The MARYLAND
HEALTH CARE COMMISSION

Guidelines to Implementing an Electronic Health Record

February 2012

Health Information Technology

- The main goal of using technology in the health care arena is to improve the quality of patient care
- Adopting EHRs can enhance patient safety through:
  - *Comprehensiveness*: EHRs can give providers the information they need to evaluate a patient's current condition in the context of the patient's health history and other treatments
  - *Speed*: In a crisis, EHRs provide instant access to information about a patient's medical history, allergies, and medications. This can enable providers to make decisions sooner, instead of waiting for information from test results

The Purpose of this Presentation

- Adopting an EHR system does not necessarily mean redefining an organization's existing business processes
- This presentation:
  - Aims to provide guidance to health care providers and their staff in developing a plan to implement an EHR system;
  - Offers advice to ease the transition from a paper to a digital practice; and
  - Provides resources that are available to assist practices with implementing an EHR

This presentation is developed for…

- Small to medium-sized physician practices
  - Practices who have started the process of selecting and implementing an EHR
  - Practices that would like a general overview on the processes and things to consider regarding implementation of an EHR
  - Practices seeking additional resources that will help with implementing an EHR

Presentation Items

- EHR Overview
- Assess Practice Readiness
- EHR Model and Vendor Selection
- Contracting with Vendor
- Five Phases of EHR Implementation
- Achieve Meaningful Use
- Resources

An Overview

Electronic Health Records

Three Stages of EHR Use

Basic EHR

Clinical notes and results viewing

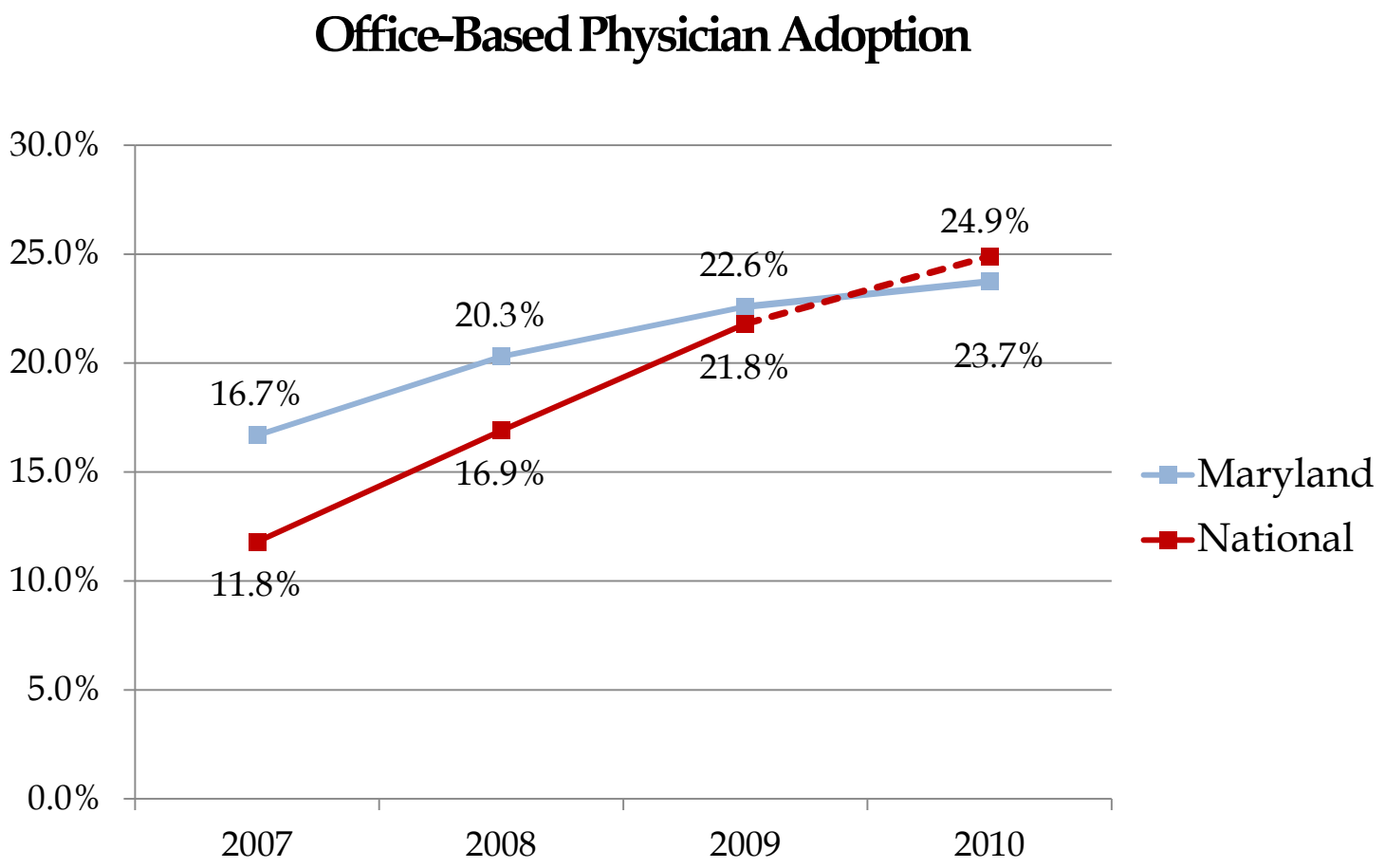
Intermediate

e-Prescribing that includes adverse drug prevention and alternative drug suggestion

Advanced

Lab order entry with testing guidance, radiology order entry with test guidance, and electronic charge capture

EHR Adoption – On the Rise



Maryland Data – Maryland Board of Physicians
National Data – National Center for Health Statistics
Dash lines within the chart indicate 2010 data are preliminary

Assess
Practice Readiness

Practice Readiness Assessment

- The assessment phase is foundational to all other EHR implementation steps, and involves determining if the practice is ready to make the change from paper records to EHRs, or to upgrade their current system to a new certified version
- At this stage, practice leadership and staff should consider the practice's clinical goals, needs, financial and technical readiness as they transition.

Conduct a Practice Readiness Assessment

- The assessment should look at the current state of the practice:
  - Are administrative processes organized, efficient, and well documented?
  - Are clinical workflows efficient, clearly mapped out, and understood by all staff?
  - Are data collection and reporting processes well established and documented?
  - Are staff members computer literate and comfortable with information technology?
  - Does the practice have access to high-speed internet connectivity?
  - Does the practice have access to the financial capital required to purchase new or additional hardware?
  - Are there clinical priorities or needs that should be addressed?

Workflow Analysis

- Perform a workflow analysis
  - A workflow analysis helps staff better understand the complexity in completing a task and develop a better appreciation of how these tasks are accomplished by others
  - Analyzes existing work processes while looking for opportunities for improved productivity and efficiency using the tools provided by the EHR
  - A completed workflow analysis will:
    - Inform the practice on detailed descriptions of current office workflow
    - Provide detailed workflow maps of key office processes
    - Identify current inefficiencies, bottlenecks, and opportunities for improvements
    - Provide a high-level outline of desired future workflow redesigns after EHR implementation

EHR Adoption Timeline

- Keep in mind the EHR adoption process is a journey:

Planning	Vendor Selection	Contracting	Implementation	Training and Go-Live	Post Go-Live and Improvement
Time Varies	1 – 3 Months	1 Month	2 – 4 Months	2 Weeks	Ongoing

EHR Model &
Vendor Selection

EHR Models

- There are two models of EHR systems
  - ***Application service provider (ASP)*** - Allows practice to access the EHR software from a remote site through an Internet connection to the site that houses the EHR and the patient information. The practice will pay a monthly fee instead of having to pay the costs for a client server solution
  - ***Client-server or standalone (CS)*** - Data is stored in a server located in the physician's office. The practice incurs the cost of investing in hardware, and the staff maintains and supports the EHR system

Select an EHR Model

- Assess which EHR model will meet your practice's needs
  - The Client-server model is typically more costly and entails purchasing, installing and maintaining the EHR system in-house; or
  - The Application Service Provider model includes licensing the EHR software and enables access using the Internet
- For a comparison on the differences between an ASP versus a CS model, please review the following chart from the American Medical Association, which is located at: http://www.ama-assn.org/resources/doc/hit/asp-saas-client-compare.pdf.

Certified EHR Vendors

- The Health Information Technology for Economic and Clinical Health (HITECH) Act directed the Office of the National Coordinator for Health Information Technology (ONC) to establish a temporary certification program that authorizes ONC-Authorized Testing and Certification Bodies (ONC-ATCBs) to certify EHR technology
  - ONC-ATCBs certify that complete EHRs and EHR modules are compliant with standards, implementation specifications, and criteria and that the EHR technology is capable of supporting meaningful use to qualify for incentive payments
  - There are over 1,000 nationally certified EHR products

EHR Vendor Selection

- With over 1,000 certified EHR vendors available, choosing the right system for your practice can be daunting. The following are steps to guide a practice in selecting an EHR vendor:

1. Identify the key decision makers in the practice for an EHR selection team, which should include a project manager, a physician champion, and clinical and office staff
   - Appoint a team to define what you expect the EHR to accomplish for your practice, the cost and complexity of the EHR implementation, and include a budget and the resources
   - Determine the EHR functionalities your practice requires

EHR Vendor Selection *Continued*

2. Develop a Request for Proposal (RFP)

- An RFP will tell prospective vendors what they need to know about your practice and provide you with useful information about the vendor's products, and it will help to ensure that the responses you receive can be more easily compared
- The RFP will provide background information to vendors on the practice and the types of EHR functionalities needed by your staff
- The following are examples of an RFP template that the practice can customize:
  - *The Doctor's Office Quality – Information Technology (DOQ-IT) - http://www.ddcmultimedia.com/doqit/ToolsandResources/EHRtools.html, click the tab for vendor selection, and then download the sample RFP document*
  - *The American Health Information Management Association (AHIMA) - http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_047959.hcsp?dDocName=bok1_047959*
  - *The American Academy of Family Physicians (AAFP) - http://www.aafp.org/fpm/2005/0200/p55.html#fpm20050200p55-bt3*

EHR Vendor Selection *Continued*

3. Review the RFPs
   - Your goal is to pick the top candidates to visit the practice and give a demonstration of their system
     - Have each person on the selection team participate in the review and ranking of the vendors
     - Narrow the list of vendors to the top two or three choices
     - Check references and hold vendor demonstrations
4. Choose the vendor
   - Conduct a site visit at practices that use the vendor's software, observe how these practices use this system
   - Select a finalist

Contracting with the Vendor

Contracting with Vendor

- After selecting an EHR vendor, your practice will need to negotiate the support that the vendor will provide
- Items to consider in contract talks:[2] user licenses; type of interfaces; hardware specifications and installation; third party software; internet connectivity and redundancy; implementation project manager; training; service agreement; IT support; and additional terms and conditions

[2] Carolyn Hartley, *Signing an EHR Contract? 25 Tips to Control Costs*, eHealth Report Newsletter, February 2010. Available at: http://physiciansehr.org/signing-an-ehr-contract-25-tips-to-control-costs.aspx.

Contract Tips and Best Practices[3]

- Have a lawyer and senior IT staff review software vendor agreements when possible
- Review contract language frequently and avoid any ambiguous language
- Make sure any verbal agreements are backed up by a paper trail
- Make sure the contract includes a clause about security and HIPAA compliance
- Document any "what if" fees. For example, troubleshooting support, late payment fees, system upgrades, etc.

[3] Houston Neal, *The Guide to Negotiating an EHR Software License Agreement*, Software Advice, October 2010. Available at: http://blog.softwareadvice.com/articles/medical/the-guide-to-negotiating-an-ehr-software-license-agreement-1102810/

The Five Phases of EHR Implementation

Five Phases of the EHR Implementation Process[4]

- When you have selected a vendor and signed a contract, it is time to implement the EHR
- Generally, there are five phases to EHR implementation:

[4]Ursula Pennell and Eric Fishman, MD, Known Pitfalls and Proven Methods for a Successful EMR Implementation, *EMR Consultant*, 2005 – 2011. Available at: http://www.emrconsultant.com/emr_pitfalls.php.

EHR Implementation Phase 1: Planning

Things to Consider

- The most extensive and time consuming phase of the EHR implementation process
- Things to consider during this phase:
  - Which documents to convert from paper to digital
  - What information to convert
  - Who on staff will enter the information
  - Map critical practice workflows
  - Identify problem areas and bottlenecks
  - Determine security rights and authorized access and system piloting
  - Ensure a system backup plan is in place

EHR Implementation Phase 1: Planning

Staff

- Appoint an In-house Project Manager
  - Have a key person on staff to oversee the entire EHR implementation
- Communicate with the staff early in the planning phase the practice's plans to acquire an EHR
  - Include staff in the decision of selecting the EHR vendor
- Have end-user staff involvement in the system set-up
  - Have staff who will use the EHR become involved in decisions regarding the set-up of the system files, pick-lists, defaults, templates or libraries, customizable options, etc.

EHR Implementation Phase 1: Planning
continued

- Decide what data needs to be retrievable
  - Identify what data will be useful for reporting purposes
  - Determine what data to include in customized libraries, pick lists, standardized and/or required data field for your practice
- Be aware that "free text" may not be reportable
  - If the data is not in discrete data fields, the provider may not be able to use this information in an internal report writing program or a third-party report writing program
  - A speech recognition software program within an EHR may be in a free-text form that is not in a format useful for reports

EHR Implementation Phase 1: Planning
continued

- Phased implementation is highly recommended
  - Many functions in an EHR are in discrete modules
  - Modules can include functions for clinical summary, reporting, lab order entry, messaging, evaluation & management coding, e-prescribing, etc.
  - Map out the order and the rationale for phasing in the modules
- Create timelines that are flexible
  - Constantly re-evaluate and assess the progress in implementing the EHR

EHR Implementation Phase 2: Testing

- Software Testing
  - *Test software extensively before implementation* – set up a test database for software testing and for staff training
  - *Perform volume testing, if possible* – perform a dry run in a test database to determine the time it takes to enter the data in a typical day or with increased volume
  - *Ask for a list of known bugs from the vendor for the version of the EHR system*– ask the vendor to create work-arounds and identify dates for patch fixes before staff goes-live with the EHR system. Be persistent in asking the vendor for information on any major system flow problems or bugs in using the EHR

EHR Implementation Phase 2: Testing
continued

- Hardware Testing – prepare the infrastructure
  - For a client server environment, plan in advance the locations for workstations, printers, kiosks, servers, and/or wireless device access points
  - New systems need to be purchased and delivered well in advance of implementation to allow for testing
  - Complete all testing before scheduling staff training sessions
  - Set up a test environment for use with future updates, which will allow your IT director to install future software updates/upgrades in a non-production environment for testing before using software live

EHR Implementation Phase 3: Training

- Allocate enough time for staff training
  - Set aside sufficient time for staff to learn the new EHR system and the new workflow and procedures
  - Keep training sessions short and scheduled in increments, provide a hands on approach for staff, schedule small groups for more personalized training
- Training should be performed outside of clinical work sessions
  - Block off time, hire temporary employees, train outside of clinical time, and offer to pay if staff is training outside of their usual work schedule
- Evaluate staff's readiness for go-live

EHR Implementation Phase 4: Go-Live

- Schedule the go-live in close proximity to the end of the training sessions
  - Do not schedule long delays between the training sessions and the go-live phase; avoid allowing more than a week between the end of training and go-live
- Reduce provider schedules
  - Reduce the number of patients that a provider is required to see in an effort to reduce the level of anxiety with switching to the EHR
- Provider adequate resources
  - Provide well trained individuals such as vendor trainers, super users, in-house project managers, etc., during the go-live phase

EHR Implementation Phase 5: Post Go-Live

- Conduct a post go-live assessment
  - Continue to assess the staff's level of frustration, monitor productivity, measure patient cycle times, re-evaluate workflows, assess learning curves, determine whether the EHR is meeting established goals, etc.
- Evaluate the go-live with staff
  - Ask the staff for feedback on the go-live process (e.g., what was helpful and what was lacking)
- Provider on-going training and support
  - Continue to offer training sessions that will help reinforce and refresh staff on the EHR

Achieve Meaningful Use

Meaningful Use

- The Medicare and Medicaid EHR Incentive Programs provide a financial incentive for the "meaningful use" of certified EHR technology to achieve health and efficiency goals
- By putting into action and meaningfully using an EHR system, providers will reap benefits beyond financial incentives–such as reduction in errors, availability of records and data, reminders and alerts, clinical decision support, and e-prescribing/refill automation

Components of Meaningful Use

- The use of certified EHR technology for electronic exchange of health information to improve quality of health care
- The use of certified EHR technology to submit clinical quality and other measures
- The use of a certified EHR in a meaningful manner (e.g. e-prescribing)

Achieve Meaningful Use

- Continuous evaluation of your practice's goals and needs throughout the transition to continue improving workflows that achieve the individual practice's goals and needs while leveraging the functionality of EHR
- Evaluating the implementation process will help shape both the practice and its evolution
- Continuously evaluate the processes to ensure that the practice is functioning efficiently to ensure staff and patient satisfaction, and ultimately achieve meaningful use.

EHR Adoption Resources

EHR Product Portfolio

- The EHR Product Portfolio[4] includes 45 vendors
  - All vendors participating offer a discount to Maryland providers
- The web-based document includes a vendor contact list, privacy and security policies, product overview, line item pricing, five-year pricing projections, and user reference reports
- The MHCC updates its EHR Product Portfolio twice annually to include only those EHRs certified by the ONC-recognized ATCBs

[4] http://mhcc.maryland.gov/electronichealth/ehr/ehrvendors.html

Hosted EHRs

- Existing law requires the MHCC to designate one or more MSOs to offer services in the state which:
  - Use an application service provider model to host one or more EHR systems through the Internet
  - Well positioned to leverage buying power and manage the technical aspects of EHRs
  - Will likely compete for market share based on their EHR solutions and other administrative practice support services
- Nine MSOs are State Designated

Medicare EHR Adoption Incentives

- Incentive Payment Detail
  - Columns = first calendar year EP receives a payment
  - Rows = payment amount yearly if meeting requirements

	CY 2011	CY 2012	CY 2013	CY2014	CY 2015 and later
CY2011	$18,000				
CY 2012	$12,000	$18,000			
CY 2013	$8,000	$12,000	$15,000		
CY 2014	$4,000	$8,000	$12,000	$12,000	
CY 2015	$2,000	$4,000	$8,000	$8,000	$0
CY 2016		$2,000	$4,000	$4,000	$0
TOTAL	$44,000	$44,000	$39,000	$24,000	$0

Medicaid EHR Adoption Incentives

- Incentive Payment Detail
  - Columns = first calendar year EP receives a payment
  - Rows = payment amount yearly if meeting requirements

	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015	CY 2016
CY 2011	$21,250					
CY 2012	$8,500	$21,250				
CY 2013	$8,500	$8,500	$21,250			
CY 2014	$8,500	$8,500	$8,500	$21,250		
CY 2015	$8,500	$8,500	$8,500	$8,500	$21,250	
CY 2016	$8,500	$8,500	$8,500	$8,500	$8,500	$21,250
CY 2017		$8,500	$8,500	$8,500	$8,500	$8,500
CY 2018			$8,500	$8,500	$8,500	$8,500
CY 2019				$8,500	$8,500	$8,500
CY 2020					$8,500	$8,500
CY 2021						$8,500
TOTAL	$63,750	$63,750	$63,750	$63,750	$63,750	$63,750

State-Regulated Payer Incentives

- Maryland is the first state to build on the Medicare and Medicaid adoption incentive programs under the American Recovery and Reinvestment Act of 2009, requiring state-regulated payors to provide incentives for the adoption of EHRs
  - The six largest payers participate: Aetna; CareFirst; Cigna; Coventry; Kaiser Permanente; and United Healthcare

- Aimed at primary care practices: family; general; internal medicine; pediatrics; geriatrics; and gynecology
- A one-time maximum of $15,000 per practice per payer

Additional Resources

- The following websites provide information regarding EHR selection:
  - MHCC EHR Product Portfolio – http://mhcc.maryland.gov/electronichealth/ehr/ehrvendors.html
  - Management Service Organizations – http://mhcc.maryland.gov/electronichealth/mso/mso_providers.html
  - MHCC CMS EHR Demonstration Project – http://mhcc.maryland.gov/electronichealth/cmsdemo/index.html
  - Office of the National Coordinator – National Learning Consortium – http://www.healthit.gov/

Questions? Contact Us!

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Citation

- This presentation was prepared using material from the Department of Health and Human Services Office of the National Coordinator for Health Information Technology HeatlthIT.gov website, specifically the *How to Implement EHRs* webpage.