Statewide Health Information Exchange (HIE) Financial Sustainability Study

HIE Council Briefing
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Arkansas HIE Council Meeting Financial Feasibility Study Agenda

- Project Context and Approach
  - Project Overview, Principles and Assumptions of the Funding Model

- Summary of Gartner Analysis and Direction
  - HIE Value Definition, Quantified Financial Benefits and Additional Benefits
  - Costs and Funding Needs, and Time-Based and “per Metric” Cost & Value Comparison
  - Funding Strategies and Mechanisms

- Implementation Recommendations
  - Funding Strategy
  - Revision of the Funding Model Over Time
Introductions

- Gartner Project Team
  - Frank Petrus
  - Jeff Perkins
  - Erika Chahil
  - Kevin Chartrand

- HIE Council Members
Objectives for this Meeting

The primary objectives of today’s session are to:

- Discuss key principles that will govern the Financial Sustainability Model for SHARE
- Discuss the benefits and value that can be achieved through the establishment and use of SHARE
- Review the expected costs and the funding already in place for SHARE
- Identify and discuss the constituent groups that should contribute to SHARE to meet the funding gap
- Introduce a straw man Financial Sustainability Model for SHARE
- Discuss next steps and future needs for the Sustainability Model
Financial Feasibility Project Context

**Project Background**
- The Arkansas SP/OP was approved by the Office of the National Coordinator for Health Information Technology on February 25, 2011.
- The Arkansas legislature approved Acts 694 and 891 (house bills 542 and 1905) in March, 2011 to establish OHIT, and to enable OHIT to establish SHARE.

**OHIT’s Key Priorities for Financial Model**
- Identify quantifiable value of the HIE to various constituents.
- Ensuring the accuracy of the HIE revenue estimates for the design /development / implementation and for its on-going sustainability.
- Identify potential funding mechanisms for the financial sustainability for the State’s HIE.
- Develop detailed funding scenarios and assessment formulas for the most viable alternatives for initial development and implementation and on-going financial sustainability.
- Conduct an analysis of viable funding alternatives.
- Finalize the recommendations with OHIT for the finance model of choice for funding the initial HIE development and deployment and for its on-going financial sustainability.

**Project Objectives**
- Consideration of the OHIT enabling legislation’s framework for developing fee structures.
- Consideration of State Medicaid Director (SMD) letter regarding federal matching and cost allocation for HIE related costs.
- Analysis of ADH and CDC funding currently spent on Registry and public health reporting requirements.
- Analysis of High Cost Fund at PSC and/or feasibility of a “universal service fee” or other telecommunications-based model for HIT fund.
The Model was developed based on an established framework

**Determine the Preferred Funding Methods**
Recommendations of revenue generation by constituent group with specific recommendations on the mechanism to use with each group

**Identify the Potential Funding Mechanisms**
- Mechanisms include:
  - Per-bed/-member charges
  - Usage fees
  - Flat fees
  - Non-medical fees

**Estimate Initial & Ongoing Required Revenue**
Based on:
- Strategic & Operational plans
- Past estimates
- Projections of known costs

**Estimate the Value of the HIE by Constituent**
- Benefits include:
  - Reduced medical procedures
  - Shorter stays
  - Less unnecessary visits/admissions

- Constituents include:
  - Payers
  - Hospitals
  - Professionals
The funding strategy should adhere to a few fundamental principles

- The funding model should be simple, transparent and predictable
- To be sustainable, the funding model should not rely on short-term, unsustainable funding streams (i.e., expiring federal funds, grants, etc.)
  - One-time sources should be leveraged for growth and projects when available
- In the long-term, funding responsibilities of SHARE should be in approximate estimated or demonstrated proportion of the value that constituents receive
  - Funding should not be sought disproportionately from any one stakeholder or group of stakeholders
- The funding model should not dis-incent those needed for critical mass, especially in the near-term
- The funding model should abide by the enabling legislation for funding
- The funding model should harmonize with other, similar initiatives in the State, consistent with the coordination of services offered
  - Such initiatives should include the Medicaid Management Information Systems (MMIS), Health Benefits Exchange (HBEx) and All Payers Claim Database (APCD)
- The funding model should be reviewed bi-annually, or as appropriate, to ensure that all principles are adhered to
A few key assumptions are needed for SHARE’s funding model

- Value and corresponding cost sharing must be viewed as a “point-in-time” analysis.

- While the framework for the funding strategy is a solid foundation for the long term, the specifics of who receives value through SHARE and who should share in the costs should be re-evaluated over time.

- Changes in the projected costs of SHARE should be taken into account as soon as the Authority can provide revised cost estimates based on vendor input (i.e., RFTP).

- With the exception of the updates to the costs model and corresponding changes to the funding formulae, we believe the specifics of the funding model as described herein are valid for the next two to three years.

- The funding model and underlying analysis is based on current health care payment structures and does not reflect potential future changes such as health care payment reform.

- All timeframes used in this model are based on the Federal Fiscal Year for alignment with the ONC Cooperative Agreement calendar, and the timing of the initial release of this report.

- Medicaid contributions are based on an understanding resulting from discussions between Medicaid and OHIT. This model should be updated as further understandings are reached.
The old model of data exchange included a lot of point-to-point connections; the new model relies on SHARE to facilitate information flow.

* MPI refers to Master Patient and Master Provider Indices
Studies suggest that there are $94 billion* in annual steady-state benefits from optimal use of HIE nationally.

At approximately 1% of the US population, Arkansas residents would receive approximately 1% of the estimated national benefits.

This sustainability study identified approximately $65M in financial benefits that could be realized by adoption and use of an HIE in Arkansas.

OHIT identified $49M for a conservative estimate for measurable financial benefits that could be achieved through the adoption and use of SHARE in Arkansas.

$94B assumes full implementation at Level 4 HIEI (see Appendix for framework) sophistication, at an estimated cost of $16.5B. The CITL study evaluated benefits between outpatient providers and laboratories, outpatient providers and radiology centers, outpatient providers and pharmacies, providers and public health departments, and providers and payers (Source: Pan E, et al. The Value of Healthcare Information Exchange and Interoperability. Chicago: HIMSS; 2005.)
There is significant value that can be achieved through the utilization of the HIE by accessing and utilizing the HIE

Benefits were determined by defining cases where SHARE could provide quantifiable, measurable, financial value. These benefits were transposed to constituent groups by calculating the values for each group and summing.

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevent Unnecessary 30-day Readmissions</td>
<td>$11,059,707</td>
</tr>
<tr>
<td>Reduce avoidable Adverse Drug Events (ADEs) - Inpatient</td>
<td>$2,935,910</td>
</tr>
<tr>
<td>Avoid Duplicative Testing and Imaging</td>
<td>$19,286,400</td>
</tr>
<tr>
<td>Avoid Duplicative Consults</td>
<td>$1,655,571</td>
</tr>
<tr>
<td>Reduce Length and Complexity of Stays</td>
<td>$3,469,712</td>
</tr>
<tr>
<td>Reduced administration burden for collecting, managing and distributing medical records (providers)</td>
<td>$4,448,349</td>
</tr>
<tr>
<td>Reduced administration burden for collecting, managing and distributing medical records (hospitals)</td>
<td>$6,728,594</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Benefits</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value that is Financial and Measurable</td>
<td>$49,584,242</td>
<td></td>
</tr>
<tr>
<td>Payers</td>
<td>Carrier / ASO</td>
<td>$13.5M</td>
</tr>
<tr>
<td>Medicaid</td>
<td>$10.1M</td>
<td>20%</td>
</tr>
<tr>
<td>Medicare / Other Public</td>
<td>$7.9M</td>
<td>16%</td>
</tr>
<tr>
<td>Providers</td>
<td>Hospitals</td>
<td>$6.7M</td>
</tr>
<tr>
<td>Professionals</td>
<td>$4.4M</td>
<td>9%</td>
</tr>
<tr>
<td>Others</td>
<td>Uninsured</td>
<td>$7.0M</td>
</tr>
</tbody>
</table>
Moving from a value per constituent group to “per metric” values (steady state calculations)

Using value allocations and metric data that we currently know, such as the number of covered lives, the number of staffed hospitals beds and the number of licensed health care professionals, we can calculate the projected annual value that SHARE will bring to each constituent as described below. These calculations are based on steady state benefits.

<table>
<thead>
<tr>
<th>Constituent Group</th>
<th>Group Value Allocation</th>
<th>Calculation Metric</th>
<th>Per Metric Value Calculation</th>
<th>Per Metric Value (Direct Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payers (Carrier / ASO)</td>
<td>$13.4M</td>
<td>1.0 M covered lives</td>
<td>$13.4M / 1.0M</td>
<td>$13.29 per lives covered per year</td>
</tr>
<tr>
<td>Medicaid</td>
<td>$10.0M</td>
<td>755,607 covered lives</td>
<td>$10.0M / 755,607</td>
<td>$13.29 per lives covered per year</td>
</tr>
<tr>
<td>Hospitals</td>
<td>$6.7M</td>
<td>9,345 staffed beds</td>
<td>$6.7M / 9,345</td>
<td>$720 per staffed bed per year</td>
</tr>
<tr>
<td>Health care Professionals</td>
<td>$4.4M</td>
<td>7,318 health care professionals</td>
<td>$4.4M / 7,318</td>
<td>$607 per professional per year</td>
</tr>
</tbody>
</table>
The annual direct, quantifiable financial benefits are expected to exceed annual costs in a short timeframe

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Benefits</strong></td>
<td>$4.11</td>
<td>$12.37</td>
<td>$21.74</td>
<td>$33.32</td>
<td>$42.54</td>
<td>$47.20</td>
<td>$49.58</td>
</tr>
<tr>
<td><strong>Annual Costs</strong></td>
<td>$5.15</td>
<td>$5.40</td>
<td>$6.40</td>
<td>$6.40</td>
<td>$6.40</td>
<td>$6.40</td>
<td>$6.40</td>
</tr>
</tbody>
</table>

**Annual HIE Cost vs. Direct Value ($M)**

**Cumulative HIE Cost vs. Direct Value ($M)**
The ONC Cooperative Agreement provides critical development funds through the initial years of SHARE, though non-Federal matches must be supplied.

A source for this match must be identified to draw down Federal funds.

- Non-Federal Coop Agmn't Match - Unknown Source
- Non-Federal Coop Agmn't Match - DF&A
- Federal Funding (ONC Coop Agmn't)

**2010 actual**
- $257,549

**2011 estimate**
- $1,084,359

**2012 estimate**
- $4,329,598

**2013 estimate**
- $745,965

**2010**
- $158,514

**2011**
- $460,000

**2012**
- $2,237,895

**2013**
- $1,000,000

This presentation is for the Sole Use of the State of Arkansas.
The difference between the estimated costs and the Cooperative Agreement funds leaves a funding gap that must be filled through other funding sources.
The value allocation is translated to SHARE’s funding model based on an equitable sharing of costs (using direct quantifiable value at steady state)

**Annual Value by Constituent group**

- **Payers (Carrier and ASO)**: 27%
- **Health care professionals**: 9%
- **Hospitals**: 14%
- **Uninsured**: 14%
- **Medicaid**: 20%
- **Medicare / Other Public**: 16%

- **Medicaid contributions will not be directly tied to benefits to align with CMS guidance**
- **Will indirectly contribute via other Federal funds such as the ONC Cooperative Agreement**
- **Would likely cause an undue burden and would be difficult to assess**

- **Per CMS guidance, Medicaid should at least contribute based on the percentage of the population they serve, which is currently 26%**

- **The three constituent groups that should share the remaining funding gap (those costs not covered by Federal or State funds, including Medicaid) in the near-term will be:**
  - Payers (Carrier and ASO)
  - Health care professionals
  - Hospitals

- **The funding gap should be closed by these three groups at ratios approximately consistent with the value they receive, which is currently estimated to be 27:9:14, respectively**

- **The following groups will not be expected to contribute in the near-term:**
  - **Uninsured**: Would likely cause an undue burden and would be difficult to assess
  - **Medicare**: Will indirectly contribute via other Federal funds such as the ONC Cooperative Agreement
Contributions by group should be introduced when financial benefits are able to be identified and measured

<table>
<thead>
<tr>
<th></th>
<th>Short-term (&lt;4 years)</th>
<th>Mid-term (4-8 years)</th>
<th>Long-term (&gt;8 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Government</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Payers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health care Professionals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiology Centers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-Term Care Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled Nursing Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Regardless of this timeline, all potential users of SHARE should be able to use SHARE’s services as soon as SHARE is able to support them.
Near-term HIE funding strategy through State and Federal government funding

<table>
<thead>
<tr>
<th></th>
<th>Federal Government (ONC/CMS)</th>
<th>State of Arkansas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amount</strong></td>
<td>The remainder of the Cooperative Agreement Grant ($7.81M over 4 years)</td>
<td>Approximately $600,000 over 4 years for match of Cooperative Agreement (DF&amp;A)</td>
</tr>
<tr>
<td></td>
<td>$130,000 planning funds from Medicaid through ARRA</td>
<td></td>
</tr>
<tr>
<td><strong>Schedule</strong></td>
<td>On a Federal drawdown schedule, likely quarterly</td>
<td>In coordination with drawdown schedule, and will completed in FFY 2012</td>
</tr>
<tr>
<td></td>
<td>The $130,000 is being drawn down concurrent with match rates</td>
<td></td>
</tr>
<tr>
<td><strong>Pros/ Cons/ Risks</strong></td>
<td>• Ends after Feb, 2014; it is not renewable</td>
<td>• ONC Cooperative Agreement is now approved by ONC</td>
</tr>
<tr>
<td></td>
<td>• Cannot be re-appropriated</td>
<td>• Matching is secured through DF&amp;A up to ~$600,000</td>
</tr>
<tr>
<td></td>
<td>• Requires non-Federal matching</td>
<td></td>
</tr>
</tbody>
</table>
CMS’ State Medicaid Director Letter provides opportunities for applying for administrative funds for SHARE

- CMS’ State Medicaid Director Letter published on May 18th 2011 provides guidance to State Medicaid agencies regarding the use of administrative funds to support health information exchange as part of the Medicaid program, but only if the State can demonstrate they have a business model that includes funding from various other health care stakeholders.

- Opportunities for start-up funds include:
  - MMIS Administrative Funds for services that SHARE provides that directly relate to MITA business services and are necessary to enable them, and/or there are interfaces to the MMIS from external HIE entities.
  - HITECH Administrative Funds in support of the Medicaid EHR Incentive Program
    - $130,000 has already been received as part of the HITECH funds for the Incentive Program.

- Opportunities for ongoing funds include:
  - Adjustments to provider reimbursement methodologies, which are matched at a State’s Federal medical assistance percentage (FMAP).
  - General program administration funds from Medicaid/CMS if SHARE is related to administering Medicaid
    - This amount is related to the population covered by Medicaid, which is currently 26%.
  - Reimbursement through payment for episodes of care as part of the health care payment reform.

- OHIT should continue discussions with Medicaid on further opportunities to secure Federal funding, and other value add services.
SHARE selected mechanisms for revenue collection that are simple, transparent, predictable and viable to implement

<table>
<thead>
<tr>
<th>Constituent Type</th>
<th>Short-Term Mechanisms (&lt;4yrs)</th>
<th>Mid-term / Long-Term Mechanisms (4-8 yrs – onward)</th>
</tr>
</thead>
</table>
| Payers – Medicaid | • HITECH funds - Percentage of annual HIE budget equal to the percentage of professional that will apply for Medicaid Incentives (est. ~12%)  
• Medicaid funds for MMIS – Percentage of Medicaid-eligible total covered population; or percentage of total healthcare expenditures that are Medicaid expenditures (est. 26%; 19%, respectively) | • Adjustments to provider reimbursement methodologies, which are matched at a State’s Federal medical assistance percentage (FMAP)  
• 50% match rate for general program administration if SHARE is related to administering Medicaid  
• Addition of HIT specific allocation to episodic payments for care |
| Payers – Risk-based Carrier Plans and Administrative Services Organizations | • Percentage of annual HIE budget based on population served  
• **Per member monthly/yearly fee**  
• Flat fees not based on size or volume | • Percentage of annual HIE budget based on population served  
• **Per member monthly/yearly fee**  
• Flat mandatory fees  
• Voluntary subscription fees |
| Hospitals and Nursing Facilities | • Flat fees not based on size or volume  
• **Per facility fees**  
• **Per staffed bed fee**  
• Per census count | • **Per staffed bed fee**  
• Per facility fees  
• Flat fees  
• Subscription fees  
• Per census count |
| Health Care Professionals | • Increase in statutorily-set licensing fees  
• **Fee by census or some other volume metric** | • Increase in statutorily-set licensing fees  
• **Subscription fee**  
• Per group/company fees |

* Mechanisms **bolded** are those chosen as most viable for SHARE
SHARE selected mechanisms for revenue collection that are simple, transparent, predictable and viable to implement (cont’d)

<table>
<thead>
<tr>
<th>Constituent Type</th>
<th>Short-Term Mechanisms (&lt;4yrs)</th>
<th>Mid-term / Long-Term Mechanisms (4-8 yrs – onward)</th>
</tr>
</thead>
</table>
| Ancillary Services (Lab/Rad)                  | Not applicable in the early years of operations | • Per-licensed professional fees  
  • Per location per licensed professional for each category of labs  
  • **Per facility fees**  
  • Licensing fees  
  • Volume-based fee |
| Pharmacies                                    | Not applicable in the early years of operations | • Per licensed professional fees  
  • Licensing fees  
  • **Per facility fees**  
  • Licensing fees  
  • Volume-based fee |
| Arkansas Residents, Patients and Caregivers   | Possible mechanisms were considered but found not feasible in today’s environment.  
  These included:  
  • Health care tax  
  • Increase in non-health care tax (income, etc.)  
  • Non-health care related assessment  
  • User fee |                                                                                           |

* Mechanisms **bolded** are those chosen as most viable for SHARE
A sustainable revenue model should be implemented for SHARE based on contributions by all constituent groups

- To meet revenue projections, the following model should be used
  - All per Metric assessments are based on the highest calculated minimum revenue per metric over the near-term planning period (currently three years)
  - A contingency allocation (assumed 25%) should be added during initial years to account for unforeseen expenses, differences between estimations and actual costs, and differences in adoption; this should be removed as funding needs become further understood
  - Model assumes optimal adoption by all constituent groups
  - An example of this is as shown:

<table>
<thead>
<tr>
<th>Group</th>
<th>Allocation Metric</th>
<th>Per Metric Assessment</th>
<th>Total Annual Revenue Generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONC</td>
<td>Grant Contribution</td>
<td>N/A - Expired</td>
<td>$0</td>
</tr>
<tr>
<td>Medicaid</td>
<td>Grant Contribution</td>
<td>26% of SHARE Annual Expected Costs</td>
<td>$1,664,000</td>
</tr>
<tr>
<td>Payers</td>
<td>1.0 M lives covered by private insurance</td>
<td>$3.20 per life covered per year</td>
<td>$3,234,323</td>
</tr>
<tr>
<td>Hospitals</td>
<td>9,345 staffed beds</td>
<td>$172 per staffed bed per year</td>
<td>$1,607,386</td>
</tr>
<tr>
<td>Health care Professionals</td>
<td>7,318 health care professionals</td>
<td>$150 per professional per year</td>
<td>$1,097,700</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$7,603,410</strong></td>
</tr>
</tbody>
</table>
Medicaid - cost & value comparison

**Medicaid**

OHIT has received $130,000 from CMS HITECH planning funds for the EHR Incentive Program.

Medicaid contribution to SHARE should be in proportion to the population served in the State, currently 26% but expected to rise to 35% in 2014.

**Mechanism and Amount / Formula**

OHIT and Medicaid should work together to identify other Federal funding opportunities through the EHR Incentive Program, MMIS changes, and changes to episodic care payments.

**How it Will Work**

The funding would likely be acquired on a Federal draw down schedule, which is approximately quarterly.

**Actions Required**

Confirm current contributions, identify additional opportunities with Medicaid, and pursue approval from CMS.

**Recommendation**

Use Medicaid funding at 26% of the operating budget while continuing discussions with Medicaid for other opportunities to provide services, and other Federal funding opportunities.
**Payers (Carrier/ASO)**

All commercial plans would be expected to contribute

**Mechanism and Amount / Formula**

Payers should contribute approximately 54% of the funding gap* annually. The charge per customer should be based on a consistent and known metric, the most common of which is the number of members. This also appropriately spreads costs across by size of organization.

**How it Will Work**

The allocation should be calculated by a central, reliable source, such as the Department of Insurance, at a consistent point in time, such as Oct 1, and paid on a regular basis, such as quarterly, to ensure predictability and reduce burdensome lump payments.

**Actions Required**

Instituting fees may require additional approval or legislation. OHIT should work with the Department of Insurance, the Governor’s Office and other legislative bodies to make appropriate changes to enable this mechanism.

**Recommendation**

Assess $3.20 per member per year (highest expected minimum assessment over first 3 years + 25% contingency)

Calculated at beginning of Federal Fiscal Year

Paid quarterly or annually

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* The term “funding gap” is used to denote the total cost of SHARE, reduced by the ONC cooperative agreement and CMS funding.
Hospitals - cost & value comparison

Hospitals
All acute care hospitals would be expected to contribute. Hospitals should be defined as those that meet the definition for the EHR Incentive Programs

Mechanism and Amount / Formula
About 27% of the funding gap* should be covered by hospitals. This should be allocated based on a consistent metric, such as the number of staffed beds, or an annual census count, calculated by a central, reliable source, such as the Hospital Association.

How it Will Work
The allocation should be calculated at a consistent point in time, such as Oct 1, and paid on a regular basis, such as quarterly, to ensure predictability and burdensome lump payments.

Actions Required
Instituting fees may require additional approval (i.e., State Legislature)

Recommendation
Assess $172 per bed per year (highest expected minimum assessment over first 3 years + 25% contingency)

Calculated at beginning of Federal Fiscal Year
Paid quarterly or annually

* The term “funding gap” is used to denote the total cost of SHARE, reduced by the ONC cooperative agreement and CMS funding
Professionals - cost & value comparison

Health care Professionals
All physicians and dentists should be expected to contribute.

Mechanism and Amount / Formula
About 19% of the funding gap* should be covered by professionals. This should be allocated per professional.

How it Will Work
The charge should be recovered as part of the professional’s licensing fees, if possible, to avoid additional billing requirements

Actions Required
Mandating additional costs in professional licensing fees will require additional approval

Recommendation
Assess $150 per professional annually (highest expected minimum assessment over first 3 years + 25% contingency)

*The term “funding gap” is used to denote the total cost of SHARE, reduced by the ONC cooperative agreement and CMS funding.
Adoption rates for constituent groups should be calculated so as not to overestimate revenues in the first years of the model.

- A simple model was used to project adoption rates in the first four years for all constituent groups.
- These rates are assumed to be averaged over the year.

<table>
<thead>
<tr>
<th>Year (FFY)</th>
<th>Adoption Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>5%</td>
</tr>
<tr>
<td>2013</td>
<td>25%</td>
</tr>
<tr>
<td>2014</td>
<td>75%</td>
</tr>
<tr>
<td>2015</td>
<td>Optimal</td>
</tr>
</tbody>
</table>
# Pro Forma Financial Projections

<table>
<thead>
<tr>
<th>(FFY; $ millions)</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue Projections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grants / Contributions</strong></td>
<td></td>
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</tr>
<tr>
<td>ONC Coop Agreement</td>
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<td>$2.24</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
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<td>Medicaid (including HITECH planning)</td>
<td>$0.13</td>
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<td>$1.66</td>
<td>$1.66</td>
<td>$1.66</td>
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<td>Non-Federal Coop Agmn't Match - DF&amp;A</td>
<td>$0.46</td>
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<td>$0.00</td>
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<td>Payers</td>
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<td><strong>$6.12</strong></td>
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<td><strong>SHARE Costs</strong></td>
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<td></td>
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<td>One-Time</td>
<td></td>
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<td>Infrastructure / Software Investment</td>
<td>$2.25</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
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<tr>
<td><strong>Ongoing</strong></td>
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<tr>
<td>Infrastructure / Software Licenses and Maintenance</td>
<td>$1.50</td>
<td>$3.00</td>
<td>$4.00</td>
<td>$4.00</td>
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<td>Organization Costs</td>
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<td>$1.40</td>
<td>$1.40</td>
<td>$1.40</td>
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<td><strong>Total Costs</strong></td>
<td><strong>$5.15</strong></td>
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<td><strong>$6.40</strong></td>
<td><strong>$6.40</strong></td>
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<td><strong>Surplus (Deficit)</strong></td>
<td><strong>$0.07</strong></td>
<td><strong>($0.27)</strong></td>
<td><strong>($0.28)</strong></td>
<td><strong>$1.20</strong></td>
<td><strong>$1.20</strong></td>
</tr>
</tbody>
</table>

Pro forma financial statements should be updated as information becomes available to limit surplus and deficit in future years.

This presentation is for the Sole Use of the State of Arkansas.
Overview of the resulting projected funding structure by constituent

Health care Professionals, hospitals and payers

- Providers
- Hospitals
- Payers
- Non-Federal Coop Agmn't Match - DF&A
- Medicaid
- ONC Coop Agreement

Federal funding from ONC Coop Agreement

2012: $4.33
2013: $2.24
2014: $1.66
2015: $1.66
2016: $1.66
An immediate funding strategy must be established to start a cash flow in FFY 2012

Issue

• It is critical that non-Federal funds are identified and secured in 2012 and 2013 to use for matching funds so that ONC Cooperative Agreement funds are not lost
• The specific actions, approvals, and time necessary to secure HIE funds from remaining sources means that some mechanisms may not be available to secure funds for use in 2012

Funding

• OHIT should seek other short-term funding sources for sustainability until a steady-state funding model can be achieved

Key Recommendations

• As a result, SHARE needs options for securing immediate funding required to meet the HIE plans and such potential options are noted below for discussion:
  • Work with ‘Blue & You Foundation For a Healthier Arkansas’ (BCBS Arkansas) or other independent or philanthropic groups for grants
  • Establish a Memo of Understanding (MOU) with payers and hospitals to secure funds in 2011/12, possibly in exchange for future benefits (lower rates, direct governance/advisory input for SHARE, etc.)
  • Negotiate with vendors regarding payment schedules
Additional steps should be taken to complete this model

- OHIT should talk with council members and representatives from constituent groups one-on-one or small group discussions for feedback and necessary adjustments.
- OHIT should reach out to broader stakeholder groups such as the Hospital Association, Medical Society, etc. for additional feedback, and to help to market SHARE’s services to larger populations of potential users.
- Any feedback should be shared with the HIE Council for inclusion in the Model.
- Adopt and implement the Model for SHARE.
This Model should be updated regularly, especially in the initial years of SHARE

- This model should be revised as additional information is received or agreed upon. These updates should include at a minimum:
  - Further definition of solution costs after negotiation with vendors
  - Medicaid support agreed upon and approved by CMS

- OHIT should create and routinely update a tracking tool that measures and documents the value, costs and revenue of SHARE to assist in informing future plans
  - This information should be reviewed for accuracy and progress reporting quarterly or semi-annually

- The funding model should be adjusted given updated cost and value information on an approximately annually basis for the first years of SHARE, and regularly once SHARE is well established

- Medicaid enrollment is planned to increase in 2014 by approximately 250,000. The sustainability funding model should be updated with this additional population with appropriate time before this change will take place
Appendix
CITL’s Healthcare Information Exchange and Interoperability (HIEI) Taxonomy

- HIEI is a conceptual framework describing how healthcare entities share information. CITL (Center for Information Technology Leadership) created a functional taxonomy (with four levels) based on three factors in data exchange:
  - The amount of human involvement,
  - the sophistication of IT, and
  - the adoption of standards.

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Non-electronic data</td>
<td>Mail, phone</td>
</tr>
<tr>
<td>2</td>
<td>Machine-transportable data</td>
<td>PC-based and Manual Fax/Email of pictures, Portable Document Format (PDF)</td>
</tr>
<tr>
<td>3</td>
<td>Machine-organizable data</td>
<td>Secured e-mail or free text or incompatible/proprietary file formats</td>
</tr>
<tr>
<td>4</td>
<td>Machine-interpretable data</td>
<td>Structured messages standardized content/data such as automated entry of LOINC results from an external lab into a primary care provider’s electronic health record (EHR)</td>
</tr>
</tbody>
</table>

SHARE will provide value in multiple ways –
Indirect / Qualitative Examples

**Improved Quality and Consistency of Care**

- Provide complete, accurate information securely to all appropriate health professionals at the right time
- Ensure all information is passed immediately with the patient at every transition of care
- Achieve effective coordination across all care providers
- Increase provider and patient confidence that all information transferred is accurate and complete
- Strengthen current and future Arkansas health care initiatives to improve clinical outcomes and patient safety
- Improve access to quality health care services for under-served populations by strengthening the provision of health care through SHARE

**Enhanced Resident/Patient Care Delivery Experience**

- Enhance residents and patient’s active participation in their health care
- Reduced time away from work or home to receive additional unnecessary tests or images
- Reduced Waiting time between appointments while medical information is transmitted between providers
- Reduced time waiting if information is lost, or incomplete information is retrieved
- Reduction of preventable readmissions to hospitals due to ineffective transitions of care
- Reduction in time spent on the above for caretakers of patients
SHARE will provide value in multiple ways –
Indirect / Qualitative Examples, (cont’d)

Supporting Infrastructure for - Public Health Reporting

- Reporting to public health registries, or registries of any sort, are highly beneficial to populations in identifying state-wide trends, anomalies and “hot spots”, such as the information gathered in the landmark article “Hot Spotters” by Atul Gawande

- Reporting of data has been identified as a key part of Meaningful Use of EHRs; the following are objectives from the Menu Set of Meaningful Use Stage 1, and are expected to be in the Core Set for Stage 2:
  - Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice [at least one test]
  - Hospitals Only: Capability to submit electronic data on reportable (as required by state or local law) lab results to public health agencies and actual submission in accordance with applicable law and practice [at least one test]
  - Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice [at least one test]
SHARE will provide value in multiple ways – Benefits from Value-Added Services

**SHARE’s Additional Capabilities**

- Facilitate HIE Meaningful use requirements for Arkansas providers through –
  - Secure messaging and process protocols to meet HIE stage 1 MU
  - Master provider index / database and Master patient index
  - Web Portal for those providers without EHR/EMR systems capable of facilitating secure messaging
- Facilitate e-prescribing and secure messaging, which will be utilized in the exchange of clinical summaries and structure lab results
- Provide options for single sign-on strategies for statewide services Arkansas based services to include but not limited to HIE, MMIS, Health Benefits Exchange and Eligibility

**Supporting Infrastructure for Other Innovations (e.g., Integration with the All-Payer Claims Database (APCD))**

- Nationally, all-payer claims databases are emerging to address the need for comprehensive information about health and to support health care health care transparency and reform initiatives in states
- Health information technology and health information exchanges (HIEs) have the potential to enhance existing databases with clinical information for quality and outcomes reporting
- Although there is a significant correlation between the goals of APCDs and HIEs, there is not much evidence of integration between the two in the US other than conceptual coordination. This is likely due to:
  - The lack of need of an HIE to collect information due to existing EDI
  - The siloed funding that likely created the APCDs
  - The late arrival of HIEs compared to APCDs in existing states
Benefits were assigned to constituent groups using insurance coverage

<table>
<thead>
<tr>
<th>Value that is Financial and Measurable</th>
<th>Value</th>
<th>Payers/Plans*</th>
<th>Providers</th>
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<tbody>
<tr>
<td></td>
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<td>Private</td>
<td>Medicaid</td>
</tr>
<tr>
<td>Prevent Unnecessary 30-day Readmissions</td>
<td>$11,059,707</td>
<td>35%</td>
<td>26%</td>
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<tr>
<td>Reduce avoidable Adverse Drug Events (ADEs) - Inpatient</td>
<td>$2,935,910</td>
<td>35%</td>
<td>26%</td>
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<tr>
<td>Reduce avoidable Adverse Drug Events (ADEs) - Ambulatory</td>
<td>$49,857</td>
<td>35%</td>
<td>26%</td>
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<tr>
<td>Avoid Duplicative Testing and Imaging</td>
<td>$19,286,400</td>
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<tr>
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<td>$1,655,571</td>
<td>35%</td>
<td>26%</td>
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<tr>
<td>Reduce Length and Complexity of Stays</td>
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<td>Reduced administration burden for professionals</td>
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<td>Reduced administration burden for hospitals</td>
<td>$6,728,594</td>
<td>35%</td>
<td>26%</td>
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...and used to determine overall direct value

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<th>Providers</th>
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<td>Medicaid</td>
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<tr>
<td>Prevent Unnecessary 30-day Readmissions</td>
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<td>$3.9</td>
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<td>Reduce avoidable Adverse Drug Events (ADEs) - Inpatient</td>
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<td>$1.0</td>
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<td>$0.0</td>
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<tr>
<td>Avoid Duplicative Testing and Imaging</td>
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<tr>
<td>Avoid Duplicative Consults</td>
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<td>$0.6</td>
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<td>Reduce Length and Complexity of Stays</td>
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<td>Reduced administration burden for professionals</td>
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<td>$6.7</td>
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<table>
<thead>
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<th>Direct</th>
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<td>$13.5</td>
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<td></td>
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<td>27%</td>
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</table>
Benefits will grow over time as value is realized by a growing user base

<table>
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<th>Value that is Financial and Quantifiable</th>
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<th>2012</th>
<th>2013</th>
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<td>30%</td>
<td>50%</td>
<td>70%</td>
<td>90%</td>
<td>100%</td>
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<tr>
<td>Reduce Length and Complexity of Stays</td>
<td>$3.5</td>
<td>20%</td>
<td>40%</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>Reduced administration burden for professionals</td>
<td>$4.4</td>
<td>5%</td>
<td>10%</td>
<td>30%</td>
<td>60%</td>
<td>75%</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>Reduced administration burden for hospitals</td>
<td>$6.7</td>
<td>5%</td>
<td>10%</td>
<td>30%</td>
<td>60%</td>
<td>75%</td>
<td>90%</td>
<td>100%</td>
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Guiding Assumptions:
• Value realization was generally aligned with the expected release of supporting HIE services
• Benefits that require significant clinician workflow changes were slower to achieve realization
• Benefits that require patient/resident adoption were slower to achieve realization
• Larger organizations were able to realize benefits before smaller organizations
## Contacts

<table>
<thead>
<tr>
<th>Gartner Contact</th>
<th>Gartner Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frank Petrus</td>
<td>Erika Chahil</td>
</tr>
<tr>
<td>Senior Managing Partner</td>
<td>Senior Director</td>
</tr>
<tr>
<td>Public Sector Health and</td>
<td>Gartner Consulting</td>
</tr>
<tr>
<td>Human Services Practice</td>
<td>Telephone: + 1 703-201 6974</td>
</tr>
<tr>
<td>Lead</td>
<td><a href="mailto:erika.chahil@gartner.com">erika.chahil@gartner.com</a></td>
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<td>Gartner Consulting</td>
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<td><a href="mailto:frank.petrus@gartner.com">frank.petrus@gartner.com</a></td>
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