State of Connecticut

Statewide Health Information Exchange (HIE) Financial Sustainability Study

Executive Summary: Recommended Funding Methods and Formulas for HIE Financial Sustainability

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Prepared for DPH Keeping Connecticut Healthy

Engagement: 223894910

Gartner

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The funding strategy used in defining the funding model should adhere to a few fundamental principles

1. The funding model should be simple, transparent and predictable
2. 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
3. In the long-term, funding responsibilities of the HIE should be in approximate proportion to the value that constituents receive
   - Funding should not be sought disproportionately from any one stakeholder or group of stakeholders
4. The funding model should not dis-incent those needed for critical mass, especially in the near-term
5. The funding model should be reviewed regularly to ensure that all principles are adhered to
6. The funding model should be reviewed and revised appropriately to take into consideration potential changes in the health care landscape in the coming years

There is a significant amount of value that will be created by accessing and utilizing the HIE

	Value
Benefit Tier 1 - Quantifiable and Currently Measurable	
Prevent Unnecessary 30-day Readmissions	$11,753,333
Benefit Tier 2 - Quantifiable and Possibly Measurable	
Reduce avoidable Adverse Drug Events (ADEs) - Inpatient	$4,457,200
Reduce avoidable Adverse Drug Events (ADEs) - GP	$58,144
Avoid Duplicative Testing and Imaging	$22,167,000
Reduced Administration Burden (providers)	$4,405,760
Reduced Administration Burden (hospitals)	$7,075,296
Total	**$49,916,732**

Benefit Tier 3 - Value that has Multiple Dependencies or is Difficult to Measure	
Avoid Duplicative Consults	$1,332,000
Reduce Length and Complexity of Stays	$5,267,600
Increase Provider Availability	$5,025,320
Reduce Inpatient Costs by Allowing Stays in Less Expensive Settings	$4,200,000
Increase in Patient Empowerment (inPx)	$2,440,722
Increase in Patient Empowerment (ER)	$1,290,750
Total	**$19,556,392**

- Tier 3 Benefits are expected to be realized along with Tier 1 and Tier 2, however they will be difficult to measure and so will be excluded from further calculations
- Detailed Descriptions of the Value Calculations are available in Appendix A
- Administrative and medical savings were not distinguished or weighted differently in this analysis

The benefits will accrue to a number of constituent groups

The value for each benefit type was calculated and then estimated for the constituent groups below. As a result, the Tier-1 and Tier-2 benefits are expected to accrue across the constituents groups as identified below. The detailed calculations can be seen in Appendix A.

Roughly half of the Medicaid value (savings) will go to the State given the State is responsible for roughly half of the Medicaid payments.

		Tier 1+2 Benefits
Payers	Carrier / ASO	$23.2M
	Medicaid	$4.0M
	Medicare / Other Public	$7.3M
Providers	Hospitals	$7.3M
	Physicians	$4.2M
Others	Uninsured	$4.0M
Total		**$49.9M**

See Appendix A for details on value calculation and constituent group accruals

Values above may not sum to total due to rounding effects

Moving from a value per constituent group to "per metric" values (steady state calculations)

Using value by constituent group and currently available metric data (i.e., such as the number of covered lives, the number of staffed hospitals beds and the number of licensed physicians), we calculated the projected *annual* value that the HIE will bring to each constituent group on a "per unit" as shown below. These calculations are based on achieving a steady state HIE operation with critical mass capability and participation.

Constituent Group	Group Value Allocation	Calculation Metric	Per Metric Value Calculation	Per Metric Value (Tier 1+2)
Payers (Carrier / ASO)	$23.2M	64% of 3.4M residents, or 2.2M residents	$23.2M / 2.2M	$10.47 per resident covered per year*
Federal and State Medicaid Savings	$4.0M	11% of 3.4M residents, or 369,200 residents	$4.2M / 369,200	$10.81 per resident covered per year*
Hospitals	$7.3M	6,935 staffed beds	$7.3M / 6,935	$1052 per staffed bed per year
Physicians	$4.2M	16,568 licensed physicians	$4.2M / 16,568	$253 per licensed physician per year

See Appendix D for sources

*Medicaid value varies from other payers due to rounding effects

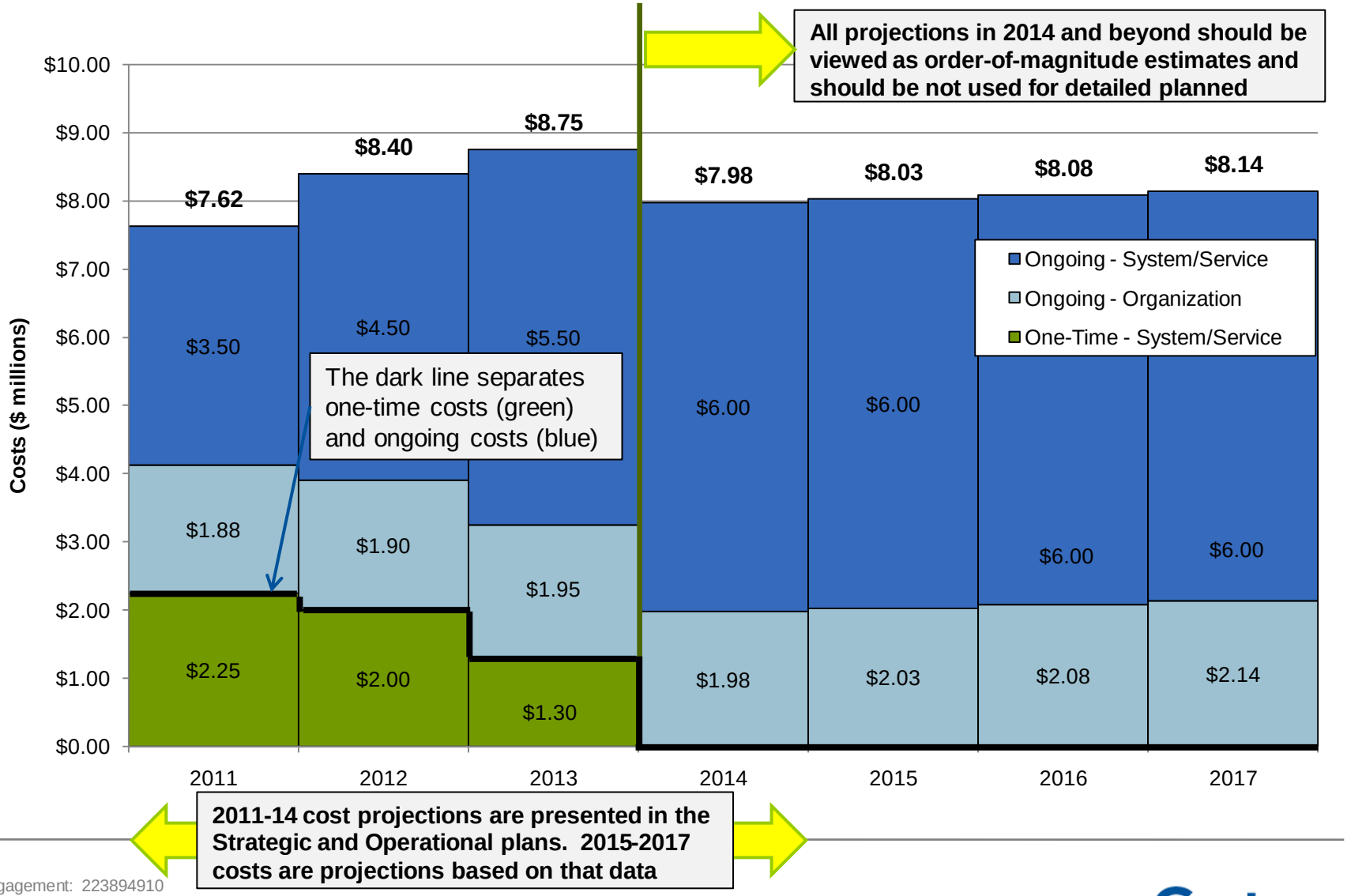
Cost estimates from HITE-CT Operational Plan

HITE-CT Four-Year Cost Estimates	2011	2012	2013	2014	TOTAL
HITE-CT Organziation					
Direct Costs					
Staff Salaries- 10 FTE positions	$1,200,000	$1,236,000	$1,273,080	$1,311,272	**$5,020,352**
Benefits (35% of Salaries)	$420,000	$432,600	$445,578	$458,945	**$1,757,123**
Indirect Costs					
Rent and Utilities	$75,000	$75,000	$75,000	$75,000	**$300,000**
Office Equipment	$15,000	$15,000	$15,000	$15,000	**$60,000**
Outreach and Communications	$50,000	$50,000	$50,000	$50,000	**$200,000**
Travel	$20,000	$20,000	$20,000	$20,000	**$80,000**
Legal	$75,000	$50,000	$50,000	$25,000	**$200,000**
Supplies and Miscellaneous	$20,000	$20,000	$20,000	$20,000	**$80,000**
Sub-Total HITE-CT Organization	$1,875,000	$1,898,600	$1,948,658	$1,975,218	**$7,697,476**
HITE-CT HIE Software as a Service (SaaS) Solution					
One-Time Costs					
Implementation	$1,000,000	$1,000,000	$500,000	$0	**$2,500,000**
Interfaces	$750,000	$500,000	$500,000	$0	**$1,750,000**
Oversight	$500,000	$500,000	$300,000		**$1,300,000**
Ongoing Costs					
Hosted Solution	$2,000,000	$3,000,000	$4,000,000	$4,000,000	**$13,000,000**
Technical Operations	$1,000,000	$1,000,000	$1,000,000	$1,000,000	**$4,000,000**
User Support	$500,000	$500,000	$500,000	$500,000	**$2,000,000**
Enhancements	$0	$0	$0	$500,000	**$500,000**
Sub-Total HITE-CT HIE SaaS Solution	$5,750,000	$6,500,000	$6,800,000	$6,000,000	**$25,050,000**
Total	**$7,625,000**	**$8,398,600**	**$8,748,658**	**$7,975,218**	**$32,747,476**

Notes

- The four year cost estimates are based on the assumption that the State would follow a Software-as-a-Service (SaaS) model , which is a common licensing approach in the HIE marketplace.
- This SaaS licensing strategy tends to spread the costs more evenly over time, versus having higher up-front costs of a license, implement, and support approach.
- The cost estimates were derived using Gartner's observations from the HIE marketplace, along with input from multiple HIE vendors.
- The vendors were aware of key requirements from the HIE S&OP and key demographic information, but they were not made aware the cost information was specifically for Connecticut.

Seven year expected one-time and ongoing HIE cost model by type



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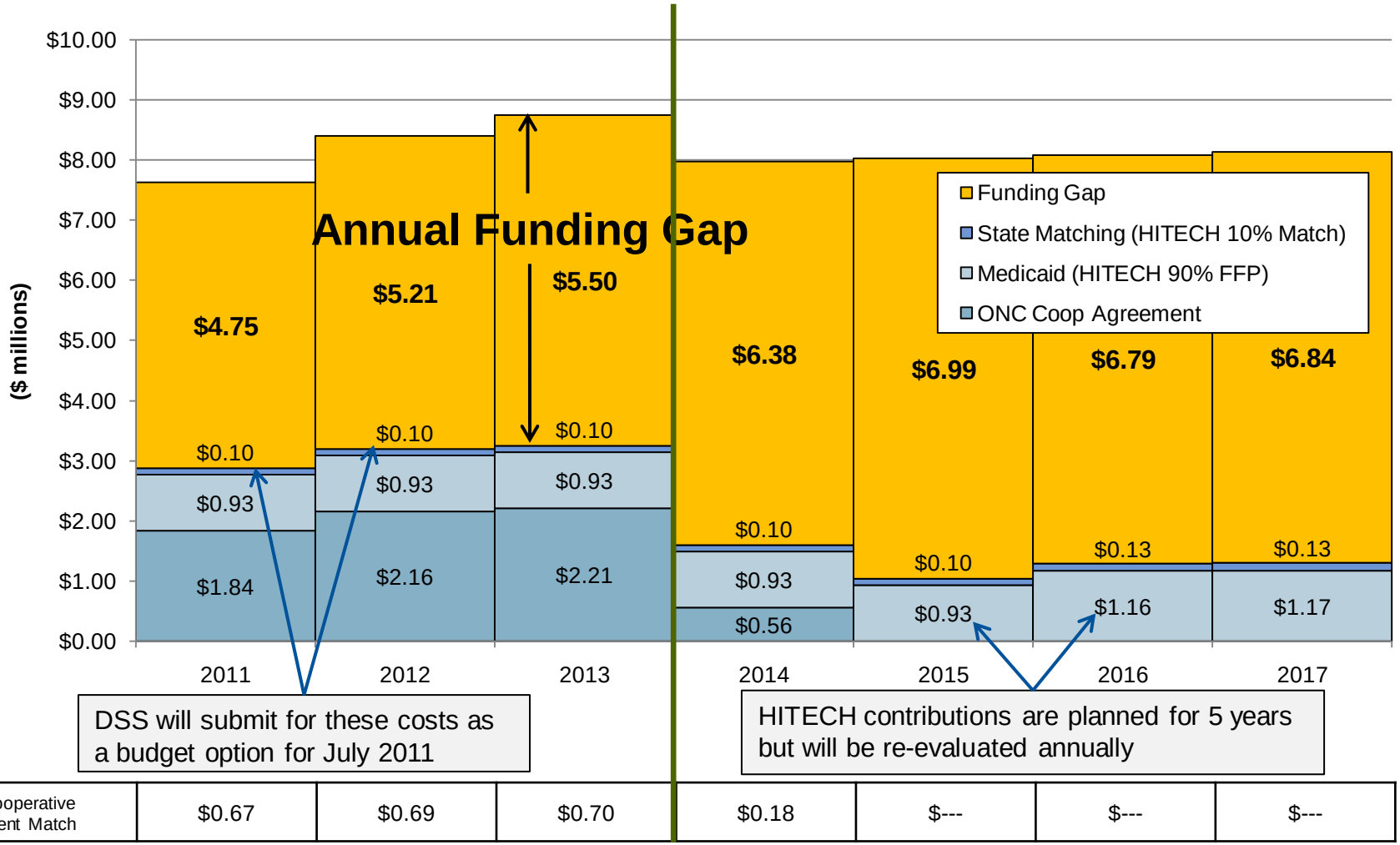
Secured & Tentative Funding and Annual Funding Gap
(With Federal 90/10 HITECH Contributions – Pending CMS approval)



ONC Cooperative Agreement Match	$0.67	$0.69	$0.70	$0.18	$---	$---	$---

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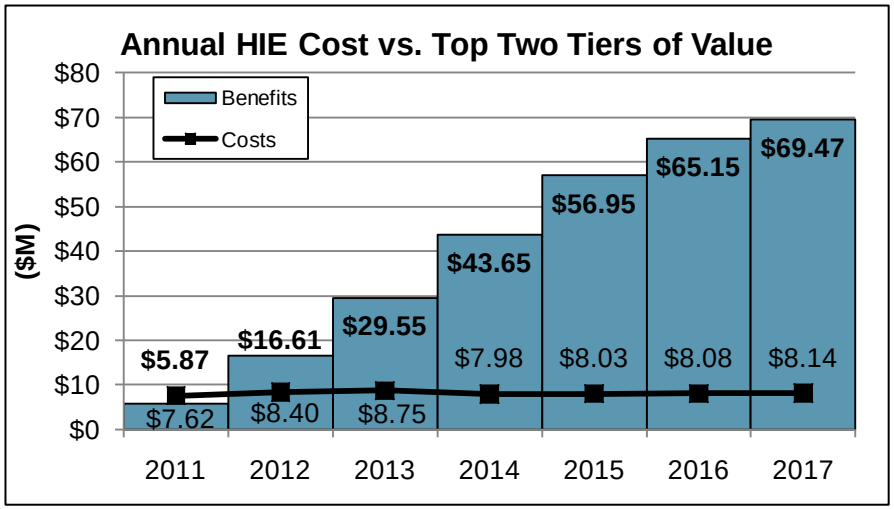
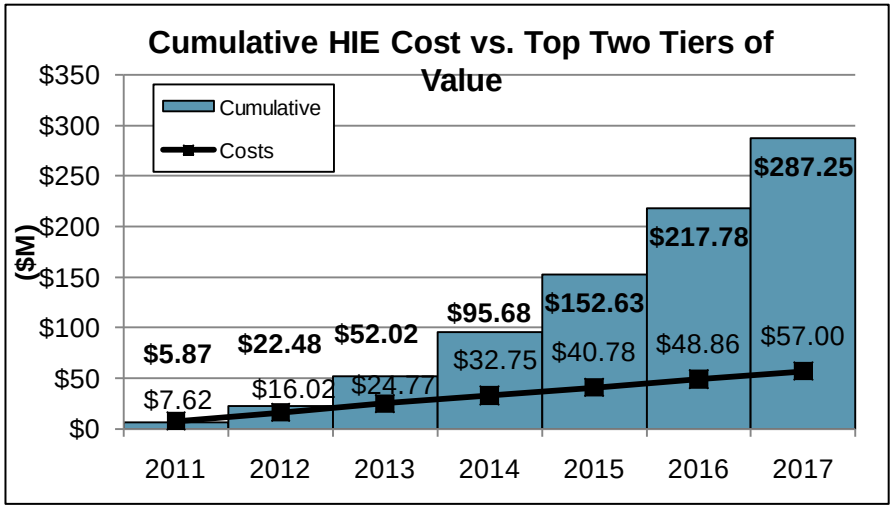
The HIE is expected to provide significant value relative to the HIE costs

Top two value tiers





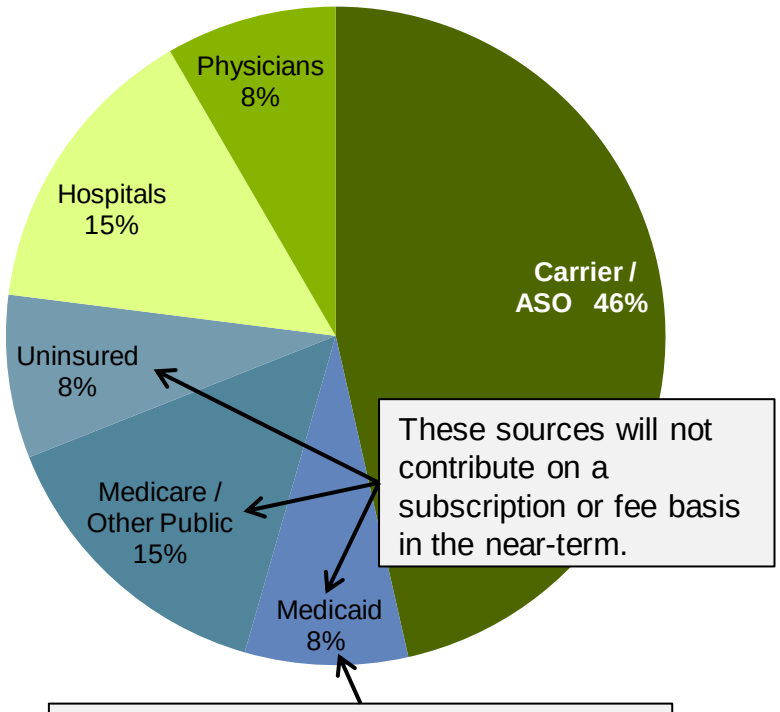
- The value the HIE will grow rapidly over the first years of operation
- Value realization curve (i.e., how quickly value is realized) was estimated for each benefit type
  - See Appendix B for individual realization curves and details on assumptions
- Based on the value realization assumptions, the annual and cumulative value will exceed the respective costs within two years of the start of the HIE

Key assumptions for the HIE 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 the HIE and who should share the costs of the HIE should be re-evaluated over time
- Changes in the projected costs of the HIE should be taken into account as soon as the Authority can provide revised cost estimates based on vendor input (i.e., RFI, RFP)
- 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
- Most, if not all, of the funding streams will require approval by legislative or other bodies; this model assumes that these approvals are granted expediently
- Three years of projections are presented for near-term planning; projections past three years should be viewed as order-of-magnitude forward-looking projections and should not be used for detailed planning

The value allocation is translated to the HIE funding model based on an equitable sharing of costs (using top two tiers of value benefits at steady state)

All Constituents Accruing Value

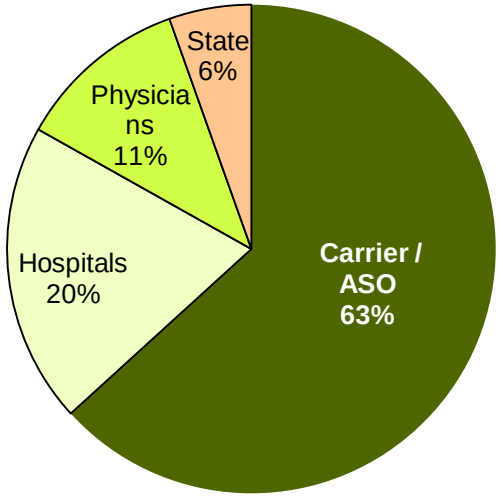


- State DSS proposes to contribute CMS SMHP Incentive funding on a set annual basis (at 90% Federal participation)
- The State could contribute either directly or indirectly in an amount at least equal to the value it receives through reductions in the State's share of Medicaid claim payments
- The three constituent groups that will share the funding gap (those costs not covered by Federal or State funds) will be:
  - Payers (Carrier and ASO), Physicians, and Hospitals
- The funding gap should be closed by these three groups at ratios approximately consistent with the value they receive
- The following groups are not expected to contribute in the near-term:
  - Uninsured: Would likely cause an undue burden and would be difficult to asses
  - Medicare: Will indirectly contribute via other Federal funds such as the ONC Cooperative Agreement

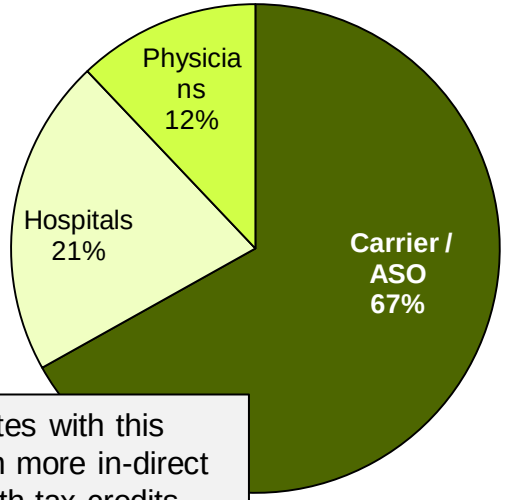
The charts below indicate the portions of the funding gap to be covered by the corresponding constituent groups

- If the State contributes directly to the HITE-CT through General Fund contributions or similar, the contributions should be split according to the top chart
  - Carrier / ASO : Hospitals : Physicians : State
  - 46 : 15 : 8 : 8 x ½
- If the State contributes to the HIE through other mechanisms (e.g. tax credits), the bottom chart should be used for revenue calculations
  - Carrier / ASO : Hospitals: Physicians
  - 46 : 15 : 8
- The funding gap (the budget less ONC funding, CMS funding through DSS SMHP Incentive Program and appropriate matches) should be divided between these groups roughly at these percentages

With State direct cash contributions



With State contributions through other mechanisms



State still contributes with this model, although in more in-direct means such as with tax credits.

Annual minimum assessment projections by constituent group and by individual metric have been projected for future years

Constituent Group	2011	2012	2013	2014	2015	2016	2017
				Calculations in 2014 and after should be viewed as order-of-magnitude projections			
Payers – 2.2M covered lives	$3.18M	$3.48M	$3.68M	$4.27M	$4.68M	$4.54M	$4.57M
(per member / covered life)	*$1.44*	*$1.57*	*$1.66*	*$1.93*	*$2.11*	*$2.05*	*$2.07*
Hospitals – 6,935 staffed beds	$1.00M	$1.10M	$1.16M	$1.34M	$1.47M	$1.43M	$1.44M
(per staffed bed)	*$144.24*	*$158.08*	*$166.94*	*$193.72*	*$212.24*	*$206.02*	*$207.46*
Providers – 16,568 licensed physicians	$573,865	$628,940	$664,173	$770,747	$844,438	$819,691	$825,404
(per licensed physician per year)	*$34.64*	*$37.96*	*$40.09*	*$46.52*	*$50.97*	*$49.47*	*$49.82*

Funding Model Recommendation Summary for 2011

- To meet revenue projections, we recommend the following approach and funding model
  - All per Metric assessments are based on the highest calculated minimum revenue per metric over the near-term planning period (currently three years)
  - Plus a contingency allocation (25%) to account for unforeseen expenses and differences between estimations and actual costs; this should be lessened or eliminated as funding needs become further understood

Group	Allocation Metric	2011 Per Metric Assessment	Total Annual Revenue Generated
ONC	Grant Contribution*	N/A	$1,837,906
Medicaid through SMHP HITECH 90/10	HITECH 90/10 Contribution*	N/A	$ 930,240
Dept of Social Services	DSS Budget Option	N/A	
Payers	2,214,300 covered lives	$2.10 per member / covered life	$4,650,030
Hospitals	6,935 staffed beds	$210 per staffed bed	$1,456,350
Providers	16,568 licensed physicians	$55 per licensed physician (collected as $110 every two years)	$911,240
Total			**$9,889,126 ** **

* State matches are not included in this calculation

** Calculations assume acceptance of required gubernatorial and legislative approvals

Pro Forma Financial Projections

($ millions)	2011*	2012	2013
Revenue Projections			
Grants			
ONC Cooperative Agreement	$1.84	$2.16	$2.21
Medicaid Funds through SMHP HITECH funding	$0.93	$0.93	$0.93
Dept of Social Services 10% matching for HITECH funding	$0.10	$0.10	$0.10
Assessments / Subscriptions			
Payers *($2.10 per life covered)*	$4.65	$4.65	$4.65
Hospitals *($210 per staffed bed)*	$1.46	$1.46	$1.46
Providers *($110 at license renewal)*	$0.91	$0.91	$0.91
Total Revenues	**$9.89**	**$10.21**	**$10.26**
HITE-CT Cost Projections			
One-Time			
Infrastructure / Software Investment	$2.25	$2.00	$1.30
Ongoing			
Infrastructure / Software Licenses and Maintenance	$3.50	$4.50	$5.50
Organization Costs	$1.88	$1.90	$1.95
Total Costs	**$7.63**	**$8.40**	**$8.75**
Contingency **	**$2.26**	**$1.81**	**$1.52**

* 2011 data assumes one full year of funding, which will be affected by the date at which some funding methods are approved by the State legislature and other required entities

** Contingency is consistent with best practices for technology- enabled initiatives such as the HIE and is included to allow for unknown factors in the implementation of the Authority; can be adjusted or eliminated to meet the Authority overall requirements for contingency funding

An immediate funding strategy must be established to start a cash flow in 2011

- The projected revenues will not be immediately available as legislative approval will be required to institute assessments – To mitigate this risk:

  – A portion of the HIE Cooperative Agreement funds from ONC should be available for use in 2011 upon approval of the HIE Strategic and Operational Plans
    - Current plan with ONC is that funds will be drawn down over a period of four years

  – CMS SMHP HITECH 90/10 Incentive Program funds through Connecticut DSS are being requested to support Medicaid's portion of the HIE and, if approved, this funding stream should start in 2011
    - Approval from CMS has not yet been granted
    - Source of 10% Match has not been finalized

  – 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 2011

An immediate funding strategy must be established to start a cash flow (Con't)

- The Authority needs options for securing immediate funding required to meet the HIE plans and such potential options are noted below for discussion:
  - Work with ONC to direct more ONC funds for use in 2011 versus use in subsequent years
  - Work with the Governor's Office and the current and incoming legislature to secure more State funds for use in 2011 and 2012
    - The Authority should immediately work with the Governor-elect in order to help inform the Governor's budget document and to determine the most appropriate State funding strategies
  - Work with payers and hospitals to secure funds in 2011
  - Seek funding from philanthropic foundations
  - Negotiate with vendors regarding payment schedules
- Tax credits could also be used as an added benefit for stakeholders funding for the HIE
  - Direct tax credits or incentives could be given to early contributors of the Authority
    - Near-term credits may encourage stakeholders to provide funds immediately, until more permanent funding mechanisms can be put in place
    - Greater incentives could be given for early payment for multiple years to help subsidize one-time setup costs for the HIE
  - Could be used in lieu of direct State cash contributions
  - Not-For-Profit entities could also be included in the tax incentives by allowing these entities to sell credits to other entities in the State

Additional Information

- Additional information and the full report can be found on the Health Information Technology and Exchange webpage at the Connecticut Department of Public Health website at:

  http://www.ct.gov/dph/cwp/view.asp?a=3936&q=462912&dphNav_GID=1993

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