Arizona Health Information Exchange (HIE)
Program Evaluation Plan

CFDA #: 93.719
Opportunity #: EP-HIT-09-001

Updated: 06/01/2012
Prepared By:
The Arizona Strategic Enterprise Technology Office
# Table of Contents

Evaluation Framework ................................................................. 3  
National Program Priorities .......................................................... 5  
  E-prescribing ................................................................................ 5  
  Laboratories ................................................................................ 7  
  Care Summaries .......................................................................... 9  
Arizona Program Priorities ............................................................. 11  
  State Level Provider Directory is Operational .............................. 11  
  Public Health is Fully Participating in Electronic Health Information Exchange ...... 13
Evaluation Framework

Arizona’s evaluation framework describes the approaches and strategies that Arizona is using to facilitate and expand health information exchange in the program priority areas and in its own strategic priority areas. It provides the structure and process within which the program will be evaluated including key evaluation questions, expected process and outcomes to assess, and the evaluation methods to be used.

For each national or state program priority, the evaluation will address:

**Goal(s)**
- What are the goals for the program?

**Qualitative and/or Quantitative Criteria** (study design)
- What criteria will be used to show progress towards the goal

**Target Population** (study population)
- What is the population used in the evaluation?

**Required Data** (data sources)
- What data is needed to determine if the criteria are met?

**Source(s) and Approach** (data collection methods)
- From where will the data be obtained?
- How will the data be obtained?

**Analysis Method** (data analysis)
- How will the data be analyzed?

**Program Performance Analysis**
- How well did we perform in each of the program priority areas?
  - Where did we start in each of the areas?
  - How did we progress in each of the areas?

**Arizona Approaches and Strategies**
- Describe approaches and strategies used to facilitate/expand HIE in priority areas.

**Conditions Supporting or Hindering Implementation of Strategies**
Conditions (or context) may include such things as political environment, economic environment, stakeholder relationships, status of laws, unexpected events such as natural disaster, level of exchange at baseline, HIE governance, HIE technical environment, or other.
- What conditions supported our ability to implement the strategies in the program area?
- What conditions hindered our ability to implement the strategies in the program area?
Assessment of Key Approaches and Strategies

- How did each of the key approaches (and strategies) contribute to progress in the program priority area?
  - What lessons did we learn?
  - What can we share with ONC and other state efforts?
National Program Priorities

E-prescribing

Over the last decade, the State of Arizona has experienced considerable growth in almost every statistical area and adoption of e-prescribing is no exception. The State's overall growth can be attributed to the fact that it is a relatively new state with many services and providers having just recently established themselves within the state. Arizona’s e-prescribing rate is above the national average. This high percentage can be partially attributed to the high number of chain pharmacies (875) compared to independent ones (142).

Goal(s)

- e-prescribing is fully adopted in Arizona

Qualitative and/or Quantitative Criteria

The success of e-prescribing will be measured in the following areas: capability to e-prescribe, actual use of e-prescribing, and the total volume of e-prescriptions for the State of Arizona

<table>
<thead>
<tr>
<th>Target Population</th>
<th>Milestones and/or Performance Measurements</th>
<th>Target YE2012</th>
<th>Target YE2013</th>
<th>Target Program End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacies</td>
<td>100% of pharmacies e-prescribing capable</td>
<td>98%</td>
<td>99%</td>
<td>100%</td>
</tr>
<tr>
<td>Pharmacies</td>
<td>100% of pharmacies e-prescribing participating</td>
<td>98%</td>
<td>99%</td>
<td>100%</td>
</tr>
<tr>
<td>Providers</td>
<td>Achieve 60% of Arizona prescribers routing prescriptions electronically.</td>
<td></td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Providers</td>
<td>Exceed 40% of all Arizona prescriptions electronically routed to pharmacies</td>
<td></td>
<td>40%</td>
<td></td>
</tr>
</tbody>
</table>

Target Population
- Pharmacies
- Providers

Required Data
- Pharmacy e-prescribing status
- Percentage of Providers e-prescribing
- Percentage of prescriptions that are e-prescriptions

Sources and Approach to Obtain the Required Data

ONC has provided a subscription to the Surescripts database. Reports are available on a monthly basis reflecting the data for providers and pharmacies. An additional report is available from ONC on an annual basis that contains the percent of physicians actively e-prescribing via the Surescripts network and the percent of new and renewal prescriptions e-prescribed. These reports satisfy our data gathering requirements.
ASET will continue to work with the State Medicaid provider (AHCCCS) to assess the Medicaid providers with high volumes of prescriptions. Beginning 7/1/2012, AHCCCS will have access to data for pharmacy claims submitted and whether or not they were e-prescribed.

Analysis Method
Arizona is a leader in e-prescribing. ASET will no longer look at just the percentages of pharmacies that are capable of and participating in e-prescribing. We are now using the reports to identify the specific remaining pharmacies that are either not capable of e-prescribing or not actively using the system.

We will also use the available data to identify providers that produce a high volume of prescriptions.

Program Performance Analysis
- How well did we perform in reaching our performance targets and our goal?
  - Where did we start (baseline)?
  - How did we progress?

Arizona e-prescribing Approaches and Strategies
- Assess pharmacies not currently participating in e-prescribing and develop approaches to increase adoption.
- Leverage the HIE technology solution and its core messaging system to allow participating entities to utilize HINAz’s relationship with Surescripts.
- Implement provider directory which may be leveraged by providers to route prescriptions to appropriate destinations.
- Leverage existing entities to provide technical assistance to pharmacies and providers as needed.
  - Collaborate with AzHeC (REC) to help providers understand MU.
  - Leverage the e-prescribing Committee and the Consumer Advisory Group.
- ASET will work with State Medicaid provider (AHCCCS) to assess the Medicaid providers with high volumes of prescriptions. ASET will consider measures to help increase e-prescribing adoption and use.

Conditions Supporting or Hindering Implementation of Strategies
- What conditions supported our ability to implement the strategies for eRx?
- What conditions hindered our ability to implement the strategies for eRx?

Assessment of Key Approaches and Strategies
- How did each of our key strategies and approaches contribute to progress in eRx?
  - What lessons did we learn?
  - What can we share with ONC and the other state efforts?
Laboratories

Arizona’s objective is to ensure that providers and hospitals can electronically receive and display clinical laboratory test results in a structured standard format.

Goal(s)
Electronic lab orders and structured results delivery is fully adopted in Arizona.

Qualitative and/or Quantitative Criteria

<table>
<thead>
<tr>
<th>Target Population</th>
<th>Milestones and/or Performance Measurements</th>
<th>Target YE2012</th>
<th>Target YE2013</th>
<th>Target Program End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratories</td>
<td>Percentage of laboratories sending structured lab results to providers</td>
<td>35%</td>
<td>45%</td>
<td>46%</td>
</tr>
<tr>
<td>Laboratories</td>
<td>Percentage of laboratories sending structured lab results to providers electronically using LOINC</td>
<td>25%</td>
<td>35%</td>
<td>36%</td>
</tr>
<tr>
<td>Laboratories</td>
<td>Percentage of outpatient and inpatient lab results accessible by an HIE infrastructure</td>
<td>60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratories</td>
<td>Labs with a Direct account to enable sending structured lab results to providers</td>
<td>1Q 2012 - 10 2Q 2012 - 15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Target Population
- Laboratories

Required Data
- Labs: Total number of labs in Arizona
- Lab status: Status of each lab sending structured labs and LOINC to providers
- Lab results accessible from the HIE: Status of labs participating in the HIE
- Labs with Direct accounts: Number of labs with a Direct account

Sources and Approach to Obtain the Required Data
- Labs: CLIA reports
- Lab status: ASET administered Lab survey
- Lab results accessible from the HIE: HINAz utilization report
- Labs with Direct accounts: AzHeC HIE Marketplace reports

Analysis Method
- Review reports quarterly for status and trending.

Program Performance Analysis
- How well did we perform in reaching our performance targets and our goal?
  - Where did we start (baseline)?
  - How did we progress?
Arizona Laboratory Approaches and Strategies

- Leverage Core Services infrastructure vendor’s relationship with Sonora Quest and LabCorp.
- Leverage Direct as a potential strategy to route lab results to the ordering provider.
- Leverage existing entities to provide technical assistance to providers and independent labs.

Conditions Supporting or Hindering Implementation of Strategies

- What conditions supported our ability to implement the strategies for Labs?
- What conditions hindered our ability to implement the strategies for Labs?

Assessment of Key Approaches and Strategies

- How did each of our key strategies and approaches contribute to progress in Labs?
  - What lessons did we learn?
  - What can we share with ONC and the other state efforts?
Care Summaries

ASET is placing emphasis on establishing an infrastructure and policy framework that enables the exchange of clinical summaries to support stage 1 Meaningful Use objectives. Our strategies will support options ranging from Direct to a bi-directional functional HIE.

**Goal(s)**
Electronic exchange of care summaries is fully adopted in Arizona

**Qualitative and/or Quantitative Criteria**

<table>
<thead>
<tr>
<th>Target Population</th>
<th>Milestones and/or Performance Measurements</th>
<th>Target YE2012</th>
<th>Target YE2013</th>
<th>Target Program End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>Percentage of hospitals sharing electronic care summaries with unaffiliated hospitals and unaffiliated providers</td>
<td>35%</td>
<td>45%</td>
<td>46%</td>
</tr>
<tr>
<td>Providers</td>
<td>Percentage of ambulatory provider sharing electronic care summaries with other providers</td>
<td>40%</td>
<td>50%</td>
<td>51%</td>
</tr>
<tr>
<td>Providers</td>
<td>Register health care providers with a Direct address</td>
<td>2Q 2012 - 250</td>
<td>3Q 2012 - 450</td>
<td>4Q 2012 - 587</td>
</tr>
<tr>
<td>Providers</td>
<td>Outreach to providers who have not adopted certified EHRs and inform them of their options</td>
<td>60%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Target Population**
- Hospitals
- Providers

**Required Data**
- Hospitals currently sharing care summaries with unaffiliated hospitals and providers
- Ambulatory providers sharing care summaries with other providers
- Total number of providers in Arizona
- Providers without certified EMRs
- Providers with a Direct address

**Sources and Approach to Obtain the Required Data**
Through contracts with the NAMCS and AHA, ONC is providing the data for hospitals and providers sharing care summaries with unaffiliated entities. The total number of providers in the state and EMR access will come from the Arizona State University survey. AzHeC will provide the data for the number of providers with a Direct address.

**Analysis Method**
- Review the reports on a quarterly basis for status and trends.
Program Performance Analysis
- How well did we perform in reaching our performance targets and our goal?
  - Where did we start (baseline)?
  - How did we progress?

Arizona Care Summary Approaches and Strategies
- Develop core infrastructure and messaging services through an HIE vendor to enable eligible providers and hospitals to conduct exchange of patient care summaries
- Evaluate and create a strategy to leverage direct in white space areas as a viable option to exchange clinical summaries
- Leverage existing entities to provide technical assistance to providers around various options of exchange

Conditions Supporting or Hindering Implementation of Strategies
- What conditions supported our ability to implement the strategies for care summaries?
- What conditions hindered our ability to implement the strategies for care summaries?

Assessment of Key Approaches and Strategies
- How did each of our key strategies and approaches contribute to progress in care summaries?
  - What lessons did we learn?
  - What can we share with ONC and the other state efforts?
Arizona Program Priorities

State Level Provider Directory is Operational

At its core, the provider directory will provide a mechanism for the exchange of data between two unaffiliated providers/organizations. It will contain all relevant information for all registered clinicians within Arizona. “Clinician” is broadly defined to include all certified and licensed clinicians (e.g., physicians, nurse practitioners, nurses, certified nursing assistants, medical assistants).

Goal(s)
There is an operational state level HIE entity level (ELPD) and individual level (ILPD) directory with at least 8500 providers in the ILPD.

Qualitative and/or Quantitative Criteria
- The number of providers in the ILPD

Target Population
- Providers

Required Data
- Number of providers in the ILPD

Source(s) and Approach
- HINAz report of ILPD contents

Analysis method
- Review reports from HINAz quarterly for status and trends.

Program Performance Analysis
- How well did we perform in each of the program priority areas?
  - Where did we start in each of the areas?
  - How did we progress in each of the areas?

Arizona Approaches and Strategies
- Provide assistance to the selected vendor with the onboarding of providers into the provider directory.
- Established provider directory will contain all relevant information for all registered clinicians in Arizona.
- (New) Use the technology vendor’s resources to populate the provider directory.
  - (Prior Strategy - Replaced by “New” above) Leverage other organizations such as the Arizona Medical Board as data sources into the provider directory.

Conditions Supporting or Hindering Implementation of Strategies
- What conditions supported our ability to implement the strategies in the program area?
- What conditions hindered our ability to implement the strategies in the program area?
Assessment of Key Approaches and Strategies

- How did each of the key approaches (and strategies) contribute to progress in program priority area?
  - What lessons did we learn?
  - What can we share with ONC and other state efforts?
Public Health is Fully Participating in Electronic Health Information Exchange

Arizona Department of Health Services (ADHS) has developed various ways to collect information necessary to monitor public and behavioral health and to trigger public health action. This evaluation focuses on three projects that will enhance the ability of Arizona Public Health to support current and future Meaningful Use requirements:

1. Enhance Syndromic Surveillance Capabilities in Support of Meaningful Use
2. Implementing Direct for Immunizations at ADHS
3. Arizona State Laboratory Interoperability Project at ADHS

1. Enhance Syndromic Surveillance Capabilities in Support of Meaningful Use

Goal(s)
- Increase the number of hospitals participating with Biosense 2.0
- A production connection between ADHS and Biosense 2.0 will be used by ADHS
- Identify ways to utilize Biosense in other programmatic areas such as environmental health, injury, and chronic diseases.

Qualitative and/or Quantitative Criteria

Enhance Syndromic Surveillance Capabilities in Support of Meaningful Use

<table>
<thead>
<tr>
<th>Anticipated Date of Completion</th>
<th>Deliverable</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 31, 2012</td>
<td>Hire (2) epidemiologists and (1) project specialist</td>
</tr>
<tr>
<td>October 2012</td>
<td>User agreement and policy manual for public health</td>
</tr>
<tr>
<td>December 2012</td>
<td>Data dictionary for public health</td>
</tr>
<tr>
<td>December 2012</td>
<td>Implementation guide for facilities</td>
</tr>
<tr>
<td>March 2013</td>
<td>Database for technology specifications</td>
</tr>
<tr>
<td>July 2013</td>
<td>Public health user manual and training manual</td>
</tr>
<tr>
<td>October 2013</td>
<td>Protocol for routine use of BioSense 2.0 at ADHS</td>
</tr>
<tr>
<td>November 2013</td>
<td>BioSense 2.0 evaluation report</td>
</tr>
<tr>
<td>December 2013</td>
<td>(10) new hospitals, including (2) rural or critical access hospitals</td>
</tr>
</tbody>
</table>

Target Population
- Hospitals
- ADHS

Required Data
- See Table: Enhance Syndromic Surveillance Capabilities in Support of Meaningful Use Performance Metrics above
Source(s) and Approach
- See Table 1: Enhance Syndromic Surveillance Capabilities in Support of Meaningful Use Performance Metrics above

Analysis Method
- See Table: Enhance Syndromic Surveillance Capabilities in Support of Meaningful Use Performance Metrics above

Program Performance Analysis
- How well did we perform in each of the program priority areas?
  - Where did we start in each of the areas?
  - How did we progress in each of the areas?

Arizona Approaches and Strategies
- Invest in state agency infrastructure to facilitate health information exchange
- Take incremental approach to build state level HIE capabilities

Conditions Supporting or Hindering Implementation of Strategies
- What conditions supported our ability to implement the strategies in the program area?
- What conditions hindered our ability to implement the strategies in the program area?

Assessment of Key Approaches and Strategies
- How did each of the key approaches (and strategies) contribute to progress in program priority area?
  - What lessons did we learn?
  - What can we share with ONC and other state efforts?
2. Implementing Direct for Immunizations at ADHS

Goal(s)
- Direct Exchange is a viable option for providers to send immunization records to ADHS
- Improve Public Health capability to support Stage 1 and future Meaningful Use requirements.

Qualitative and/or Quantitative Criteria
The Direct Gateway is responsible for receiving and sending messages from HISPams. A Direct Gateway will be developed and hosted at the ADHS data center. The Gateway implements all the security and audit log features based on the Direct Project specifications. Immunization messages received will be published to ASIIS via web services. The web services will be accessible only via the Direct Gateway and will have a trusted connection to ASIIS.

Target Population
- Providers
- ADHS

Required Data
- ADHS Gateway utilization for immunization data

Source(s) and Approach
- ADHS report of immunization data submission routes

Analysis Method
- Review ADHS Directory Gateway usage reports quarterly for status and trends.

Program Performance Analysis
- How well did we perform in each of the program priority areas?
  - Where did we start in each of the areas?
  - How did we progress in each of the areas?

Arizona Approaches and Strategies
- Invest in state agency infrastructure to facilitate health information exchange
- Leverage existing entities to provide technical assistance to providers around various options of exchange.
- Take incremental approach to build state level HIE capabilities

Conditions Supporting or Hindering Implementation of Strategies
- What conditions supported our ability to implement the strategies in the program area?
- What conditions hindered our ability to implement the strategies in the program area?

Assessment of Key Approaches and Strategies
- How did each of the key approaches (and strategies) contribute to progress in program priority area?
  - What lessons did we learn?
  - What can we share with ONC and other state efforts?
3. Arizona State Laboratory Interoperability Project at ADHS

Goal(s)
- ADHS lab system accepts orders and sends acknowledgement
- ADHS lab system sends reports in HL7 format in production mode.

Qualitative and/or Quantitative Criteria

State Laboratory Interoperability Project Performance Metrics

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>Anticipated Completion Date</th>
<th>Frequency of Monitoring</th>
<th>Data Source and Reporting Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop monthly progress reports on project status and evaluate progress towards project milestones.</td>
<td>Ongoing</td>
<td>Monthly</td>
<td>Progress updates at steering team meetings. Frequency of reports submitted.</td>
</tr>
<tr>
<td>Number of hospitals that have signed data sharing agreements for exchange of laboratory orders and results with ADHS.</td>
<td>TBD</td>
<td>Monthly</td>
<td>Report on the number of signed agreements.</td>
</tr>
<tr>
<td>Complete a catalog of state public health laboratory test orders using standard codes (LOINC).</td>
<td>TBD</td>
<td>Once</td>
<td>Percentage of laboratory test codes cataloged.</td>
</tr>
<tr>
<td>Number of laboratories exchanging lab orders and results with the state public health lab for Pilot stage.</td>
<td>Target: 5 TBD</td>
<td>Quarterly Starting 4th Qtr. of 2012</td>
<td>Number of successful message transactions per week for participating labs.</td>
</tr>
<tr>
<td>Number of lab orders and results exchanged with the state public health lab for the Pilot stage.</td>
<td>Target: 10% of total volume TBD</td>
<td>Quarterly Starting 4th Qtr. of 2012</td>
<td>Number of successful message transactions per week for participating labs.</td>
</tr>
</tbody>
</table>

Target Population
- Hospitals
- Labs
- ADHS

Required Data
- See Table: State Laboratory Interoperability Project Performance Metrics above

Source(s) and Approach
- See Table: State Laboratory Interoperability Project Performance Metrics above

Analysis Method
- See Table: State Laboratory Interoperability Project Performance Metrics above

Program Performance Analysis
- How well did we perform in each of the program priority areas?
  - Where did we start in each of the areas?
  - How did we progress in each of the areas?
Arizona Approaches and Strategies

- Invest in state agency infrastructure to facilitate health information exchange
- [ASET will] Leverage existing entities to provide technical assistance to providers and independent labs. Coordinate efforts with HIE (HINAz), REC (AzHeC) and the Arizona Department of Health Services (CLIA contact for AZ)
- Take incremental approach to build state level HIE capabilities

Conditions Supporting or Hindering Implementation of Strategies

- What conditions supported our ability to implement the strategies in the program area?
- What conditions hindered our ability to implement the strategies in the program area?

Assessment of Key Approaches and Strategies

- How did each of the key approaches (and strategies) contribute to progress in program priority area?
  - What lessons did we learn?
  - What can we share with ONC and other state efforts?