management system communicates demographic information to the EMR. On the back end, the EMR communicates billing information into the practice management system.

Week 1: Familiarization

After signing the project charter, we kicked off the project. Part of the success of our implementation was because we educated our physicians on what was required of everyone—physicians, nurses, administrative staff—to get the job done. We had commitment from the physicians to attend all scheduled meetings and to stay current with our requests to review customizations in a timely manner. Since our timetable was aggressive, this buy-in at the outset was critical to keep the implementation process moving.

Weeks 2 Through 6: Configuration and Verification

Noteworthy's team initiated a discovery process with checklists detailing exactly what they needed from us to configure the EMR. Three key areas needed input: customization of medical knowledge, workflow and technical information specific to our practice.

The Noteworthy team observed and gathered data, including examples of our existing paper methods. They customized visit outlines, care paths, order sets, reports and document templates. They met every two weeks with Dr. Silverman, our clinical lead, and his team to build our medical knowledge.

Together, we customized more than 90 visit templates, each with a reason for visit as well as links to suggested medications, procedures, educational handouts, and diagnosis and billing codes. We customized the chart's summary screen to contain the information that physicians wanted to see when they first open the chart, plus wellness reminders. Also, we developed templates for the phone triage nurses and timetables for our most common send-out tests, decided on educational handouts and added our referring physician list.

Simultaneously, we had a weekly conference call with all of the team leaders and Noteworthy to monitor and discuss progress of all aspects of the project.

When we approved the final version, Noteworthy tested for four days to ensure the programming was correct and truly matched our needs. We were ready to deploy.

Weeks 6 and 7: Deployment

We developed a system to enter patient history into the EMR. The physicians developed a critical data checklist with detailed instructions for nonclinical staff to enter data. We decided to pull charts daily for patients scheduled for checkups the next day and used temporary staff to enter their histories. During the first visit, the practitioner would review data entered into the EMR and sign off on the paper chart.

Before formal training, we asked everyone to familiarize himself with the program by spending two 30-minute sessions on different days practicing on a demo version of the EMR. After that, Noteworthy provided two hours of formal training to everyone, including temporary employees. We set up six workstations in a conference room training environment and trained more than 80 staff members without limiting our patient schedules. We were ready to use the new system on Nov. 13.

Go-Live

In pediatrics, Monday is a horrible day to start any project, so we went live on a Tuesday. The vendor kept 18 staff members at our three office locations during that week to support us. Each practitioner had a one-on-one trainer. We had one trainer assigned to each group of triage nurses and to each front desk, and we had a project manager at each location.

Noteworthy had recommended a phased-in utilization. They suggested using the EMR for 30 percent of visits, or every third patient, on the first day, 50 percent the second day, 75 percent the third day and 100 percent by the week's end. The EMR was easier to use than paper. The first day, practitioners used it at least 50 percent of the time. Practitioners and staff even developed a competition to see who could use the system more. By the second day, we were close to 100 percent.

Even though we learned the system quickly, we did tend to run almost an hour behind schedule for the first few weeks. We probably expected too much of ourselves and should have given ourselves more time to adjust.

In our experience, Roswell is an EMR installation success story. Staff and vendor alike dedicated substantial behind-the-scenes effort to planning, analysis and organization, and these were critical components of our success.

Nancy Babbitt, C.M.P.E., is the administrator for Roswell Pediatric Center, P.C., headquartered in Alpharetta, GA. Contact her at babbittnc@aol.com. **HMT**

Reprinted from *Health Management Technology*, February 2003

ROSWELL PEDIATRIC CENTER, P.C.

JOB DESCRIPTION:

SUPERVISOR OF INFORMATION SYSTEMS

The Supervisor of Information Systems for Roswell Pediatric Center, P.C. oversees all activities that relate to the practice's information systems, including networking and system security.

Clinical Customizations and Upgrades: Work with physicians and staff to come to a "group concensus" on customizations and prioritizing future requests. Reviews proposed upgrade prior to implementation.

Staff Education and Training: Responsible for employee's access levels and passwords on all applications. Oversees training of new and current employees on information systems applications. Provides ongoing training during staff meetings or as needed on an individual basis. Attends ongoing education classes/meetings with business partners and outside sources, then trains staff as needed.

Hardware and related infrastructure responsibilities:

- Implement and monitor functionality of the information systems
- Maintain security and integrity of the information systems
- Oversee and resolve issues relative to system implementation and integration
- Monitor and maintain security of home and remote site system users
- Serve as a liaison to business associates which are networked/interfaced with our information systems. Key contact for business partner support services, regarding hardware and software issues and / or applications.
- Report to the Practice Administrator on a routine basis regarding the status of system operations, as well as when crisis occur.
- Report to the Information Technology Committee on a routine basis. Prepare agenda's for monthly meetings. Follow up and implement decisions approved by the IT Committee or the Partners.
- Liaison with outside IT support firm. Organizes and directs requests and oversees work performance. Monitors hours we have used compared to hours billed.
- Assist in upgrades and new projects.
- Responsible for overseeing the installation and connectivity of computer equipment.
- Responsible for monitoring daily, weekly, and monthly back up procedures.
- Oversees contracts for data, voice, and internet services

- Responsible for tracking hardware and software inventory.

- Responsible for disposal and media re-use.

- Responsible for reviewing suggested Hardware Upgrades, Enhancements, and maintenance agreements.

- Responsible for researching IT vendor's recommendations

- Responsible for assisting outside sources in chart reviews / audits.

- Maintenance and upkeep of computer hardware, printers, scanners, including onsite equipment repairs.

- Troubleshooting all computer and network problems, virus, worms, error messages

Computer Surveillance and Monitoring Program:
Responsible for maintaining the security and integrity of the computer surveillance program and printed materials. Quarterly monitors random work stations on random days, keeping documentation of monitoring secure, by scanning into access controlled File Cabinets in Impact MD, then shredding the printed materials. Reports to the Practice Administrator on a routine basis regarding the status of employees network use.

Coding and Compliance Official:

- Overseeing and monitoring the implementation of the Compliance Program

- Establishing methods, such as period audits, to improve the Practice's efficiency and quality of services, and to reduce the Practice's vulnerability to fraud and abuse.

- Periodic review of the compliance program and identification of areas for update to meet any changes in standard of practice.

- Development and coordination and participation in an employee training program that focuses on the elements of compliance program.

- Oversee that the HHS-OIG's "List of Excluded Individuals and Entities" and the "General Services Administrations List of Parties Debarred from Federal Programs" have been checked with respect to all employees, Practitioners, and independent business associates.

- Ensure that pertinent Federal and State statues, regulations, and standards of training and documentation to employee/personnel/compliance file for all employees and practitioners occurs.

- Investigate any report or allegation concerning possible unethical or improper business practices and monitoring subsequent correction action and/or compliance.

HIPAA Privacy and Security Official: See the attached job description.

IT ASSISTANT

This position's required working hours will fluctuate, as IT services are needed. Time requirements are variable dependent on the needs of the Practice. If chosen, the employee must be willing to work after hours and weekends when necessary, as well as maintaining their current job duties.

The chosen employee must be:

- Energetic
- Willing to learn new tasks and take on additional responsibilities
- Reliable and dependable
- Flexible with their time
- Detail oriented

Responsibilities may include, but not be limited to:

- Maintenance and upkeep of computer hardware
- Maintenance and upkeep of printers and scanners
- Inventory of hardware
- Troubleshooting all computer and network problems, including network traffic monitoring
- Assist in upgrades and new projects
- Assist in maintaining network security
- Responsibility of daily backups and monitoring of all backup tapes
- Assist in training other employees on new products, programs, and program upgrades
- Act as a liaison to the IT Supervisor
- Attend and contribute to monthly IT Committee Meetings

Adapted from proposed CCHIT Use Case #1

Last Updated August 21, 2005

Historical Information contained in the EHR from previous visits:

Demographics:
Joe Smith, Preschool, male,
Birthdate: 6/20/2001 at 8:05 PM
Mother: Jessica N, DOB 2/24/1970
Father: Jeffrey N., DOB, 10/26/1972
Address: 1600 Rockville Pike, Rockville, Maryland
Phone: 301-555-1212(home)
Mom's cell: 202-666-1212,
Dad's cell: 202-777-1212

Allergies:
Penicillin, with a reaction of hives

Medications:
One a Day Plus Iron, 1 tab daily
Fluoride supplements Luride 0.5 mg 1 tab daily

Labs:
Hemoglobin - 12.0 gm/dl on 5/26/04
Lead - 2.0ug/dl on 5/26/04.

Past Medical History
Breast-fed for 15 months (stopped completely 09/20/2002)
Ear infections (2/25/2002), (10/10/2002), (01/15/2003).
Rotavirus with dehydration, diarrhea, and 72 hour hospitalization (03/05/2001)

Growth and Development:
Development - normal as per ages and stages assessment. (Various assessment tools have been used)
Growth: Birthweight 8.00 pounds

		Wgt.	Hgt.	Head circ.
Age	1 mo. (07/22/2001)	9 lbs 2 oz.	21"	14"
	2 mo. (08/23/2001)	10 lb	22"	15"
	4 mo. (10/30/2001)	13 lb	24.5"	16"
	6 mo.(12/29/2001)	15.5 lb	27"	16.75"
	9 mo. (03/21/2002)	18 lb	28"	17.5"
	12 mo. (06/22/2002)	20 lb	29.5"	18"
	15 mo. (09/25/2002)	22 lb	31"	18.25"
	18 mo. (12/29/2002)	24 lb	32"	18.5"
	2yr. (06/21/2003)	30 lb	33.5"	18.75"
	3 yr. (06/25/2004)	34 lb	37"	19.5"

Immunizations:
(EMR should display immunizations due at this visit. Recording of immunizations must include manufacturer, expiration date, lot number, site of administration, administrator and documentation of VIS given – vendor may choose how they show this)

DTaP 8/23/2001, 10/30/2001, 12/29/2001, 9/25/2002
IPV 8/23/2001, 10/30/2001, 3/21/2002
Hep B 6/21/2001, 7/22/2001, 3/21/2002
MMR 6/22/2002
Varivax 12/29/2002
HIB 8/23/2001, 10/30/2001, 12/29/2001, 9/25/2002
PCV7 8/23/2001, 10/30/2001, 12/29/2001, 9/25/2002

Information to be recorded in this visit:

Joe has a common name and so after looking up by name and seeing 4 Joe Smiths, the receptionist looks him up by his birth date or SSN or phone number. While there the mother states that she has remarried, her new husband has adopted Joe and they have moved. She needs to have his last name changed to Thompson as well as the address changed to 1234 Maplewood Drive, Bethesda, MD 22222.

Ms N. tells the receptionist that Joey is here for his four-year check-up. She brought his immunization record handed to her during Joey's 3 y/o check up. An age-specific anticipatory guidance questionnaire and pre-visit instructions were produced by the EHR and sent to the mother last week together with the reminder for Joey's check-up. A PPD was placed two days ago in school and is now large, so his mother is concerned. .

Nurse Betty then reviews Joey's chart. She checks the computer for needed immunizations (DTaP. IPV, and MMR) and retrieves the current immunization record from the EMR. Upon review Nurse Betty finds that the mother just said that he is allergic to Penicillin because she is allergic to Penicillin. Nurse Betty removes or marks erroneous the allergy from the list. He is allergic to peanuts with a reaction of anaphylaxis. This allergy is added.

The nurse ascertains that he takes Flintstones chewable multivitamins and enters the medication in the computer as "prescribed elsewhere" since this was not prescribed by his doctor. She deletes the One a Day plus iron that was in the computer as the mother states he never took those.

Then the nurse takes Joey's vital signs: BP(90/55) Height (40"), Weight (40lb), Temperature(98.6), pulse(80), respiratory rate(20) and enters them into the medical record and graphically reviews height and weight history, then logs out.

Joey's doctor logs on and checks the medical record, vital signs, growth and development including the developmental assessment done by the nurse from a checklist. Then she goes into the exam room.

Information obtained by the physician:

Joey has been in preschool for a few years and has done very well. He has good social skills and has made friends. He eats from all four food groups and especially likes fruits and vegetables. He is very active and takes swimming lessons and ice skates. He watches about 8 hours of TV per week and there is no TV in his bedroom. No one in his home is a smoker. There are smoke detectors in his home. Dad is a hunter and his hunting rifle is stored in a gun safe secured with a combination lock. The ammunition is stored in a separate locked location. There is a dog and cat that share the household. He is in a car seat in the rear seat of the car when he is transported. He wears a helmet when he rides his tricycle and takes skating lessons.

He traveled recently for a month to a high-risk area for tuberculosis. While there he played with many of the local children. A PPD was placed two days ago at school.

Through the EMR's support of guidelines, the doctor notes that he needs three boosters, DTaP, IPV, and MMR.

Dr. Alexander does a complete physical and finds that Joe has a normal exam except that the PPD site has 12mm erythema and induration, interpreted as positive. All systems were examined. Guided by the anticipatory guidelines (Dr. Alexander is using Bright Futures (http://brightfutures.aap.org), Dr. Alexander addressed appropriate elements (preparing for kindergarten, summer safety, insect repellant, sunscreen) and creates information for the parents to read these recommendations. This may be providing a link to read them on line or a text document. It was agreed that Joe will need the standard four year immunizations and a recommendation for flu vaccine was made for the fall. Consent to immunize and share the information with the registry is signed and scanned into the EMR along with his HIPAA privacy papers. Dr. Alexander counsels the mother on the significance of the positive PPD.

Plan:
A chest x-ray is ordered. Joe is started on INH (Isonizide) for 6 months and the stop date is entered into the computer as part of the prescription. His calculated dose at 10mg/kg is 180mg/day and the physician orders this medication in the EHR system. The prescription is created to make up the dose at 120mg/5ml in a pleasant tasting liquid. The Sig is 7.5ml daily for six months. Vitamin B6 is also added at 50 mg daily for six months. Both prescriptions are printed or faxed to the patient's pharmacy. A prescription renewal for Fluoride supplements Luride 0.5 mg 1 tab daily is printed or faxed to the patients Pharmacy.

A follow up appointment in one month is planned to check on compliance and any symptoms. Dr. Alexander notifies the front desk to schedule the one month appointment. The receptionist makes the appointment while the physician is completing her note.

AAP Pediatric Documentation Challenge™ Scenario

Nurse Betty prepares Joey for his immunizations. She administers the immunizations and provides complete documentation of the event in Joey's EHR. While she is documenting this in the chart, the physician attempts to update the same note. The system prevents simultaneous entry into the same chart section. Nurse Betty also completes and documents the vision and hearing screening test. Ms. N. is then given an updated record of Joe's immunization record and a school and camp form required for his extra-curricular program and his school. On the way out the door, he is given his appointment for one month.