Overview of Health IT in North Dakota: Data to Inform and Improve Performance

Office of Economic Analysis, Evaluation and Modeling & State HIE Program

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Chartpack Team

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Questions?

- Please contact your project officer with any questions.
Overview of the Data
What is in the Chartpacks?

**National and state data on:**

- Health information exchange
  - Capacity to exchange
  - Active exchange
    - Exchange what types of data? (e-Rx, lab data, care summaries)
    - Exchange with who? (physicians, hospitals, pharmacies, labs, patients)
- EHR adoption
  - Adoption of a basic EHR
  - Intent to apply for Meaningful Use

Office of the National Coordinator for Health Information Technology
Goals of the “Chartpacks”: A Tool for States

Provide a snapshot of current levels of HIE/HIT capacity and activity underway

Assess trends over time

Help identify gaps as well as areas of strength

Office of the National Coordinator for Health Information Technology
Why Chartpacks?

Regional extension centers

Workforce training

Medicare & Medicaid Incentives and penalties

State grants for health Information exchange

Standards & certification framework

Privacy & Security framework

Adoption of EHRs

Meaningful Use of EHRs

Exchange of health information

• Improved
  • health outcomes
  • ability to study and improve care delivery
  • Increased transparency and efficiency

Research to enhance HIT

About the Data Sources

• ONC acquired potential indicators of HIT adoption and use from 3 major sources:

• **National Ambulatory Medical Care Survey (NAMCS) EMR Supplement:**
  – The National Center for Health Statistics conducts this survey of physicians who work in ambulatory care settings annually by mail.
  – Starting in 2010, the sample size was increased so we could generate state-level estimates.

• **American Hospital Association (AHA) survey Health IT Supplement:**
  – The American Hospital Association administers this annual survey of hospitals CIOs online and by mail. We report on non-federal acute care hospitals.

• **Surescripts:**
  – A leading e-prescription network, Surescripts provides the highest quality representative sample of e-prescribing by providers and pharmacies in the United States.
## Current Data Sources

### Potential Indicators of HIT/HIE Capacity and Activity

<table>
<thead>
<tr>
<th>Data Source</th>
<th>EHR adoption</th>
<th>Labs</th>
<th>eRX</th>
<th>Care Summary</th>
<th>Consumer</th>
<th>State Level Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAMCS</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X**</td>
<td>X**</td>
<td>X</td>
</tr>
<tr>
<td>AHA (Hospital)</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Surescripts</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

*Generation of State-Level estimate depends upon sample size and response rate.

**2011 data only will be available later this year.
ONC’s Current Data Sources

**Provider Surveys**

**Physicians**
- **NAMCS**
  - Annually
  - Physicians who work in ambulatory care settings
  - Mail

**Hospitals**
- **AHA**
  - Annually
  - CIOs of non-federal acute care hospitals
  - Online & mail

**Limitations**
Possible overestimate of adoption/use rates due to self-reported data & respondent bias
Surescripts, a leading e-prescription network, provides the highest quality representative sample of e-prescribing in the United States.

Data on providers and pharmacies are available **quarterly**.

Market presence may vary in certain territories/states.*

*Please report pharmacies that are on a different network to your project officer.
# Data Strengths and Limitations

<table>
<thead>
<tr>
<th>Source</th>
<th>Strengths</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAMCS</td>
<td>• Oversampling to generate state-level estimates</td>
<td>• Self-reported</td>
</tr>
<tr>
<td></td>
<td>• Administered by NCHS</td>
<td>• Non-responder bias</td>
</tr>
<tr>
<td></td>
<td>• High response rate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Over-estimation of HIT adoption</td>
</tr>
<tr>
<td>AHA</td>
<td>• High response rate</td>
<td>• Self-reported</td>
</tr>
<tr>
<td></td>
<td>• Respondent is the hospital CIO</td>
<td>• Non-respondent bias</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No oversampling</td>
</tr>
<tr>
<td>Surescripts</td>
<td>• Geographic scope of more than 92% of all pharmacies nationwide</td>
<td>• Coverage varies by state</td>
</tr>
<tr>
<td></td>
<td>• Large sample size</td>
<td>• Denominator not supplied</td>
</tr>
<tr>
<td></td>
<td>• Zip code level data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Includes both nurse practitioners and physicians</td>
<td></td>
</tr>
</tbody>
</table>

**Due to small sample sizes, in some cases we may not be able to generate reliable state-level estimates. When the Relative Standard Error is high, it is considered an unreliable estimate and will be indicated with either an asterisk or the data will not be shown.**
NAMCS Chart Packs
National Trends: Physician EHR Adoption

'Basic' EHR Adoption by Office-Based Physicians

Source: NAMCS, 2008-2010

*Rural = Non-Metropolitan
Rural estimates not shown for 2008 because >30% relative standard error
How does your State Compare to National Estimates?

Proportion of Office-Based Physicians that have Adopted a 'Basic' EHR

Overall: 25% (National), 49% (North Dakota)
Small Practices (≤10 Physicians): 21% (National), 46% (North Dakota)
Primary Care: 30% (National), 50% (North Dakota)

Source: NAMCS, 2010
Nationwide: Physician Meaningful Use Intent

Overall MU Intent for Office-Based Physicians in the Country

- Uncertain: 45%
- Yes: 41%
- No: 14%

MU Intent for Key Physicians

- Intend to Apply in 2011: 75%
- Primary Care: 50%
- Small Practices (≤10 Physicians): 85%

Source: NAMCS, 2010
Physician MU Intent in your State

Overall MU Intent for Office-Based Physicians in North Dakota

Source: NAMCS, 2010
* Indicates unreliable estimate, Relative Standard Error > 0.3
National Trends: Physicians Viewing Lab Results Electronically

Proportion of Office-Based Physicians with the Capability: View Lab Results Electronically

Source: NAMCS, 2008-2010
“EHR” defined by those who report having any EHR
How does your state compare to national estimates?

**Office-Based Physicians Capability:**
Viewing Electronic Lab Results

<table>
<thead>
<tr>
<th>With EHR</th>
<th>Without EHR</th>
<th>No Capability to Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>44%</td>
<td>19%</td>
</tr>
<tr>
<td>North Dakota</td>
<td>67%</td>
<td>11%</td>
</tr>
<tr>
<td>National</td>
<td>37%</td>
<td>22%</td>
</tr>
</tbody>
</table>

**Source:** NAMCS, 2010

“EHR” defined by those who report having any EHR
How does your state compare to national estimates?

Office-Based Physicians Capacity: Electronic Lab Test Ordering

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>With EHR</td>
<td>37%</td>
<td>67%</td>
</tr>
<tr>
<td>Without EHR</td>
<td>8%</td>
<td>6%*</td>
</tr>
<tr>
<td>No Capability to Exchange</td>
<td>55%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: NAMCS, 2010

“EHR” defined by those who report having any EHR
* Indicates unreliable estimate, Relative Standard Error > 0.3
Nationwide Comparisons
Statewide Estimates: Physician Intent to apply for Meaningful Use

Source: NAMCS, 2010
Statewide Estimates: Physicians Viewing Lab Results Electronically

Source: NAMCS, 2010
Measures of ePrescribing
How does your State Compare to National Estimates?

Percent of Retail Community Pharmacies Enabled to e-Prescribe and Actively e-Prescribing on the Surescripts Network in North Dakota

State of the Nation September 2011
- Enabled nationwide: 92.4%
- Active nationwide: 90.9%

Data Source: Surescripts
Surescripts Connectivity: Urban vs. Rural Pharmacies

Percent of Retail Community Pharmacies Connected to the Surescripts Network in Urban and Rural Counties in North Dakota

<table>
<thead>
<tr>
<th>Month</th>
<th>Percent Enabled in Urban Counties</th>
<th>Percent Enabled in Rural Counties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-08</td>
<td>68.3%</td>
<td>93.5%</td>
</tr>
<tr>
<td>Jan-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Feb-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Mar-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Apr-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>May-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Jun-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Jul-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Aug-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Sep-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Oct-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Nov-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Dec-09</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Jan-10</td>
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<tr>
<td>May-10</td>
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<td>90.2%</td>
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<tr>
<td>Jun-10</td>
<td>74.3%</td>
<td>90.2%</td>
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<tr>
<td>Jul-10</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Aug-10</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Sep-10</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Oct-10</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Nov-10</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Dec-10</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Jan-11</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Feb-11</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Mar-11</td>
<td>74.3%</td>
<td>90.2%</td>
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<tr>
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</tr>
<tr>
<td>Aug-11</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Sep-11</td>
<td>74.3%</td>
<td>90.2%</td>
</tr>
</tbody>
</table>

State of the Nation September 2011
Enabled urban: 93.1%
Enabled rural: 90.2%

Data Source: Surescripts
The medication history request variable measures adoption and demand, describing the number of medication histories sought on the Surescripts network. There are 240 million patients with medication history data in the Surescripts database. Their information comes from participating pharmacy benefit managers and pharmacies.

Data Source: Surescripts
AHA Data
How Does Your State Compare to the National Estimates?

Adoption of (Basic) EHRs by All Hospitals

Data Source: AHA Hospital Survey

*Estimate not reliable due to sample size and relative standard error greater than .49
How Does Your State Compare to the National Estimates?

Adoption of (Basic) EHRs by Rural Hospitals

Data Source: AHA Hospital Survey

*Estimate not reliable due to sample size and relative standard error greater than .49
How Does Your State Compare to the National Estimates?

Adoption of (Basic) EHRs by Small Hospitals

Data Source: AHA Hospital Survey

*Estimate not reliable due to sample size and relative standard error greater than .49
Statewide Estimates: Hospital EHR Adoption

Data Source: AHA Hospital Survey
Data from 2010

Office of the National Coordinator for Health Information Technology

Percentile

- 100th (25-43.8%)
- 75th (19.5-25.9%)
- 50th (13-19.4%)
- 25th (7.8-12.9%)
Meaningful Use
How Does Your State Compare to the National Estimates?

Year Hospitals Intend to Apply for Meaningful Use

**National**
- No: 45%
- 2011: 21%
- 2013+: 8%
- Do not know: 11%

**North Dakota**
- No: 38%
- 2011: 21%
- 2013+: 8%
- Do not know: 15%

Data Source: AHA Hospital Survey
Data from 2010
Statewide Estimates: Hospitals Intending to Apply for MU in 2011/2012

Data Source: AHA Hospital Survey
Data from 2010

Office of the National Coordinator for Health Information Technology
Measures of Lab Exchange
How Does Your State Compare to the National Estimates?

% of Hospitals Electronically Exchanging Laboratory Reports

Inside Hospital System

Outside Hospital System

Data Source: AHA Hospital Survey
Data from 2010

*Estimate not reliable due to sample size and relative standard error greater than .49
How Does Your State Compare to the National Estimates?

% of Hospitals Electronically Exchanging Laboratory Reports with Ambulatory Providers Outside Their System

<table>
<thead>
<tr>
<th>Year</th>
<th>National</th>
<th>North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td>2009</td>
<td>55</td>
<td>49</td>
</tr>
<tr>
<td>2010</td>
<td>47</td>
<td>33</td>
</tr>
</tbody>
</table>

Data Source: AHA Hospital Survey
Data from 2010
Other Measures of Exchange
How Does Your State Compare to the National Estimates?

% of Hospitals Electronically Exchanging Radiology Reports

Inside Hospital System

<table>
<thead>
<tr>
<th>Year</th>
<th>National</th>
<th>North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>77</td>
<td>70</td>
</tr>
<tr>
<td>2009</td>
<td>69</td>
<td>61</td>
</tr>
<tr>
<td>2010</td>
<td>64</td>
<td>37</td>
</tr>
</tbody>
</table>

Outside Hospital System

<table>
<thead>
<tr>
<th>Year</th>
<th>National</th>
<th>North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>31</td>
<td>21</td>
</tr>
<tr>
<td>2009</td>
<td>61</td>
<td>23</td>
</tr>
<tr>
<td>2010</td>
<td>47</td>
<td>22</td>
</tr>
</tbody>
</table>

Data Source: AHA Hospital Survey
How Does Your State Compare to the National Estimates?

% of Hospitals Electronically Exchanging Medication Histories with Hospitals

**Inside Hospital System**
- 2008: National 80, North Dakota 79
- 2009: National 85, North Dakota 79
- 2010: National 74, North Dakota 71

**Outside Hospital System**
- 2008: National 12, North Dakota 20*
- 2009: National 12, North Dakota 48
- 2010: National 12, North Dakota 29

*Estimate not reliable due to sample size and relative standard error greater than .49

Data Source: AHA Hospital Survey
How Does Your State Compare to the National Estimates?

% of Hospitals Electronically Exchanging Care Summaries with Hospitals

**Inside Hospital System**

- **National**: 83, 85, 69
- **North Dakota**: 77, 77, 70

**Outside Hospital System**

- **National**: 17*, 14, 14
- **North Dakota**: 48, 13, 15*

*Estimate not reliable due to sample size and relative standard error greater than .49

Data Source: AHA Hospital Survey

Office of the National Coordinator for Health Information Technology
How Does Your State Compare to the National Estimates?

% of Hospitals Electronically Exchanging Radiology Reports with Ambulatory Providers Outside Their System

Data Source: AHA Hospital Survey
How Does Your State Compare to the National Estimates?

% of Hospitals Electronically Exchanging Medication Histories with Ambulatory Providers Outside Their System

- **2008:**
  - National: 53%
  - North Dakota: 39%

- **2009:**
  - National: 42%
  - North Dakota: 39%

- **2010:**
  - National: 30%
  - North Dakota: 25%

*Data Source: AHA Hospital Survey*
How Does Your State Compare to the National Estimates?

% of Hospitals Electronically Exchanging Care Summaries with Ambulatory Providers Outside Their System

Data Source: AHA Hospital Survey
How Does Your State Compare to the National Estimates?

Data Source: AHA Hospital Survey
Data from 2010

% of Hospitals Electronically Exchanging Key Data with Ambulatory Providers Inside Their System

- Lab Reports: National 73%, North Dakota 64%
- Rad Reports: National 70%, North Dakota 52%
- Med Histories: National 67%, North Dakota 68%
- Clinical Care Summaries: National 68%, North Dakota 81%

Data Source: AHA Hospital Survey
Data from 2010
How Does Your State Compare to the National Estimates?

% of Hospitals with Capacity to Provide Patients with an Electronic Copy of their Health Information\(^1\) within 3 Business Days

**National**
- Yes: 36%
- No: 64%

**North Dakota**
- Yes: 21%
- No: 79%

**Mechanism of Sharing**

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>North Dakota</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>17*</td>
<td>22</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>34</td>
</tr>
<tr>
<td>USB</td>
<td>46</td>
<td>49</td>
</tr>
<tr>
<td>Secure Messaging</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Patient Portal</td>
<td>19</td>
<td>33</td>
</tr>
<tr>
<td>PHR</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

*Estimate not reliable due to sample size and relative standard error greater than .49

\(^1\)Includes all of the following: Diagnostic test results, problem lists, medication lists, allergies, and discharge summaries
Statewide Estimates: Hospitals Sharing Data Electronically with Patients

Data Source: AHA Hospital Survey
Data from 2010
How Does Your State Compare to the National Estimates?

% of Hospitals with Capacity to Send Electronic Reminders to Patients

National

- Yes: 29%
- No: 71%

North Dakota

- Yes: 27%
- No: 73%

Data Source: AHA Hospital Survey
Data from 2010
Statewide Estimates: Hospitals with Capacity to Send Electronic Reminders to Patients

Data Source: AHA Hospital Survey
Data from 2010

Percentile

100th (33.8-64.4%)
75th (28.8-33.7%)
50th (21.2-28.7%)
25th (0.0-20.9%)
Statewide Estimates: HIE/HIO available in region

Data Source: AHA Hospital Survey
Data from 2010
Statewide Estimates: Exchange Capacity/Participating in an HIO

Data Source: AHA Hospital Survey
Data from 2010
How Does Your State Compare to the National Estimates?

% of Hospitals with Exchange Capacity and Participating in an HIO

Data Source: AHA Hospital Survey

*Estimate not reliable due to sample size and relative standard error greater than .49
Thank you!