Survey Objectives

1. To measure presence (structural measures) and use (process measures) of HIT by clinicians caring for Rhode Island patients

2. To capture HIT data for state agencies and other key stakeholders using single instrument (i.e., minimize data collection burden)
   - BCBSRI
   - CurrentCare
   - Department of Health grant reporting
   - Inventory Survey
   - Primary Care Physician Survey
   - QIN-QIO

Last updated 9/22/2015
• Administered to all Licensed Independent Practitioners (LIPs):
  – Advanced Practice Registered Nurses (APRNs)
  – Physicians
  – Physician Assistants (PAs)

• Electronic survey instrument sent via:
  – Hard copy mailing
  – If email available, email notification and up to two reminders

• Analyses limited to LIPs:
  – Licensed in Rhode Island
  – In active practice
  – Located in Rhode Island or an adjacent state (Connecticut or Massachusetts)
Changes to 2015 Process and Survey

• **Changes to Process**
  – Physician survey was sent in two clusters, DOH identified PCPs first, then others and PCP non-respondents
  – APRN/PA survey sent with second cluster of physician survey
  – Physician surveys included questions from the Primary Care Survey (Office of Primary Care and Rural Health)
  – Surveys collected practice information that was used for PCP and specialty office inventory surveys

• **Changes to Survey**
  – Addition of patient engagement questions and measure
  – Combined Basic EHR Use and Advanced EHR Use measures

Last updated 9/22/2015
1. **Presence of an Electronic Health Records (EHR):** Defined as a clinical information system that tracks patient health data, and may include such functions as visit notes, prescriptions, lab orders, etc.

2. **Use of an EHR:** Among those with EHRs, level of use of functionality related to documentation and results management, decision support, external communication, order management, and reporting.

3. **Use of an EHR for Patient Engagement:** Among those with EHRs, level of use of functionality related to patient access to their clinical information, patient education, and communication.

4. **Use of E-Prescribing:** Transmitting prescriptions or medication orders electronically to a pharmacy.

Last updated 9/22/2015
Changes to 2015 Practitioner Report

• Publicly-reported measures in previous report format:
  • Presence of EHR and use of e-Prescribing shown as yes/no
  • Basic and Advanced EHR use shown as a numerical score (0-100)

• Publicly-reported measures in new report format:
  • Level of EHR use and use of EHR for patient engagement shown as symbol
  • Symbols are easier to understand for those with low computational literacy
  • Circles, as opposed to stars or diamonds, help to differentiate between value and level of use

Last updated 9/22/2015
The HIT Survey has a relatively high response rate for a single-wave mailed survey. It is higher among physicians than APRNs/PAs.

Response rate by year (administration to APRNs/PAs began in 2013)

- Physicians: 58.1%, 57.8%, 62.9%, 55.4%, 62.3%, 68.3%, 66.0%
- APRNs/PAs: 46.2%, 44.0%, 44.9%

Last updated 9/22/2015
Physician Results

Overall Trends

Last updated 9/22/2015
The 2015 results provide a point-estimate of HIT adoption among physicians for the four publicly-reported measures.

Use of EHRs and e-prescribing, among respondents and all physicians

<table>
<thead>
<tr>
<th>Measure</th>
<th>Survey Respondents (N=2,572)</th>
<th>All Physicians (N=3,898)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population</td>
<td>Score</td>
</tr>
<tr>
<td>1. Physicians with EHRs, n (%)</td>
<td>2,572</td>
<td>2,290 (89.0%)</td>
</tr>
<tr>
<td>2. EHR functionality use (0-100), median</td>
<td>2,290</td>
<td>75.0</td>
</tr>
<tr>
<td>3. Patient engagement EHR use (0-100), median</td>
<td>2,290</td>
<td>35.7</td>
</tr>
<tr>
<td>4. Physicians who are e-prescribing, n (%)</td>
<td>2,377</td>
<td>1,944 (81.8%)</td>
</tr>
</tbody>
</table>

Non-respondents were reported as NOT using health information technology

Last updated 9/22/2015
EHR adoption is highest among hospital-based physicians, but office-based PCPs are more likely to use patient engagement functionality.

Respondents’ use of EHRs and e-prescribing, by physician specialty and practice location

<table>
<thead>
<tr>
<th>Measure</th>
<th>Office (N=1,621)</th>
<th>Hospital (N=951)</th>
<th>Office-Based Specialty</th>
<th>Overall Survey Respondents (N=2572)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physicians with EHRs, n (%)</td>
<td>1375 (84.8)</td>
<td>915 (96.2)</td>
<td>668 (91.4)</td>
<td>2290 (89.0)</td>
</tr>
<tr>
<td>2. EHR functionality use (0-100), median</td>
<td>75.0</td>
<td>75.0</td>
<td>82.1</td>
<td>75.0</td>
</tr>
<tr>
<td>3. Patient engagement EHR use (0-100), median</td>
<td>57.1</td>
<td>14.3</td>
<td>64.3</td>
<td>35.7</td>
</tr>
<tr>
<td>4. Physicians who are e-prescribing, n (%)</td>
<td>1,290 (82.4)</td>
<td>654 (80.6)</td>
<td>651 (90.4)</td>
<td>1,944 (81.8)</td>
</tr>
</tbody>
</table>
Adoption of EHRs and use of e-prescribing have been increasing since 2009. EHR adoption increased by nearly 31.6% and e-prescribing by 98.5%.

Survey respondents’ use of EHRs and e-prescribing

<table>
<thead>
<tr>
<th>Year</th>
<th>EHRs</th>
<th>e-Prescribing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>67.6%</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>81.8%</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>89.0%</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>81.8%</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>81.8%</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>81.8%</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>81.8%</td>
<td></td>
</tr>
</tbody>
</table>
Basic and Advanced EHR Use increased from 2009 to 2014. In 2015 we combined the data elements into a single measure, EHR Use.

Survey respondents’ use of basic and advanced EHR functionality

2015 EHR Functionality Use: 75.0 out of 100

Last updated 9/22/2015
Physician Results

Impact of EHRs
More than half of office-based and hospital-based physicians would recommend their EHR vendor to a friend or colleague.

Likelihood of recommending current EHR vendor to friend or colleague

- Likely or Very Likely
  - Hospital-based (N=901): 57.5%
  - Office-based (N=1,362): 59.9%

- Unlikely or Very Unlikely
  - Hospital-based (N=901): 40.1%
  - Office-based (N=1,362): 40.1%

Last updated 9/22/2015
Most physicians have access to their EHR, and are using it, when they are away from their usual practice location.

Percent of physicians who use their EHR outside of their usual practice location

- **Yes**
  - Hospital-based (n=913): 72.2%
  - Office-based (n=1,372): 82.0%

- **No - I have remote access to my EHR, but I do not need to use it**
  - Hospital-based: 11.3%
  - Office-based: 6.5%

- **No - I do not have remote access to my EHR**
  - Hospital-based: 16.5%
  - Office-based: 11.5%

Last updated 9/22/2015
Most physicians are using their EHR from other locations when they are not able to get things done during regular work hours.

Circumstances under which physicians access their EHR from other locations most often, by practice setting

- If I am not able to complete my work during regular office hours: 68.0% (Hospital-based), 59.6% (Office-based)
- If I have the opportunity to work from home or another location (i.e. to adjust my work/life balance): 32.0% (Hospital-based), 23.5% (Office-based)
- Other: 0.0% (Hospital-based), 17.0% (Office-based)

Last updated 9/22/2015
Physicians use their EHRs outside of their usual work location for a number of tasks, including catching up on documentation, covering patients, and reviewing labs, imaging, notes or reports.

Percent of physicians who use their EHR outside of their usual location for the following tasks...

- To catch up on documentation
- To cover my own patients
- To review labs, imaging, notes, or reports
- To return patient telephone calls
- To prepare for the upcoming work day
- To cover other physicians' patients
- Other

Last updated 9/22/2015
Though more than two thirds of physicians say that EHRs improve communication, fewer than half say that it improves their job satisfaction.

Percent of physicians who “agree” or “strongly agree” that using an EHR...
Compared to 2014, physicians’ agreement decreased for all statements about how EHRs improve care, except that EHRs improve clinical workflow.

% of physicians who “agree or strongly agree” that EHRs...

- Improves job satisfaction
- Improves clinical work flow
- Improves communication with outside physicians (hospital-based only)
- Improves care patients receive
- Improves ability to do QI work
- Improves patient safety
- Improves communication among physicians and staff
- Increased timeliness of receiving test results (hospital-based only)
- Improves billing processes (office-based only)
Physician Results

Population Health Management
Approximately one third of office-based physicians are using their EHR for population health management. The same number is not aware if this is happening.

Percent of physicians using their EHR for population health management (N=1,350)

- Yes (n=462) 34.2%
- No (n=420) 31.1%
- Don't know (n=468) 34.7%

Last updated 9/22/2015
Tracking quality measures and sending patient reminders are among the most common ways that office-based physicians use their EHRs for population health management.

**Percent of physicians who use their EHR to...**

- Identify patient with a condition, characteristic or risk factor (578/1347) - 42.9%
- Identify patients out of compliance with clinical guidelines (e.g., women over 50 without recent mammogram) (561/1343) - 41.8%
- Track clinical quality measures (e.g., % of diabetics with a hemoglobin A1c test) (645/1348) - 47.8%
- Send letters or other patient reminders regarding indicated or overdue care (634/1344) - 47.2%

Last updated 9/22/2015
Among those not using their EHR for population health management, almost half say that they would need additional staff or financial support to do so.

Percent of physicians who thought it would take the following for them to use their EHR for population health management... (N=1,307)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional staff members</td>
<td>46.1%</td>
</tr>
<tr>
<td>Financial support/incentives</td>
<td>44.1%</td>
</tr>
<tr>
<td>N/A - I am not a decision maker for my practice</td>
<td>33.0%</td>
</tr>
<tr>
<td>Technical support</td>
<td>28.4%</td>
</tr>
<tr>
<td>Analytic support</td>
<td>28.2%</td>
</tr>
<tr>
<td>Hands-on coaching</td>
<td>25.8%</td>
</tr>
<tr>
<td>Reporting functionality</td>
<td>17.0%</td>
</tr>
<tr>
<td>Other</td>
<td>9.0%</td>
</tr>
</tbody>
</table>

Last updated 9/22/2015
Among physicians who prescribe opioids or benzodiazepines, more than half consult the Prescription Monitoring Program (PMP) at least some of the time.

Percent of physicians who consult the PMP before prescribing (N=1,847)

- For none of their patients:
  - Hospital-based (N=573): 43.6%
  - Office-based (N=1,274): 40.4%

- For half or fewer than half of their patients:
  - Hospital-based (N=573): 43.3%
  - Office-based (N=1,274): 41.1%

- For more than half of their patients:
  - Hospital-based (N=573): 13.1%
  - Office-based (N=1,274): 18.4%

Last updated 9/22/2015
Physician Results

Communication
Some physician practices use technology other than an EHR with their patients.

Percent of physicians whose practice has...

A website intended for patients (e.g., a website for informational or public relations purposes)

Yes

<table>
<thead>
<tr>
<th></th>
<th>Hospital-based (n=939)</th>
<th>Office-based (n=1,605)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>55.6%</td>
<td>63.1%</td>
</tr>
</tbody>
</table>

Last updated 9/22/2015
Some physician practices use technology other than an EHR to communicate with other practices.

Percent of physicians whose practice...

A “Direct address” (i.e., a specific electronic address for secure messaging using a Health Information Service Provider)

- **Yes**
  - Hospital-based (n=930): 16.5%
  - Office-based (n=1,566): 12.6%

- **No**
  - Hospital-based (n=930): 27.8%
  - Office-based (n=1,566): 25.5%

- **Don't know**
  - Hospital-based (n=930): 55.7%
  - Office-based (n=1,566): 61.9%

Last updated 9/22/2015
Most physicians use the phone and the postal service to communicate with patients outside of in-person visits.

Percent of physicians who personally communicate with their patients using...

- Telephone: 69.4% (Hospital-based), 93.9% (Office-based)
- US Mail: 16.1% (Hospital-based), 34.7% (Office-based)
- Messaging via patient portal: 6.4% (Hospital-based), 24.4% (Office-based)
- Email: 10.9% (Hospital-based), 19.2% (Office-based)
- Fax: 3.1% (Hospital-based), 6.8% (Office-based)
- Text messaging: 2.1% (Hospital-based), 6.6% (Office-based)
- I do not communicate with patients, other than face-to-face: 29.0% (Hospital-based), 4.4% (Office-based)
- Video calling: 0.3% (Hospital-based), 0.7% (Office-based)

Last updated 9/22/2015
Physician Results

Meaningful Use
About two-thirds of office-based physicians report that they have attested to Meaningful Use.

Percent of office-based physicians who have attested, or had someone attest on their behalf, to Meaningful Use (N=1,367)

- Yes (n=899) 65.8%
- No (n=137) 10.0%
- Don't know (n=331) 24.2%

Last updated 9/22/2015
Percent of office-based physicians who attested to each stage of Meaningful Use in 2015 (N=887)

- Medicare Stage 2 (n=207): 23.3%
- Medicare Stage 1 (n=114): 12.9%
- Medicaid Stage 2 (n=55): 6.2%
- Medicaid Stage 1 (n=72): 8.1%
- Medicaid Adoption, Implementation, Upgrade (n=11): 1.2%
- Don’t know (n=428): 48.3%

Last updated 9/22/2015
More than half of office-based physicians had someone else complete their Meaningful Use Attestation for them, most commonly an office manager or administrator.

Who completes your Meaningful Use attestation? (N=885)

- 53.3% My practice's office manager or other administrative person completes my attestation
- 17.1% I complete my attestation
- 18.9% Don't know
- 2.5% Another provider in my practice completes my attestation
- 3.7% The EHR vendor for my practice completes my attestation
- 2.6% Other
- 1.9% An outside consultant completes my attestation

Last updated 9/22/2015
Physician Results

CurrentCare
Most hospital and office-based physicians are not signed up to view or receive CurrentCare data.

Percent of physicians who view or receive CurrentCare data, by setting

- I am not yet signed up to view or receive data from CurrentCare:
  - Hospital-based (n=928): 81.7%
  - Office-based (n=1569): 69.5%
- I am able to view or receive data from CurrentCare, but I am not using it:
  - Hospital-based (n=928): 10.7%
  - Office-based (n=1569): 14.2%
- For half or fewer than half of my patients:
  - Hospital-based (n=928): 6.8%
  - Office-based (n=1569): 14.0%
- For more than half of my patients:
  - Hospital-based (n=928): 0.9%
  - Office-based (n=1569): 2.3%

Last updated 9/22/2015
Office-based PCPs are more likely to be signed up for and using CurrentCare than office-based non-PCPs.

Percent of office-based physicians who view or receive CurrentCare data, by setting (N=1,569)

- I am not yet signed up to receive data from CurrentCare: 86.0% (Office-based non-PCP) and 49.9% (Office-based PCP)
- I am able to view or receive data from CurrentCare, but I am not using it: 8.2% (Office-based non-PCP) and 21.3% (Office-based PCP)
- For half or fewer than half of my patients: 5.5% (Office-based non-PCP) and 24.0% (Office-based PCP)
- For more than half of my patients: 0.2% (Office-based non-PCP) and 4.7% (Office-based PCP)

For more than half of my patients, Office-based non-PCPs are more likely to be signed up for and using CurrentCare than office-based PCPs.

Last updated 9/22/2015
Use of CurrentCare by office and hospital-based physician respondents is similar for 2014 and 2015.

Percent of physicians who view or receive CurrentCare data, by year

- **I am not yet signed up to view or receive data from CurrentCare**
  - 2014: 72.6% (n=2,492)
  - 2015: 74.0% (n=2,497)

- **I am able to view or receive data from CurrentCare, but I am not using it**
  - 2014: 14.0%
  - 2015: 12.9%

- **For some or all of my patients**
  - 2014: 13.4%
  - 2015: 13.1%

Last updated 9/22/2015
Office-based physicians are more likely than hospital-based physicians to be familiar with different CurrentCare services. The CurrentCare Viewer is the most well known.

Percent of physicians who are familiar with these CurrentCare services, by setting...

- **CurrentCare Viewer**
  - Office-based: 28.8%
  - Hospital-based: 17.2%

- **CurrentCare Inquiry**
  - Office-based: 17.8%
  - Hospital-based: 11.0%

- **Hospital Alerts**
  - Office-based: 23.4%
  - Hospital-based: 9.9%

- **EHR Integration**
  - Office-based: 15.2%
  - Hospital-based: 9.4%

Last updated 9/22/2015
Office-based PCPs were more than three times as likely to be familiar with all CurrentCare services compared to office-based non-PCPs.

Percent of office-based physicians who are familiar with these CurrentCare services, by specialty...

- **CurrentCare Viewer:**
  - Office-based Non-PCP (n=854): 13.1%
  - Office-based PCP (n=714): 47.5%

- **CurrentCare Inquiry:**
  - Office-based Non-PCP (n=854): 8.4%
  - Office-based PCP (n=714): 29.1%

- **Hospital Alerts:**
  - Office-based Non-PCP (n=854): 8.8%
  - Office-based PCP (n=714): 40.7%

- **EHR Integration:**
  - Office-based Non-PCP (n=854): 6.2%
  - Office-based PCP (n=714): 25.7%

Last updated 9/22/2015
Physician Results

Respondents *without* EHRs
Among physician respondents, physicians with EHRs are slightly more likely to be participating in the Value-Based Payment Modifier Program than physicians without EHRs.

Percent of physician respondents who are participating in the Value-Based Payment Modifier Program

- Yes: 5.1% (Office-based Physicians with an EHR) 1.2% (Office-based Physicians without an EHR)
- No: 27.7% (Office-based Physicians with an EHR) 70.5% (Office-based Physicians without an EHR)
- Don't know: 28.2% (Office-based Physicians with an EHR) 67.2% (Office-based Physicians without an EHR)

Office-based Physicians with an EHR (N=1,343)  Office-based Physicians without an EHR (N=241)

Last updated 9/22/2015
Among office-based physicians without EHRs, more than half are not planning to implement an EHR.

Percent of office-based physicians without EHRs whose main practice plans to implement an EHR (N=245)

- **No (n=131):** 53.5%
- **Yes, within 1 year (n=31):** 12.7%
- **Yes, after 1 year (n=15):** 6.1%
- **Don't know (n=68):** 27.8%

Last updated 9/22/2015
Among office-based physicians without EHRs, responses varied about “what it would take” to implement one. Highest agreement related to financial support and EHR functionality that supports efficient workflow.

Percent of office-based physicians who thought it would take the following to implement an EHR... (N=193)

- Financial support (n=90) 46.6%
- EHR functionality that supports efficient workflow 45.1%
- Free software (n=72) 37.3%
- Access to hardware/software support (n=63) 32.6%
- Hands-on coaching (n=56) 29.0%
- Other (n=49) 25.4%
- Government mandate of a specific EHR that has... 22.3%
- Web-based EHR with software that updates... 19.2%
- State medical licensure requirement (n=31) 16.1%
- N/A - I am not a decision maker for my practice (n=31) 16.1%
- Payment for population-based disease management... 7.3%

Last updated 9/22/2015
APRN and PA Results

Overall Trends
The 2015 results provide a point-estimate of HIT adoption among APRNs and PAs for the four publicly-reported measures.

Use of EHRs and e-prescribing, among respondents and all APRNs/PAs

<table>
<thead>
<tr>
<th>Measure</th>
<th>Survey Respondents (N=721)</th>
<th>All APRNs and PAs (N=1,606)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population</td>
<td>Score</td>
</tr>
<tr>
<td>1. APRNs and PAs with EHRs, n (%)</td>
<td>721</td>
<td>645 (89.5%)</td>
</tr>
<tr>
<td>1. EHR functionality use (0-100), median</td>
<td>645</td>
<td>71.4</td>
</tr>
<tr>
<td>1. Patient engagement EHR use (0-100), median</td>
<td>645</td>
<td>21.4</td>
</tr>
<tr>
<td>1. APRNs and PAs who are e-prescribing, n (%)</td>
<td>617</td>
<td>462 (74.9%)</td>
</tr>
</tbody>
</table>

Last updated 9/22/2015