ELECTRONIC MEDICAL AND DENTAL RECORD INTEGRATION OPTIONS

Presented by:
The National Network for Oral Health Access (NNOHA) and the National Association of Community Health Centers (NACHC)

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What is an Electronic Medical/Dental Record (EMR/EDR)?

- An electronic record of health-related information on an individual within one health care organization, such as a Health Center
- A computerized record of a patient's clinical, demographic, and administrative data
- Real-time data access and evaluation in medical / dental care
- Provides the mechanism for longitudinal data storage and access
- A motivation for health care providers to implement this technology derives from the need for medical outcome studies, more efficient care, speedier communication among providers and management of health plans
What is an Electronic Health Record (EHR)?

- Provides a longitudinal electronic record of patient health information generated by one or more encounters in any care delivery setting
- Includes information such as patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports
- Automates and streamlines the clinician's workflow
- Has the ability to generate a complete record of a clinical patient encounter - as well as supporting other care-related activities directly or indirectly via interface - including evidence-based decision support, quality management, and outcomes reporting
- Conforms to nationally recognized interoperability standards and that can be created, managed, and consulted by authorized clinicians and staff, across more than one health care organization
What is EMR/EDR integration?

- The extent to which the Electronic Medical and Dental records converge to form a single patient record and system

  - Primary Objectives
    - Maintain one billing/collections and A/R system
    - Ability to run UDS and practice management reports from one system
    - Limit the amount of training required
    - Easily provide clinicians with tools not present in clinical systems
    - Ability to view patient’s dental/medical information from anywhere in the organization including medication list
EMR/EDR Levels of Integration
How “integrated” is my Health Center today?

1. All Paper
2. Electronic Medical Record Only
3. Electronic Dental Record Only
4. Separate Electronic Medical and Dental Records
5. Electronic Medical Records with Dental Templates
6. Home Grown Electronic Medical & Dental Records
7. Interfaced Electronic Medical & Dental Record
8. Fully Integrated Electronic Medical & Dental Record
9. Fully Integrated Electronic Medical & Dental Record + Electronic Health Record

No integration

Full integration
All Paper

Paper Medical & Dental
## 1. All Paper

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
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<tr>
<td>• None</td>
<td>• Inefficient</td>
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<tr>
<td></td>
<td>• Costly storage and retrieval</td>
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<td>• Information not readily available</td>
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<td>• Discrepancies between charts</td>
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<td>• Cannot report off information (unstructured data)</td>
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Level 2

Electronic Medical Record Only

Electronic Medical Record & Paper and Film Dental
## 2. Electronic Medical Record Only – EMR & Paper and Film Data

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
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<tbody>
<tr>
<td>• Part of patient’s medical record exists in</td>
<td>• Paper workflows are inefficient and costly to maintain</td>
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<tr>
<td>electronic format for easy accessibility</td>
<td>• No single patient record</td>
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<tr>
<td>• Advanced clinical decision support</td>
<td>• Need for process improvement and efficiency of paper record</td>
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<tr>
<td>mechanisms can be implemented in EMR</td>
<td>“unstructured content” integration into an EMR</td>
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Level 3

Electronic Dental Record Only

Paper Medical & EDR with electronic imaging application
3. Electronic Dental Record Only

### Pros

- EDR vendors are adding EMR functionality and planning to obtain ONC certification for Stage 2
- EDR integrated with electronic imaging provides a single view of patient record

### Cons

- Paper workflows are inefficient and costly to maintain
- No single source of patient information for demographics, medications, problems, allergies, etc.
- Need for process improvement and efficiency of paper record “unstructured content” integration into an EMR
Separate Electronic Medical and Dental Records

Non-integrated. Two separate programs.
## 4. Separate EMR and EDR

### Pros
- Dental can see medical
- Sets the stage for tighter integration between the two systems

### Cons
- Requires license for both programs
- Must toggle between and log in/out of 2 distinct systems
- No single sign on
- Dual data entry
- Any non-integrated EMR-EDR costly to maintain
Electronic Medical Record Only w/Dental Templates

Dental templates created for the EMR — the EMR is used to store dental data — one program
5. Electronic Medical Record Only w/Dental Templates

**Pros**

- Do not have to interface between systems; single database
- All patient information is stored in a single chart
- Ability to leverage embedded clinical decision support and interaction checking
- Less cost

**Cons**

- Products vary in their ability to support film and image needs of dentists
- Development of dental specific templates may be required
- One size fits all approach
- Duplicate information
Home Grown Electronic Medical & Dental Records
Health Center contracted to develop its own EMR/EDR
6. Home Grown Electronic Medical & Dental Records

<table>
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<tr>
<th>Pros</th>
<th>Cons</th>
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<tr>
<td>• Control over systems development lifecycle</td>
<td>• High start up costs and time investment</td>
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<td>• Ability to customize to the specific needs of the clinic and providers</td>
<td>• Reinventing the wheel</td>
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<td>• Limited features and functionality</td>
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<td>• May not meet ONC certification criteria to qualify for MU initiatives</td>
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Level 7

Interfaced Electronic Medical and Dental Records

Clinics contract with a Health Center Controlled Network (or other 3rd party vendor) and as part of the services, pay for the proprietary HL7 bridge that allows EDR to interface with EMR – 2 separate programs
### Pros
- EDR dental specific
- HL7 messaging is an accepted interoperability standard
- Opportunity to obtain Meaningful Use incentive payments if EMR-EDR solution is ONC certified

### Cons
- Limited information sharing
- Duplicate information between two systems
- Generally there is an extra cost for HL7 interface set up and any future upgrades
Fully Integrated Electronic Medical & Dental Record (one database)

Selected by Health Center precisely because system is integrated
8. Fully Integrated Electronic Medical & Dental Records

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
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<tr>
<td>• EDR dental specific</td>
<td>• Generally the combined cost can be more. Internal IT and clinical staff need to maintain and service both applications if Health Center is not a member of a Health Center Controlled Network</td>
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<tr>
<td>• Streamlined and tightly integrated patient record and functions</td>
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<td>• Single sign in</td>
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<td>• Increased patient safety</td>
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<td>• Medication reconciliation</td>
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<td>• Single clinical view of patient record</td>
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<td>• Immediate access to patient records within the Health Center</td>
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Level 9

Fully Integrated Electronic Medical & Dental Record + Electronic Health Record (one database)

Integrated EMR, EDR and EHR solution that conforms to nationally recognized standards
9. Fully Integrated Electronic Medical & Dental Record + Electronic Health Record

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<td>• Multiple users can view a chart simultaneously</td>
<td>• Upgrade problems, including lack of internal or external IT or support resources</td>
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<td>• Lab and x-ray results returned automatically</td>
<td>• Inadequate EHR Templates that are difficult to use or update</td>
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<td>• Drug to drug/allergy interaction checking</td>
<td>• Hidden or unexpected EHR expenses</td>
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<td>• Quality of Care</td>
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<td>• Increased efficiency and improved workflow</td>
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<td>• Improved patient communications and services</td>
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<td>• Reduced medical records transportation costs</td>
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