

Component 8 Installation and Maintenance of Health IT Systems

Unit 2 System Selection – Software and Certification

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What We'll Cover

- Off-the-shelf vs. in-house software
 - Advantages and disadvantages
- Certification and compliance
 - What is CCHIT?
 - Determining system compliance
- ARRA & “meaningful use”
 - What is ARRA?
 - Determining eligibility
- Costs to consider for EHRs

Off-the-Shelf Software

- Commercial Off-the-Shelf (COTS)
- Modifiable Off-the-Shelf (MOTS)
- 200+ companies claim to make an EHR (Electronic Health Record).
- May include “freeware” with commercial support.

Advantages of COTS

- Lower development costs
- Wider “test market” to find bugs and limitations
- Vendor training and product support, bug fixes
- Easier learning curve
- Eliminate development time

Disadvantages of COTS

- Unalterable source code
- Compatibility issues
- Uncertain upgrade schedules
- Business practices may have to be modified, and workflow often has to be adapted to the particular product design.

Advantages of In-House

- Developed wholly by the operating institution
- Design is specifically tailored to meet institutional objectives.
- Can mesh comfortably with existing workflow processes.

Disadvantages of In-House

- Higher development costs, initial and throughout product lifecycle
- Dependent on expertise of in-house development staff
- Lack of vendor support – bug fixes, upgrades
- Training must be developed in-house.
- Longer development time

What is CCHIT?



- Certification Commission for Health Information Technology (CCHIT)
- Private, nonprofit
- Partnered with US Dept. of Health and Human Services (HHS) but not a government agency
- 2004: Created by Healthcare Information and Management Systems Society (HIMSS), American Health Information Management Association (AHIMA), and Alliance for Health Policy and Systems Research
- 2005: Awarded 3-year, \$7.5M government contract to develop certification criteria and inspection process

Role of CCHIT



- Define minimum EHR functionality
- Promote minimum interoperability and security standards
- Inspect integrated EHR functionality, interoperability, and security according to their independently developed criteria

Why Certification?



- Reduce risks to physicians in EHR investment
- Facilitate interoperability of EHR products
- Enhance availability of EHR adoption through stimulus incentives and relief from regulatory barriers
- Ensure that EHR products and networks are secure and protect privacy

Why Certification? (cont'd)



- Allow evaluation time to be used more efficiently
- Narrow the initial field of vendors
- Assure basic functionality and interoperability, allowing you to focus evaluation more on special or unusual needs of your institution

Getting Certified by CCHIT



- EHR can be certified in any combination of three domains:
 - Ambulatory
 - Inpatient
 - Emergency Department
 - (Enterprise = all 3)
- CCHIT Certified 2011: “core” plus “optional” certifications
- Average cost \$29,000

What are ARRA and "Meaningful Use"?



- ARRA (American Recovery and Reinvestment Act, a.k.a. "stimulus bill")
 - Passed by Congress in February 2009
 - Over \$22 billion allocated to modernize health IT system.
 - HITECH (Health Information Technology for Economic and Clinical Health) Act: initially rewards institutions for "meaningful use" of EHRs, then in 2015 imposes penalties.



Meaningful Use Criteria: Stage 1

- According to Centers for Medicare & Medicaid Services (CMS), the priorities for hospitals & providers are:
 1. Improving quality, safety, and efficiency, and reduce health disparities
 2. Engage patients and families in their health care
 3. Improve care coordination
 4. Improve population and public health
 5. Ensure adequate privacy and security protections for personal health information

Meaningful Use Criteria: Stage 1 (cont'd)

- 1. Improve quality, safety, and efficiency, and reduce health disparities
 - Computerized Provider Order Entry (CPOE, directly entered by authorizing provider) for 10+% of all orders
 - Drug-drug, drug-allergy, drug-formulary checks
 - Up-to-date problem list of current and active diagnoses, based on ICD-9 or SNOMED vocabularies
 - Active medication list
 - Active medication allergy list

Meaningful Use Criteria: Stage 1 (cont'd)

- 1. Improve quality, safety, and efficiency, and reduce health disparities (cont'd)
 - Demographics
 - Preferred language, insurance type, gender, race, ethnicity, date of birth, date and cause of death
 - Vital signs
 - Changes in height, weight, blood pressure; calculate and display Body Mass Index (BMI); plot and display growth charts, including BMI, for children 2-20 years

Meaningful Use Criteria: Stage 1 (cont'd)

- 1. Improve quality, safety, and efficiency, and reduce health disparities (cont'd)
 - Smoking status (13+ years old)
 - Laboratory test results as structured data
 - Lists of patients by specific conditions
 - Report quality measures to CMS or states
 - Five clinical decision support rules, including for diagnostic test ordering, along with ability to track compliance
 - Submit claims electronically, public and private

Meaningful Use Criteria: Stage 1 (cont'd)

- 2. Engage patients and families in their health care
 - Provide patients with electronic copy of health information upon request
 - Diagnostic test results, problem list, medication lists, allergies, discharge summary, procedures
 - Discharge instructions at the time of discharge

Meaningful Use Criteria: Stage 1 (cont'd)

- 3. Improve care coordination
 - Electronically exchange key clinical information
 - Medication reconciliation at relevant encounters and each transition of care
 - Summary of care record for each transition of care and referral

Meaningful Use Criteria: Stage 1 (cont'd)

- 4. Improve population and public health
 - Capability to:
 - Submit data to immunization registries
 - Submit data on reportable lab results (as required by state or local law) to public health agencies
 - Provide electronic syndromic surveillance data to public health agencies
 - Actual data submissions under certain circumstances

Meaningful Use Criteria: Stage 1 (cont'd)

- 5. Ensure adequate privacy and security protections for personal health information
 - Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities.

Meaningful Use Criteria: Next Stages

- Projected timeline of implementation
 - Stage 2: 2013
 - Stage 3: 2015
- Requirements
 - Not yet officially defined
 - Expected to require taking stage 1 functions even further; e.g., increasing e-prescribing from 40% to 50% (stage 2) and then to 80% (stage 3)

Typical EHR Costs to Consider

- Start up costs
 - Initial hardware and network upgrades
 - Initial software and licensing
 - Initial interfaces
- Maintenance costs
 - Annual software licensing, upgrades, support
 - Annual interface upgrades and support

Typical EHR Costs to Consider (cont'd)

- Training costs
 - Administrators
 - Users
- Productivity costs
 - Lost during transition
- Consultant fees

References

- Discussion of organizations, with display of their logos, is for educational purposes only and does not imply endorsement of the material by the organization.
 - CCHIT: <http://www.cchit.org/>
 - ARRA, HITECH Act: <http://www.recovery.gov/>
 - CMS EHR Incentive Program: <https://www.cms.gov/ehrincentiveprograms/>
- Meaningful Use criteria information
 - Summary by EHR vendor: <http://www.meditech.com/Interoperability/pages/stimulusresourcelibrary.htm>
 - Federal government resources: https://www.cms.gov/EHRIncentivePrograms/30_Meaningful_Use.asp
