Health Center Network of New York (HCNNY)

Tales from the Trenches: Moving Beyond EHR Implementation to Data Aggregation and Quality Improvement Transformation

Defining New Directions

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Session Outline

• Brief history and overview of HCNNY
• Detailed clinical perspective on collaboration and data sharing
• Demonstration and discussion of clinical data warehouse
HCNNY History

• Formed in 2007 by six founding health centers and CHCANYS
• Federally funded in 2007 for a 3 year project focused on EHR implementation of a single product for five members (eClinicalworks)
  – All implementations complete; developed data warehouse; delivered services to non-members
History continued…

• Federally funded in 2010 for a two year project focused on optimizing EHR use and advancing data warehouse & quality improvement (vendor agnostic approach)
• Added three new members (2 confirmed; 1 pending)
• Incorporated in 2010; continue close working relationship with CHCANYS
Network Composition

- Nine member health centers
  - 74 sites
  - 205 provider FTE’s
  - 260,582 patients

- CHCANYS
  - Collaboration of technology projects and related advocacy
  - Provides leased personnel and administrative services
Member Organizations

• Open Door Family Medical Center, Ossining, NY * / !
• Whitney M. Young, Jr. Health Services, Albany, NY * / !
• Hudson River Healthcare, Peekskill, NY * / !
• Westside Health Services, Rochester, NY *
• Anthony L. Jordan Health Center, Rochester, NY !
• Oak Orchard CHC, Brockport, NY
• Hudson Headwaters Health Network, Glens Falls, NY *
• Hometown Health Center, Schenectady, NY *
• Rochester Primary Care Network, Rochester, NY ❖
• Community Health Care Association of NYS *

* Founding member / ! PCMH Level 3 / ❖ Membership pending
Our Vision

HCNNY’s vision is to position its health center members as coordinators of care across the continuum of the health care system by ensuring that health centers have the ability to effectively leverage information technology to provide high quality, cost-effective, coordinated primary health care to underserved populations.
The Pixels within the Vision

Implementation

single EHR product

Optimization

Advanced feature and module use
Implementation of patient engagement tools

Data Aggregation and QI

Outcome benchmarking and analysis
Quality Improvement

Defining New Directions
Sampling of Network Benefits/Services

- Shared hosting architecture
- Dedicated training staff & collaborative training sessions
- Common 3rd party reporting solution - shared report design & collaborative training
- Data aggregation, analysis and QI
- HIE facilitation
- Product Development
The Key to Success = Member Expertise

- **Steering Committee**
  Vision, direction and commitment of resources

- **Clinical Committee**
  Clinical data capture and workflows, decision support, compliance and other regulatory issues, outcome measure analysis, quality improvement, PCMH, Meaningful Use

- **Finance Committee**
  Federal, state and local billing and reporting requirements, enrollment issues, compliance, maximizing incentives, product development

- **IT Committee**
  System and hardware performance, peripherals, new data center solution for multiple application hosting and greater control
Clinical Rationale

• Shared intellectual resources
  – Training, planning, reporting requirements
    (i.e. Meaningful Use, UDS, PCMH)
• Single vendor platform (currently)
  – Leverage with vendor
• Quality Improvement
  – Opportunity to impact pt outcomes on a bigger scale
Clinical Measures

- 2007-2010: same as HRSA/UDS measures for simplicity & continuity
- 2010 – 2012 Innovations Grant
Struggles

• Sharing data
  – Despite similarities, anxiety around looking bad to each other
  – What data to collect?
  – How to collect the data?
  – How to share the data (i.e., how will the data be used?)
Accomplishments

• Sustained commitment to meet every month
  – Every other face-to-face 11 – 3 in Albany
  – Every other phone conference 4 – 6

• Agreement on
  – What data to share
  – How to collect data
  – Who is responsible at each site for data
A Tale of One Member

- Westside Health and Hypertension
  - We have data…Yeah!
  - Now what…?
- Presentation of Center/Provider Report Cards *(drum roll, please…)*
A Tale of One Member

Percent Totals
- Controlled: 34%
- Uncontrolled: 66%

Westside Health Services ID#2

<table>
<thead>
<tr>
<th>Count of AccountNo</th>
<th>Controlled</th>
<th>Uncontrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500</td>
<td>680</td>
<td>1312</td>
</tr>
</tbody>
</table>

DatasetName
- Controlled
- Uncontrolled

Status

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## A Tale of One Member

<table>
<thead>
<tr>
<th>Age</th>
<th>LastOfEncDate</th>
<th>Last BP</th>
<th>VisitsThisPeriod</th>
</tr>
</thead>
<tbody>
<tr>
<td>66</td>
<td>6/8/2009</td>
<td>138/90</td>
<td>10</td>
</tr>
<tr>
<td>31</td>
<td>4/8/2010</td>
<td>156/100</td>
<td>1</td>
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<tr>
<td>51</td>
<td>4/8/2010</td>
<td>160/103</td>
<td>1</td>
</tr>
<tr>
<td>59</td>
<td>6/5/2009</td>
<td>196/112</td>
<td>6</td>
</tr>
<tr>
<td>83</td>
<td>3/1/2010</td>
<td>144/85</td>
<td>2</td>
</tr>
<tr>
<td>45</td>
<td>3/8/2010</td>
<td>153/93</td>
<td>3</td>
</tr>
<tr>
<td>54</td>
<td>1/22/2010</td>
<td>129/95</td>
<td>1</td>
</tr>
<tr>
<td>50</td>
<td>4/5/2010</td>
<td>141/92</td>
<td>5</td>
</tr>
<tr>
<td>44</td>
<td>12/21/2009</td>
<td>141/94</td>
<td>2</td>
</tr>
</tbody>
</table>

### Chart Description:
- **Count of AccountNo**: 100 accounts in total.
- **Controlled Uncontrolled**: 36 controlled, 87 uncontrolled.
- **Status**: Controlled (green) and Uncontrolled (red).
A Tale of One Member

– Stages of grief:

1. Denial ~ “These numbers can’t be right!”
2. Anger ~ “I don’t have time to deal with this!”
3. Bargaining ~ “Can’t we look at this in 3/6/12…months?”
4. Depression ~ “This is too hard to tackle; why bother?”
5. Acceptance ~ “OK, I can see my role clearer. What next?”
A Tale of One Member

• Test intervention and results
Meaningful Use

• How does being a HCCN help centers with regard to MU?
  – Analyzing aggregate vs. individual data
    • Big area of struggle for individual providers
  – Focus on MU criteria
    • Self-mgmt support, nutrition & smoking counseling
  – Leveraged push with EHR vendor
Individual Member Gains

• #1~ Implementation of EHR
• Ongoing support as a “newbie” to EHR from seasoned users (as opposed to the vendor)
• Sharing of lessons learned, new ideas, “how-to” shortcuts, and more
  – Quality Improvement initiative resulting from data collected via repository
What’s *Really* Exciting…

• Our cool Data Repository & Clinical Dashboards!
  – Pam Ferrari, RN
  • Director of PI & Clinical Knowledge Support, Open Door Family Medical Center & Co-Clinical Committee Chair
  – Stephanie Heckman, Heckman Consulting
Data gathering and comparison

• Getting the data out of eCW
  – Bridgelt
• Looking at the data in excel
• Getting the data into Cognos
• Presenting the data in Cognos
Getting the data out of eCW

• Standardized data fields
  – Naked Blood Pressure
  – Where do you document smoking
  – What about self management goals
  – Are labs LOINCed?

• Created a data extract that went into Microsoft access and then excel
## Data Extract

<table>
<thead>
<tr>
<th>HealthCenterNa</th>
<th>RendProvSpecil</th>
<th>LastVisitDate</th>
<th>SeemsWithinLast</th>
<th>LastVisitStartYr</th>
<th>TotalLastVisitC</th>
<th>PrevBP1</th>
<th>PrevBMI1</th>
<th>EncntrId</th>
<th>PCGProc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Door</td>
<td>Family Medicine</td>
<td>5/20/2010</td>
<td>Yes</td>
<td>6/1/2009</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1400034</td>
</tr>
<tr>
<td>Hudson River</td>
<td>Family Medicine</td>
<td>5/20/2010</td>
<td>Yes</td>
<td>6/1/2009</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1400034</td>
</tr>
<tr>
<td>Open Door</td>
<td>Family Medicine</td>
<td>5/20/2010</td>
<td>Yes</td>
<td>6/1/2009</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1400034</td>
</tr>
<tr>
<td>Hudson River</td>
<td>Family Medicine</td>
<td>5/20/2010</td>
<td>Yes</td>
<td>6/1/2009</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1400034</td>
</tr>
</tbody>
</table>

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### Defining New Directions

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Looking at the data in excel

<table>
<thead>
<tr>
<th>HealthCenterName</th>
<th>Under 7</th>
<th>Between 7 and 9</th>
<th>Over 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Door</td>
<td>3.24%</td>
<td>41.93%</td>
<td>33.21%</td>
</tr>
<tr>
<td>Westside</td>
<td>13.67%</td>
<td>35.71%</td>
<td>29.60%</td>
</tr>
<tr>
<td>Hudson River</td>
<td>14.43%</td>
<td>36.41%</td>
<td>30.54%</td>
</tr>
</tbody>
</table>
# Hypertension Prevalence

<table>
<thead>
<tr>
<th>Patient Count</th>
<th>Hypertension Prevalence in Open Door Population</th>
<th>Hypertension Prevalence in Westside Population</th>
<th>Hypertension Prevalence in Hudson River Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>Hypertension</td>
<td>No Hypertension</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>43760</td>
<td>6868</td>
<td>25145</td>
</tr>
</tbody>
</table>
Hypertension Control

Hypertension Control Open Door
- Not Controlled: 38%
- Controlled: 62%

Hypertension Control Westside
- Not Controlled: 41%
- Controlled: 59%

Hypertension Control Hudson River
Getting the data into Cognos

- Full Cognos was owned by Hudson River
- Brought in only data from our extract
- Designed Graphs and Drilldown reports
Opening Screen in Cognos

Last Medical Visit Dashboard

Health Center:  
- Hypertension Prevalence
  - No: 83.8%
  - Yes: 16.2%

Over 18?:  
- HT: [chart]

Diabetic?:  
- BP Status Hypertension
  - Controlled: 51.6%
  - Not Controlled: 48.4%

HT?:  
- Smoking Status Hypertension
  - never: 9.5%
  - former: 1.0%
  - current: 2.0%

Diabetes Prevalence
- No: 91.6%
- Yes: 8.4%

Diabetes Control
- LastA1CStatus
  - Under 7: [chart]
- Between 7 and 9: [chart]

Diabetes BP Control
- Not Controlled: 73.2%
- [chart]
Hypertension Control

BP Status Hypertension

<table>
<thead>
<tr>
<th>Health Centers</th>
<th>Over 18?:</th>
<th>Diabetic?:</th>
<th>HT?:</th>
<th>Show Data?:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hudson River</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controlled</td>
<td>52.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Controlled</td>
<td>43.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(blank)</td>
<td>4.6%</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(blank)</td>
<td>0.1%</td>
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</tr>
<tr>
<td>Open Door</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controlled</td>
<td>56.9%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Not Controlled</td>
<td>40.1%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(blank)</td>
<td>2.5%</td>
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</tr>
<tr>
<td>Westside</td>
<td></td>
<td></td>
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<tr>
<td>Controlled</td>
<td>37.5%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Not Controlled</td>
<td>60.1%</td>
<td></td>
<td></td>
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<tr>
<td>(blank)</td>
<td>2.3%</td>
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</tr>
<tr>
<td>(blank)</td>
<td>0.1%</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>BPStatus</th>
<th>Count</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Not Recorded Properly</td>
<td>44</td>
<td>0.1%</td>
</tr>
<tr>
<td>Not Controlled</td>
<td>16,626</td>
<td>43.0%</td>
</tr>
<tr>
<td>Controlled</td>
<td>20,189</td>
<td>52.3%</td>
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<tr>
<td>(blank)</td>
<td>1,764</td>
<td>4.6%</td>
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<tr>
<td>Summary</td>
<td>38,623</td>
<td>100.0%</td>
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</table>

<table>
<thead>
<tr>
<th>BPStatus</th>
<th>Count</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Not Recorded Properly</td>
<td>73</td>
<td>0.2%</td>
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<tr>
<td>Not Controlled</td>
<td>12,412</td>
<td>40.4%</td>
</tr>
<tr>
<td>Controlled</td>
<td>17,503</td>
<td>56.9%</td>
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<tr>
<td>(blank)</td>
<td>768</td>
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<tr>
<td>Summary</td>
<td>30,756</td>
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<table>
<thead>
<tr>
<th>BPStatus</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Recorded Properly</td>
<td>19</td>
<td>0.1%</td>
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<tr>
<td>Not Controlled</td>
<td>8,179</td>
<td>60.1%</td>
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<tr>
<td>Controlled</td>
<td>5,102</td>
<td>37.5%</td>
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<tr>
<td>(blank)</td>
<td>309</td>
<td>2.3%</td>
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<tr>
<td>Summary</td>
<td>13,609</td>
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</table>

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# Diabetes Control

## Health Centers:

### Hudson River

- **LastA1CStatus**
  - Under 7: 4,931 (36.6%)
  - Over 9: 2,140 (15.9%)
  - Between 7 and 9: 4,282 (31.8%)
  - (blank) 2,112 (15.7%)

- **Summary** 13,485 (100.0%)

### Open Door

- **LastA1CStatus**
  - Under 7: 4,633 (44.8%)
  - Over 9: 1,844 (17.8%)
  - Between 7 and 9: 3,524 (34.1%)
  - (blank): 336 (3.3%)

- **Summary** 10,337 (100.0%)

### Westside

- **LastA1CStatus**
  - Under 7: 1,615 (33.0%)
  - Over 9: 814 (16.6%)
  - Between 7 and 9: 1,386 (28.3%)
  - (blank): 1,077 (22.0%)

- **Summary** 4,892 (100.0%)
Diabetes Prevalence by Center

### Diabetes Prevalence

<table>
<thead>
<tr>
<th>Health Centers:</th>
<th>Over 18?:</th>
<th>Diabetic?:</th>
<th>HT?:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hudson River</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diab</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Count</td>
<td>21,110</td>
<td>15,734</td>
<td>6,445</td>
</tr>
<tr>
<td>Percentage</td>
<td>15.9%</td>
<td>10.1%</td>
<td>19.3%</td>
</tr>
<tr>
<td>No</td>
<td>111,556</td>
<td>139,285</td>
<td>26,978</td>
</tr>
<tr>
<td>Summary</td>
<td>132,666</td>
<td>155,019</td>
<td>33,423</td>
</tr>
<tr>
<td>Diab</td>
<td>Yes</td>
<td>No</td>
<td></td>
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<tr>
<td>Count</td>
<td>15,734</td>
<td>139,285</td>
<td></td>
</tr>
<tr>
<td>Percentage</td>
<td>10.1%</td>
<td>89.9%</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>6,445</td>
<td>26,978</td>
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</tr>
<tr>
<td>Summary</td>
<td>155,019</td>
<td>33,423</td>
<td></td>
</tr>
</tbody>
</table>

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Some Cool Information

• Race really does make a difference in prevalence of disease!
• We all have lots of patients with two blood pressures greater than 140/90 who have not been diagnosed with Hypertension.
• Having your data allows you to identify where your challenges are.
• We don’t get heights and weights and BP’s as often as we would like.
On-going Struggles

• Data validation
• Identifying data person at each center
• Anyone can use excel but many are afraid
• Cognos is pretty but writing and formatting reports is slow requires expertise
• Using the data internally to drive change takes time and commitment
Thank You

• Michele Hannagan, MS, FNP
  – Director of Clinical Operations, Westside Health Services, Rochester, NY
  – Co-Chair of Clinical Committee of HCNNY
  – mhannagan@westsidehealth.net
  – 585-672-1765

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  – Co-Chair of Clinical Committee of HCNNY
  – pferrari@ood.org
  – 914-502-1455