The Electronic Health Record (R)evolution
AGENDA

• Problems we want to solve
• Solution
• Demonstration
• Challenges and Successes
5 PROBLEMS we want to solve
1. Changing community demands

Current Demand:  Proposed Solution:

![Diagram of community demand and solution]

![Diagram of network and cloud computing]

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Note: The diagram on the right illustrates a potential solution involving shared and dedicated desktops, cloud computing, and profile/data applications.
2. Research reality
3. EHR vs. EMR + EDR (00:2.42)
4. Cost of IT security
5. Focus on Mission Artic Vortex 2014
5. Focus $ on Mission
5. Focus on Mission: Using Patient Information in Teaching (00:01.25)
5. Focus on Mission: Using Patient Information in Teaching (00:01.25)
SOLUTION: Cloud & Collaboration

ICE
redefining
Health Care

SCHOOL OF DENTISTRY
UNIVERSITY OF MICHIGAN

INTERNET2
NET+

SCHOOL OF DENTISTRY
UNIVERSITY OF PITTSBURGH
Our Five Strategic Goals

1. Patient Care
   - Efficient clinical experience
   - Inform decision-makers
   - Support unified health record
Our Five Strategic Goals

1. Patient Care
2. Education
   - Separate student and patient information
   - De-identify patient data
   - Support learning analytics
Our Five Strategic Goals

1. Patient Care
2. Education
3. Clinical Research
   - Share research data
   - Adopt data collection standards
Our Five Strategic Goals

1. Patient Care
2. Education
3. Clinical Research
4. Technology
   - Cloud
   - Software engineering best-practices
   - Ensure & document security
   - Continuous improvement through community collaboration
Our Five Strategic Goals

1. Patient Care
2. Education
3. Clinical Research
4. Technology
5. Sustainability
   – Decrease costs
   – Adopt widely
How We are Organized

Advisory Board

Education

User Experience

Finance

Clinic Business Management

Research

Security

Migration & Architecture

Steering Committees

Expert Groups

Tx Plan

Pat. Queue

Pay. Plans

Risk Assess.

Imaging

Health Hx

Appts.

Perio Chart

ICD-10

Dent. Ins.

Recalls

Meds

Fac. Sign-off
Feature Review (Steering Committee & Perio Expert Group)
<table>
<thead>
<tr>
<th>As a</th>
<th>I want</th>
<th>So that</th>
</tr>
</thead>
<tbody>
<tr>
<td>periodontal faculty</td>
<td>ability to have faculty approve a</td>
<td>i can show who oversaw a student that needs to be overseen</td>
</tr>
<tr>
<td></td>
<td>student’s perio chart</td>
<td></td>
</tr>
<tr>
<td>periodontist</td>
<td>the ability to compare values in perio</td>
<td>i can track disease progression in a patient, and help educate them on</td>
</tr>
<tr>
<td></td>
<td>chart across a timeline</td>
<td>preventive measures or overall prognosis</td>
</tr>
<tr>
<td></td>
<td>to differentiate calculus into</td>
<td>charting calculus is more meaningful</td>
</tr>
<tr>
<td></td>
<td>&quot;supragingival&quot; and &quot;subgingival&quot;</td>
<td>(subgingival calculus is more detrimental to patients)</td>
</tr>
<tr>
<td>periodontist</td>
<td>calculus</td>
<td>i can more easily tell what is approved and what is not, the green is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hard to read right now</td>
</tr>
<tr>
<td>clinician</td>
<td>the faculty approval color to be</td>
<td>i can tell the patient the reasons for why there are certain treatments</td>
</tr>
<tr>
<td></td>
<td>changed or otherwise indicated</td>
<td>for certain teeth recommended, track treatment success</td>
</tr>
<tr>
<td>periodontist, general dentist,</td>
<td>ability to add prognosis per tooth in the</td>
<td></td>
</tr>
<tr>
<td>clinician</td>
<td>charting areas</td>
<td></td>
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<td></td>
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</tbody>
</table>
Programmed (ICE) & Validated (Perion Expert Group)
Each Member School’s Role

• 1 member on Advisory Board
• Lead a Steering Committee
• Identify members for Steering Committees and Expert Groups
• Meet deadlines
• Be collaborative
• Have fun!!!
What does Membership Mean?

**PROS**
- Combined expertise
- Define the product
- Better pricing
- National & global leadership
- Collaborative research opportunities
- Internet2 expertise

**CONS**
- Your highest priority may not align with others
- Community is evolving
DEMONSTRATION
(00:20.00)

Mark Genuis, PhD
CHALLENGES & SUCCESSES
CHALLENGE: Changing the Culture (00:2.28)
CHALLENGE: Data Separation (00:01.22)
CHALLENGE: Data Separation (00:01.22)
CHALLENGE/SUCCESS: Data Sharing (00:02.05)
CHALLENGE: Data Sharing (00:02.05)
CHALLENGES: Internet2 NET+

Guiding change

• Guide the development of the community
• Skepticism of innovation
CHALLENGES: Internet2 NET+

**Guiding change**
- Guide the development of the community
- Skepticism of innovation

**Precedents that come with healthcare**
- Legal contracts & documents
- IT security
CHALLENGES/SUCCESS: Service Provider

1. Clear vision of company’s goals
2. Absolute executive commitment
3. Understanding of variance across schools
What does it take?
QUESTIONS?