COMMMUNITY eHEALTH PLAN – NEEDS ASSESSMENT

REGION: ***Southeast***

COMMUNITY: ***South Shore***

PARTICIPATING ORGANIZATIONS: *Beth Israel Deaconess Hospital Plymouth, South Shore Hospital, South Shore Medical Center, New England Quality Care Alliance, Bayada Home Health Care, PMG Physician Associates, Granite Medical Group, Harbor Medical Associates, Digestive Disease Associates, Pinnacle Health Management, Health Imperatives, Family Continuity*

DATE REVIEWED / UPDATED: 4/30/15

EXECUTIVE SUMMARY

Methodology

In order to better understand the health information technology and health information exchange ecosystem at the state and local level – so as to inform Community and Statewide eHealth Plans, MeHI conducted a needs assessment of healthcare stakeholders throughout fifteen communities in Massachusetts. The assessment utilized the semi-structured interview methodology and data collection process to gather information from participants. In addition to organizational and HIT environment information, the interview centered on four domains to better understand the clinical/business needs, internal challenges, external barriers and ideas for improvement. Responses were collected, codified into categories, and then ranked by frequency of reporting.

MeHI held roundtable meetings in each of the communities to present and discuss the interview findings. Through group discourse, categories and themes evolved. Based on feedback and comments from the roundtables, MeHI synthesized the findings to develop focus areas for the Community eHealth Plans.

In addition to shaping the focus areas, the goal of the assessment and group meetings was to identify eHealth priorities and develop actionable plans – at the Community level - that demonstrate value for each community. The assessment findings, interview and meeting feedback, and Community eHealth Plans will inform and be integrated into the Statewide eHealth Plan. Additionally, a subset of the identified themes will be incorporated into a community incentive/grant program to ensure alignment between plans and grants.

Findings

The overall findings for the community are found further down in this document in the ***Report of Community Needs*** section. Below, are the primary findings for the South Shore Community.

Identification of Needs: The primary HIT needs identified by stakeholders in the South Shore region are Hospital Discharges, Closed Loop Referral Patterns, and a List of Organizations and HIE Connection Capabilities.

Specifically, the stakeholders would like the following:

1. Send/Receive clinical information from hospitals to primary care providers upon discharge
2. Implement closed loop referrals between primary care providers, specialists and other care settings
3. Identify HIE options and associated trading partners for exchanging clinical information
4. A “complete” patient record achieved by receiving accurate and consistent information in a timely

manner from all settings of care a patient visits
5. Master Patient Index (MPI) for identifying patients accurately across the broad spectrum of healthcare
6. Manage healthcare for patients for which the organization is accountable and at financial risk

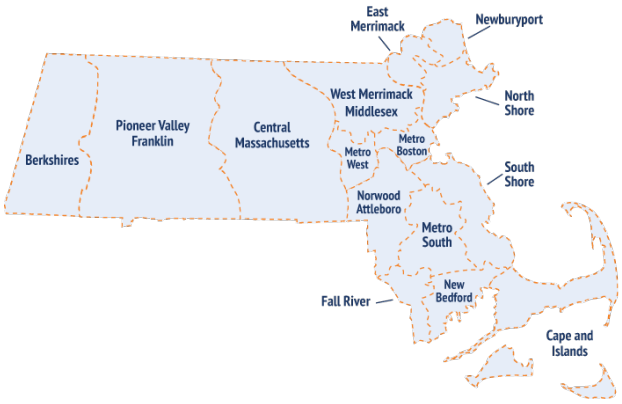
Identification of Internal Challenges and External Barriers: The primary barriers identified by stakeholders to addressing these needs are as follows:

1. Patient matching – Providers are challenged to positively match records of patients from one organization to another without an MPI available.
2. Vendor alignment has been a barrier in coordinating exchange with other organizations/vendors due to varying interpretation of health information exchange standards.
3. Lack of universal standards for sending organizations creates inconsistency in data content being received. Each organization appears to have developed their own "standard" in defining the information to be shared for patients, which is not necessarily the data the receiving organization desires.
4. Market confusion around HIE options and associated trust bundles. Lack of a public master list to identify organizations and provider available on HIE networks, and content that each can share.
5. High costs of HIT related items such as interfaces – many practices cannot afford to develop what is needed to effectively share patient information electronically
6. Workflows are not in place for Direct messaging. Some HISPs are requiring individual Direct addresses which is forcing changes in messaging workflow from front desk or medical records message triage to providers handling their own inboxes (and only for a small percentage of their patients).
7. Mass HIway reliability concerns – without alerts from the HIway to identify if transactions are successful
8. Lack of provider buy-in when providers do not see benefits in adopting or using HIT. An organization needs a provider champion who understands the value of HIT and can promote internally.
9. Various leaders within the same healthcare organization have different priority focus areas – clinical want coordinated patient care, finance wants to control costs, quality department wants better outcomes and customer satisfaction ratings. Aligning all priorities simultaneously proves to be difficult.

Identification of Path Forward: Stakeholders identified the following initiatives to address needs and barriers:

1. Focus narrowly on implementing one clinical use case such as Discharge Notifications from the community hospitals to the organizations in other care settings. This use case is of high value and relatively lower simplicity on the technical and interoperability side.
2. Collaborate to positively identify patients among healthcare organizations
3. Map the community's trading partners, the EHR systems they use, their Direct addresses, and their current capabilities to send and receive clinical information electronically.
4. A regional workgroup that convenes to help organizations establish HIE trading relationships
5. Have larger organizations in the community offer HIway connection capabilities for other smaller community organizations. Resources are concentrated within the larger organizations and could offer a value by brokering the HIway connections.
6. Implement MA state HIE standards requirement for vendors to operate in Massachusetts

Table 1: The fifteen communities comprise the foundational framework for the Connected Communities Program. These are aligned with the Health Policy Commission's Secondary Service Markets.



COMMUNITY DEMOGRAPHIC

Population - Total population of the South Shore region is approximately 405,513 living in the 330.65 square mile area. The population density is estimated at 1226.42 persons per square mile which is greater than the national average population density of 87.55 persons per square mile. According to the U.S. Census Bureau Decennial Census, between 2000 and 2010 the population in the South Shore region grew by 16,870 persons, a change of 4.34%.

Income Per Capita - For the South Shore region, the income per capita is $39,058. Massachusetts statewide income per capita at $35,484.

Poverty - In the South Shore region, 16.37% or 65,503 individuals are living in households with income below 200% of FPL and 5.92% or 23,701 individuals are living in households with income below 100% FPL. The percent population under age 18 in poverty is 6.2% or 5,558 individuals. These three percentage rates are lower than the Massachusetts state rates in the same categories.

Linguistically Isolated Populations – The South Shore region has a low percent of linguistically isolated populations at 2.88%. This indicator reports the percentage of the population aged five and older who live in a home in which no person 14 years old and over speaks only English, or in which no person 14 years and over speaks a non-English language and speak English "very well." The Massachusetts state percentage is 5.19%.

Population with Limited English Proficiency – This indicator reports the percentage of population aged five and older who speak a language other than English at home and speak English less than "very well." In the South Shore region, this indicator is 4.84% compared to the Massachusetts state indicator of 8.87%.

Population by Race Alone - The racial make-up of the South Shore region is 89.16% White, 2.55% Black, 5.95% Asian, 0.13% Native American, 0.01% Native Hawaiian, 0.8% Some Other Race and 1.41% Multiple Races

Information acquired from Community Commons http://www.communitycommons.org/

See **Attachment-1** for information on Community Commons, reporting methodology and data sources.

HEALTHCARE LANDSCAPE

Population Receiving Medicaid - In the South Shore region, the percent of insured population receiving Medicaid is 14.62%, or 56,892, of the total population for whom insurance status is determined. This indicator reports the percentage of the population with insurance enrolled in Medicaid (or other means-tested public health insurance). This indicator is lower than the Massachusetts state indicator of 20.53%.

Access to Primary Care – The South Shore region has 94.49 primary care physicians per 100,000 population. The Massachusetts state rate is 102.65 per 100,000 population. Doctors classified as "primary care physicians" by AMA include: General Family Medicine MDs and DOs, General Practice MDs and DOs, General Internal Medicine MDs and General Pediatrics MDs. Physicians age 75 and over and physicians practicing sub-specialties within listed specialties are excluded.

Facilities Designated as Health Professional Shortage Areas (HPSA) – Plymouth County has a total of 8 HPSA facility designations and Norfolk County has a total of 10 HPSA facility designations. However, the South Shore region does not have any HPSA facility designations. The state of Massachusetts has a total of 158 HPSA facility designations; 56 in primary care facilities, 51 in mental health care facilities and 51 in dental health care facilities.

Federally Qualified Health Centers (FQHCs) – The South Shore region has a rate of 1.73 FQHCs per 100,000 population with a total of 7 FQHC facilities in the South Shore region. The state of Massachusetts has a total of 108 FQHCs with a rate of 1.65 per 100,000 population.

Information acquired courtesy of Community Commons http://www.communitycommons.org/

See **Attachment-1** for information on Community Commons, reporting methodology and data sources.

Healthcare Organizations in the Community

The table below indicates the type and number of healthcare organizations known to MeHI. This is representative and not intended to be a complete inventory or count of healthcare organizations in the region.

Connected Community: South Shore (98 records)	# Organizations
Hospital, General	3
Community Health Center	8
Long-Term Post-Acute Care	32
Ambulatory, General	21
IDN/Health System/Network	12
Lab/Pharm/Imaging	4
Behavioral Health	18

REPORT OF COMMUNITY NEEDS

MeHI performed a needs assessment of healthcare providers and stakeholders representing the South Shore community. The assessment was comprised of stakeholder interviews which followed a semi-structured interview guide and data collection process. In addition to organizational and HIT environment information, the interview centered on four domains which were focused on understanding clinical/business needs, internal challenges, external barriers and ideas for improvement. Responses were collected, codified and prioritized. Community roundtable meetings were held in each of the communities and the interview data was discussed and re-prioritized based on feedback from the roundtable group. Categories and themes were shared at the community roundtables and evolved through group discourse.

During Community Roundtable sessions, stakeholders were presented with the state and regional interview findings and engaged in a much deeper review, discussion and clarification of categories and themes. The multi-stakeholder review yielded a much richer understanding of the local needs, barriers and the experiences of some of the different care sectors within the community. As such, the group was able to re-prioritize certain areas that they felt would be the most essential and valuable to focus on within the community.

Reported Clinical-Business Needs

What clinical or business needs are you trying to solve with technology?

	Reporting Area-Frequency	
Clinical-Business Needs	South Shore	MA
Improve Internal Processes & Operations	16%	13%
Improve Care Coordination*	16%	11%
Improve Interoperability & Exchange *	16%	9%
Improve Care Quality & Patient Safety	11%	9%
Enhance Alternative Payment Models (APM) *	11%	4%
Meet Regulatory/ Incentive Requirements	5%	10%
Increase Public Health Reporting	5%	3%
Access to Clinical Information *	5%	21%
Promote Patient- & Family-centered Care	5%	3%
Enhance Clinical Quality Reporting	5%	3%
Enhance Remote Patient Management	5%	4%
Remain competitive and grow business	0%	2%
Improve Population Health Analytics	0%	7%
Know Patients, where they are & their status *	0%	2%
Enable Interstate Exchange	0%	1%

*Identified as a top priority need during community roundtable

The most frequently cited areas of clinical and business needs reported in the South Shore community

interviews centered on the abilities to improve and enhance *Internal Processes and Operations*, *Care Coordination, Interoperability and Exchanges, Care Quality and Patient Safety* and *Alternative Payment Model* support. These are mostly consistent with the interview findings across the state with two notable exceptions - *Access to Clinical Information* and *Meeting Regulatory/Incentive Requirements* were more frequently reported as an area of need by stakeholders across the state than by those interviewed in the South Shore community.

Access to Clinical Information

There were multiple comments from the hospitals and larger groups surrounding the challenges to manage "hundreds of interfaces" and the need to consolidate systems, remove data silos and standardize interfaces and exchanges. Conversely, comments from smaller groups and other sectors like BH and LTPAC expressed a need for more pointed access to clinical information systems and more laconic, episodically relevant types of communications.

Interoperability and Exchange

A significant theme emerged regarding the ability to identify which organizations and vendors are connected to the HIway or other HIE and to understand their exchange capabilities. One area which gained quick consensus among stakeholders was a request to publish a list or table of vendor and organization exchange capabilities through the HIway, Direct Trust, or other HIEs. This would improve education and awareness on connection options, so organizations could be more proactive about sharing information with each other.

Know Patients and their Status and Alternative Payment Support

Also noted in multiple settings was the need for a patient identification or master patient index (MPI) solution for matching patients across healthcare settings. Although algorithms and processes are in place within organizations and some HIEs, there remains a substantial resource demand to complete patient matching. It was suggested that having a state-wide MPI would significantly improve the ability to match patients. Commenters noted that different organizations are repeating the same work to achieve patient matching. And, when an analyst is unsure of a 100% patient match, they will not share the information to avoid unintentional breach of the wrong patient's information. It was suggested that organizations may be willing to pay for an MPI service to reduce internal staff expense associated with patient matching.

Also mentioned frequently, was the need to better manage patients for risk contracts. Understanding where patients are receiving care was identified as an important need. It was noted that Medicare leakage is an issue for some organizations because Medicare patients can chose to receive care anywhere the patient prefers. Also, there were a few comments on the difficulty straddling fee for service and outcome oriented or alternative payment models which is a challenge to internal systems and resources.

Care Coordination

A few general comments were made regarding the need for a "more complete record". Currently, organizations only receive fragments of information shared from only some of the organizations where the patient receives care. It was suggested, that if organizations could receive a Continuity of Care Document (CCD) from all organizations where the patient receives care it would be a big step towards having consistent information and more of a complete view of the patient visit history and treatment.

It was also noted that gaps are created when organizations receive different information sets (fax, lab, CCD, magic button) from other area healthcare settings. The providers are left to put the pieces together, but they don't have a way to know what information is missing.

Community Priority Needs

The community group was able to identify a few core areas of need. First, the need to send/receive clinical information from the hospitals to the primary care providers upon discharge. And second, the ability to close referral loops between the primary care providers, specialists and other care settings.

The group also identified some supporting areas of need. First, the ability to identify and understand the various HIE options and capabilities among their associates and trading partners for exchanging clinical information. The group suggested an "HIE map" which indexed the organization, EHR system, HIE connection options and the types of information send/receive capabilities. And second, the establishment of a Master Patient Index (MPI) or other patient matching process or solution was noted as an essential element to identify patients across the healthcare settings.

Finally, addressing the areas above would help all meet an overarching area of need for a "complete" patient record, achieved by receiving accurate, consistent and timely information for all settings of care, would better equip organizations to manage healthcare for patients for which they are each accountable and at financial risk.

The community group specified the following priority needs to address;

1. Send/Receive clinical information from hospitals to primary care providers upon discharge
2. Implement closed loop referrals between primary care providers, specialists and other care settings
3. Identify HIE options and associated trading partners for exchanging clinical information
4. A "complete" patient record achieved by receiving accurate and consistent information in a timely manner from all settings of care a patient visits
5. Master Patient Index (MPI) for identifying patients accurately across the broad spectrum of healthcare
6. Manage healthcare for patients for which the organization is accountable and at financial risk

Reported Internal Challenges and External Barriers

Internal Challenges

What are your top HIT related challenges within your organization?

Internal Challenges	South Shore	MA
Meeting Operational and Training Needs *	28%	15%
Managing Workflow and Change *	22%	14%
Lack of Staffing Resources	17%	25%
Lack of Financial Capital *	11%	22%
Technology Insufficient for Needs	11%	9%
Market Competition and Merger Activity	6%	1%
Meeting Regulatory Requirements	6%	4%
Internet Reliability	0%	1%
Lack of Data Integration – Interoperability *	0%	3%

Sensitive Information Sharing and Consent	0%	3%
Data Relevancy	0%	0%
Improve Medication Reconciliation	0%	0%
Leadership Priorities Conflict with IT Needs *	0%	2%

*Identified as a top priority need during community roundtable

The most frequently cited internal challenges reported in the South Shore community interviews centered on the abilities to meet *Operational and Training Needs*, manage *Workflow and Change* and address a general lack of *Staffing Resources and Financial Capital*. These are consistent with the most commonly reported internal challenges across the state, although lack of *Staffing Resources* and *Financial Capital* were cited more frequently.

Operations, Training and Workflow

Meeting operational needs, workflow and training were cited frequently as internal challenges. Some noted the difficulty gaining proficiency in new technology while maintaining focus on patient care and other responsibilities. Also, lack of provider buy-in, provider complacency were noted issues. Individuals commented that adoption is difficult when there is no internal champion and when benefits are not clear.

Lack of default pathways and complicating workflows for certain functions and exchanges was mentioned a few times. One organization noted the complexity of their referral workflows due the multiple sending/receiving pathways (HIway, NextGen Share, PWTF eRefferal, fax or other). Another commenter suggested that if the focus is on very specific exchanges or use cases, groups may adopt HIE more readily, which could open the door for other HIT/HIE efforts.

Staffing

Problems with staffing, organization culture and staying nimble with resources to respond to changing priorities were mentioned frequently. One commenter noted that the needs and demands of healthcare continue to increase but resources remain the same. It was also mentioned that different departments within the same organization may have different agendas and aligning needs proves to be difficult. Clinical teams may want coordinated patient care, finance wants to control costs, quality improvement wants better outcomes and customer satisfaction ratings, etc.

Financial

The high costs of HIT, especially for smaller practices was noted as a significant internal challenge. Many practices cannot afford to develop what is needed to effectively share patient information electronically And, certain sectors, such as Behavioral Health and Long-Term Post-Acute Care were more outspoken about lack of financial capital and gaps in funding and incentive programs.

A representative from one hospital commented that some of the larger organizations may be able to assist, leverage a more concentrated resource pool and offer/broker HIway connection capabilities for other community (smaller) organizations.

External Barriers

What are your top environmental (external) HIT-related barriers impeding your progress?

External Barriers	South Shore	MA
Meeting Regulatory Requirements	25%	19%
Lack of Interoperability and Exchange Standards *	25%	23%
Lack of HIE / HIway Trading Partners & Production Use Cases *	19%	23%
Sensitive Information Sharing and Consent	13%	6%
Cost of Technology / Resources *	13%	9%
Market Confusion *	6%	1%
Lack of HIE / HIway Education	0%	6%
External Attitudes and Perceptions	0%	1%
Vendor Alignment *	0%	4%
Market Competition & Merger Activity	0%	4%
Lack of EHR Adoption	0%	1%
Lack of Reimbursement/Unreliable Payments	0%	2%

*Identified as a top priority need during community roundtable

The most frequently cited external barriers reported in the South Shore community interviews centered on the abilities to meet *Regulatory Requirements*, the lack of *Interoperability and Exchanges Standards*, lack of *HIE/HIway Trading Partners and Production Use Cases* and the ability to manage and meet *Sensitive Information Sharing and Consent* requirements. These are consistent with the most commonly reported external barriers across the state, although *Regulatory Requirements* and *Sensitive Information Sharing and Consent* and *Staffing Resources* were cited more frequently in the South Shore community.

Regulatory and Sensitive Information Exchanges

The difficulty managing and meeting regulatory, payer and program requirements was cited frequently by community stakeholders. Also, multiple comments and concerns were expressed regarding privacy and security understanding and operationalizing consent and disclosure requirements. Some of the larger organizations also noted the challenges of system configurations to support a variety of legal relationships for data access and sharing.

HIE / HIway Partners and Production Exchanges

There were many comments on the Mass HIway and other HIE networks. There remains much market confusion regarding the capabilities, pathways for HISPs and various EHR vendors. Not knowing which other organizations are truly on the Mass HIway and available to connect was mentioned frequently.

Some concerns were expressed regarding the stability and reliability of the HIway having an effect on organizational decisions to move existing point-to-point exchanges to the HIway. One example given by a community participant, was that there are currently no alerts from the HIway to show if messages are successful or failing. And, if HIway receivers are using Webmail inboxes, messages may not be in a human readable format. And, many organizations are still waiting for vendors to complete the HISP to

HISP connections.

Vendor Alignment

Vendor alignment issues were noted as a significant barrier in coordinating exchange with other organizations/vendors. Many organizations are still waiting for vendors to complete the HISP to HISP connections. And, interpretation of standards varies by vendors and all vendors appear to be struggling in some way with connections to the HIway.

Market Confusion

Other commenters mentioned a lack of clarity around state registries and public health reporting as a barrier. With the cancer registry for instance, it was not clear in what circumstances a practice was obligated to report or whether the organization running the diagnosis test would need to report. Smaller practices especially, need to receive more clarification on reporting requirements.

It was commented on multiple occasions that there remains a disconnect in what the "sending" organization wants to standardize versus the custom information that a "receiving" provider/organization would prefer.

Community Priority Barriers

During the Community Roundtable sessions, there was some discussion on whether certain items/issues should be reflected as internal challenges or external barriers. It was noted that in some cases, external barriers are realized as internal challenges. And in other cases, the internal challenges in certain organizations and sectors, such as BH and LTPAC, are creating external barriers for other stakeholders.

Internal challenges and external barriers are combined here to mitigate and align these perspectives, and where possible identify barriers that would have the biggest impact for the most stakeholders, if removed.

The community group specified the following priority barriers to addressing needs;

1. Patient matching – Providers are challenged to positively match records of patients from one organization to another without an MPI available.
2. Vendor alignment has been a barrier in coordinating exchange with other organizations/vendors due to varying interpretation of health information exchange standards.
3. Lack of universal standards for sending organizations creates inconsistency in data content being received. Each organization appears to have developed their own "standard" in defining the information to be shared for patients, which is not necessarily the data the receiving organization desires.
4. Market confusion around HIE options and associated trust bundles. Lack of a public master list to identify organizations and provider available on HIE networks, and content that each can share.
5. High costs of HIT related items such as interfaces – many practices cannot afford to develop what is needed to effectively share patient information electronically
6. Workflows are not in place for Direct messaging. Some HISPs are requiring individual Direct addresses which is forcing changes in messaging workflow from front desk or medical records message triage to providers handling their own inboxes (and only for a small percentage of their patients).
7. Mass HIway reliability concerns – without alerts from the HIway to identify if transactions are successful
8. Lack of provider buy-in when providers do not see benefits in adopting or using HIT. An organization needs a provider champion who understands the value of HIT and can promote internally.

9. Various leaders within the same healthcare organization have different priority focus areas – clinical want coordinated patient care, finance wants to control costs, quality department wants better outcomes and customer satisfaction ratings. Aligning all priorities simultaneously proves to be difficult.

Reported HIT Improvement Ideas

What are your top ideas where technology (or technology related policy) may improve healthcare in Massachusetts?

HIT Improvement Ideas	South Shore	MA
Increase Education & Awareness *	33%	15%
Provide Funding & Resources	27%	10%
Enable Interoperability & Exchange *	20%	28%
Access to Clinical Information *	13%	8%
Better Align Program / Policy	7%	6%
Improve Care Transitions	0%	3%
Enhance Alternative Payment Model (APM) Reporting	0%	0%
Enhance Reporting to State	0%	2%
Improve Vendor Cooperation *	0%	3%
Promote Costs Savings	0%	3%
Know Patients, where they are & their status *	0%	1%
Enable Population Health Analytics	0%	4%
Improve Care Quality & Patient Safety	0%	6%
Expand Consumer Engagement Technologies	0%	3%
Improve Care Management	0%	6%

*Identified as a top priority need during community roundtable

The most frequently cited improvement ideas centered on increasing *Education and Awareness*, *Funding and Resources* and enabling *Interoperability and Exchange* and *Access to Clinical Information*. These were consistent with the most commonly reported ideas across the state although, Interoperability and Exchange was cited less frequently among South Shore community stakeholders.

Education and Awareness

There were many comments to increase education and awareness of programs and to provide clear, consistent messaging on requirements of state and federal programs and their relationships to each other. And, improved HIway-HIE education and support resources was mentioned often by community stakeholders.

There were multiple suggestions to establish and convene discussion forums or regional workgroups to help organizations establish HIE trading relationships and bridge connections among groups. Also, there

was a suggestion to create an online discussion board on the Mass HIway website to help organizations develop HIway information trading relationships.

Interoperability and Exchange

Again, there were multiple comments/requests to develop an index of organizations connected to the HIway, Direct Trust, or other HIE and that are available for information sharing. If the index is published, organizations can search for trading partners and their status to facilitate new exchanges and information sharing. The index could also include the sending/receiving capabilities of the organizations. One commenter noted that this would also allow organizations to essentially "shop" for trading partners.

Align Program / Policy

There were a few comments suggesting that the vendor pathways to the Mass HIway should be clearer. And, that the State should have requirements for vendors to operate in Massachusetts. One commenter used an analogy of safety standards or emission standards on cars in order for a manufacturer to sell cars in the state.

Funding and Resources

Finally, there were some specific ideas for possible use of grant funds. These included; using funds to help the HIway team staff-up to support current needs and issue resolution; support for smaller organizations that cannot afford to invest in HIT the same ways the larger organizations can; HIT advisory and consulting support; formulate regional teams to assist smaller organizations and guide them through HIT adoption and HIway connections; coordinated use of larger organizations resources to offer/broker HIway connections for smaller organizations in the community.

	IDENTIFIED eHEALTH PRIORITY AREAS	
	Send/Receive clinical information from hospitals to primary care providers upon discharge	
	Implement closed loop referrals between primary care providers, specialists and other care settings	
	Identify HIE options and associated trading partners for exchanging clinical information	
	A "complete" patient record achieved by receiving accurate and consistent information in a timely manner from all settings of care a patient visits	
	Master Patient Index (MPI) for identifying patients accurately across the broad spectrum of healthcare Manage healthcare for patients for which the organization is accountable and at financial risk	

	HIT IMPROVEMENT IDEAS	
1	Focus narrowly on implementing one clinical use case such as Discharge Notifications from the	

	community hospitals to the organizations in other care settings. This use case is of high value and relatively lower simplicity on the technical and interoperability side.	
2	Collaborate to positively identify patients among healthcare organizations	
3	Map the community's trading partners, the EHR systems they use, their Direct addresses, and their current capabilities to send and receive clinical information electronically.	
4	A regional workgroup that convenes to help organizations establish HIE trading relationships	
5	Have larger organizations in the community offer HIway connection capabilities for other smaller community organizations. Resources are concentrated within the larger organizations and could offer a value by brokering the HIway connections.	
6	Implement MA state HIE standards requirement for vendors to operate in Massachusetts	

ATTACHMENT - 1

Community Commons http://www.communitycommons.org/

Community Commons provides public access to multiple, public data sources and allows mapping and reporting capabilities to explore various demographic, social and economic and health indicators for defined areas and communities. Community Commons was specifically used to create custom, geographically defined report areas based on the towns/zip codes within each of the MeHI Connected Community regions.

Community Commons generates custom area estimates for the selected indicators using population weighted allocations. These estimates are aggregates of every census tract which falls within the custom area, based on the proportion of the population from the tract which also falls within the area. Population proportions are determined for each census tract by dividing the sum of each census block's population by the total census tract population. In this way, when a custom area contains 50% of the area of a census tract, but contains 90% of that census tract's population, the figure for that census tract is weighted at 90% in the custom area tabulation.

Indicator data was assembled utilizing known, publicly available data sources identified in the table below;

Table – Data Source

Indicator	Data Source
Total Population	US Census Bureau, American Community Survey: 2008-12
Change in Total Population	US Census Bureau, Decennial Census: 2000 - 2010
Income Per Capita	US Census Bureau, American Community Survey: 2008-12
Population in Poverty - 100% FPL	US Census Bureau, American Community Survey: 2008-12
Population in Poverty - 200% FPL	US Census Bureau, American Community Survey: 2008-12
Children in Poverty	US Census Bureau, American Community Survey: 2008-12
Linguistically Isolated Population	US Census Bureau, American Community Survey: 2008-12
Population with Limited English Proficiency	US Census Bureau, American Community Survey: 2008-12
Population Receiving Medicaid	US Census Bureau, American Community Survey: 2008-12
Access to Primary Care	US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File: 2012
Facilities Designated as Health Professional Shortage Areas	US Department of Health & Human Services, Health Resources and Services Administration, Health Professional Shortage Areas: April 2014
Federally Qualified Health Centers	US Department of Health & Human Services, Center for Medicare & Medicaid Services, Provider of Services File: June 2014