COMMMUNITY eHEALTH PLAN – NEEDS ASSESSMENT

REGION: **Southeast**

COMMUNITY: **Fall River-New Bedford**

PARTICIPATING ORGANIZATIONS: *Greater New Bedford Community Health Center, South Coast Healthcare - Charlton Hospital, St. Luke's Hospital, Toby Hospital, Steward Healthcare - St. Ann's Hospital*

DATE REVIEWED / UPDATED: 5/19/15

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 Fall River-New Bedford Communities:

Identification of Needs: The primary needs identified by stakeholders in the Fall River-New Bedford Communities are to meet regulatory requirements, improve care coordination and improve communications between hospitals and primary care providers and between primary care providers, specialists and other care settings.

Specifically, the stakeholders would like the following:

1. Meet regulatory and incentive requirements
2. Manage healthcare for patients for which the organization is accountable and at financial risk
3. Send clinical information from hospitals to primary care providers upon discharge
4. Implement closed loop referrals between primary care providers and specialists and other care settings

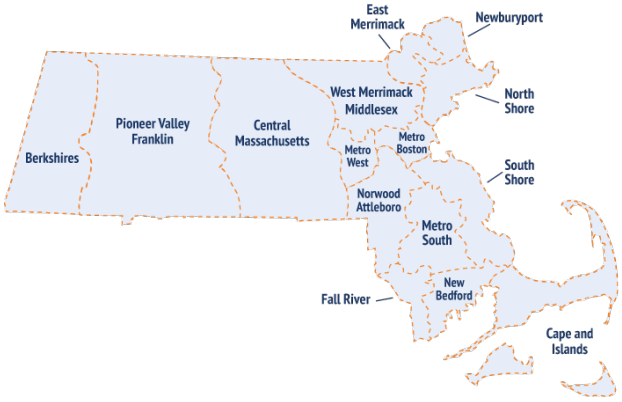
Identification of Internal Challenges and External Barriers: The primary barriers identified by stakeholders to addressing these needs are as follows:

1. Confusion and wasted effort managing multiple processes for information exchange – Providers are dedicating large numbers of staff and infrastructure to chasing down information going out and coming in to the organization through electronic HL7 interfaces, "magic button" access to partner EHRs, paper (mail and courier), fax, and now Direct messaging.
2. Patient matching – Providers are challenged to positively match records of patients from one organization to another.
3. Identifying patient's primary care team - Inpatient providers are also challenged to know which organization to send patient information to upon hospital discharge.
4. 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).
5. Semantic interoperability/ ontology variation among organizations
6. Misalignment of Meaningful Use and Patient Care – MU requirements are pushing providers to do things they are not ready for and on schedules that are rushed
7. ICD-10 conversions will happen at same time as MU stage 2 attestation period
8. Low number of technical staff that are current with xml vs. large number of staff that are expert with HL7 interfacing standards.

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 Community Health Centers. This use case is of high value and relatively lower simplicity on the technical and semantic interoperability side
2. Collaborate to positively identify patients among healthcare organizations
3. Collaborate to identify the primary care organization that serves a patient cohort and inform the inpatient settings so they may send admission notifications and discharge summaries to the right care team.
4. Engage resources to convene and educate both technical and clinical staff
5. Begin using the Mass HIway Relationship Listing Service to identify where else patients are going
6. 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.

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 Fall River-New Bedford region is approximately 339,786 living in the 323.98 square mile area. The population density is estimated at 1048.80 persons per square mile which is greater than the national average population density of 88.23 persons per square mile. According to the U.S. Census Bureau Decennial Census, between 2000 and 2010 the population in the Fall River-New Bedford region grew by 4,570 persons, a change of 1.37%.

Income Per Capita - For the Fall River-New Bedford region, the income per capita is $26,428. Massachusetts statewide income per capita at $35,763.

Poverty - In the Fall River-New Bedford region, 33.38% or 110,201 individuals are living in households with income below 200% of FPL and 15.74% or 51,946 individuals are living in households with income below 100% FPL. The percent population under age 18 in poverty is 23.31% or 68,972 individuals. These three percentage rates are higher than the Massachusetts state rates in the same categories.

Linguistically Isolated Populations – The Fall River-New Bedford region has a higher percent of linguistically isolated populations at 5.85% than the Massachusetts state rate. 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 Fall River-New Bedford region, this indicator is 10.16% compared to the Massachusetts state indicator of 8.87%.

Population by Race Alone - The racial make-up of the Fall River-New Bedford region is 87.44% White, 3.5% Black, 1.47% Asian, 0.17% Native American, 0.05% Native Hawaiian, 4.36% Some Other Race and 3.01% Multiple Races

Information acquired courtesy of 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 Fall River-New Bedford region, the percent of insured population receiving Medicaid is 30.79%, or 97,750, 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 higher than the Massachusetts state indicator of 21.41%.

Access to Primary Care – The Fall River-New Bedford region has 52.85 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) – The Fall River-New Bedford region has a total of 9 HPSA facility designations; 3 in primary care facilities, 3 in mental health facilities and 3 in dental facilities. 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 Fall River-New Bedford region has a rate of 1.77 FQHCs per 100,000 population with a total of 6 FQHC facilities in the Fall Rive-New Bedford 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: Fall River-New Bedford (86 Records)	# Organizations
Hospital, General	4
Community Health Center	4
Long-Term Post-Acute Care	32
Ambulatory, General	21
IDN/Health System/Network	5
Lab/Pharm/Imaging	3
Behavioral Health	17

REPORT OF COMMUNITY NEEDS

MeHI performed a needs assessment of healthcare providers and stakeholders representing the Fall River and New Bedford communities. 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	FR - NB	MA
Meet Regulatory/ Incentive Requirements *	30%	10%
Improve Care Coordination *	20%	11%
Increase Public Health Reporting	10%	3%
Improved Interoperability & Exchange	10%	9%
Enhance Clinical Quality Reporting	10%	3%
Improve Internal Processes & Operations	10%	13%
Access to Clinical Information *	10%	21%
Promote Patient- & Family-centered Care	0%	3%
Know Patients, where they are & their status *	0%	2%
Enhance Alternative Payment Models (APM) *	0%	4%
Enable Interstate Exchange	0%	1%
Improve Care Quality & Patient Safety	0%	9%
Improve Population Health Analytics	0%	7%
Remain competitive and grow business	0%	2%
Enhance Remote Patient Management	0%	4%

*Identified as a top priority need during community roundtable

The most frequently cited areas of clinical and business needs reported in the Fall River and New Bedford community interviews centered on the abilities to meet *Regulatory and Incentive Requirements*, improve *Care Coordination*, *Public Health Reporting* and *Access to Clinical Information*. These are mostly consistent with the interview findings across the state although meeting *Regulatory and Incentive Requirements* was more frequently reported as an area of need by stakeholders in the region than by those interviewed across the state.

Regulatory and Incentive Requirements

Difficulty meeting regulatory and program requirements was cited frequently by community stakeholders. The focus on current and future Meaningful Use attestations, efforts to standardize EHR data collection and pending ICD-10 transitions were noted as critical operational needs. And, some organizations reported a perceived misalignment of Meaningful Use and patient care, stating that the MU requirements may be pushing providers to do things that they or their systems are not ready for and on schedules that are rushed. Also specifically mentioned, was the need to gain clarity and improve capabilities for Department of Public Health reporting.

Care Coordination

Both of the major health systems in the region reported the consolidation of internal EHR systems as a business priority to support and improve care coordination. Subsequent effort and activity will be focused on collaboration with providers outside of the health system, both within Massachusetts and also with regional Rhode Island groups. Also mentioned, organizations were looking for better ways to support coordinated care with Behavioral Health settings.

Access to Clinical Information

There were multiple comments on the need to improve access to clinical information across healthcare settings. There was general consensus on the need to improve post-discharge information sharing from the hospitals to primary care providers, and for closed-loop referrals between primary care, specialists and other care settings. One of the large health systems also mentioned continued work on building interfaces to the health system reference labs.

Know Patients and their Movements and Alternative Payment Support

There were multiple comments regarding the need for a patient identification or master patient index (MPI) solution for matching patients across healthcare settings. However, there was not consensus on whether a state-wide MPI would be the right solution. There was agreement that the internal resources devoted to matching patients is significant.

And, understanding where patients are receiving care and identifying the appropriate primary care teams was identified as a significant area of need and an essential component to alternative payment and risk bearing contracts.

Community Priority Needs

The community group was able to identify a few priority areas of need that are aligned and integral to each of their business and clinical situations. These priority needs represent a starting point for community focus and an opportunity to establish and improve collaboration among the participating organizations.

The community group specified the following priority needs to address;

1. Meet regulatory and incentive requirements
2. Manage healthcare for patients for which the organization is accountable and at financial risk
3. Send clinical information from hospitals to primary care providers upon discharge
4. Implement closed loop referrals between primary care providers and specialists and other care settings

Reported Internal Challenges and External Barriers

Internal Challenges

What are your top HIT related challenges within your organization?

Internal Challenges	FR - NB	MA
Sensitive Information Sharing and Consent	22%	3%
Lack of Financial Capital	22%	22%
Lack of Data Integration – Interoperability *	22%	3%
Lack of Staffing Resources	22%	25%
Managing Workflow and Change *	11%	14%
Technology Insufficient for Needs	0%	9%
Meeting Regulatory Requirements *	0%	4%
Meeting Operational and Training Needs *	0%	15%
Data Relevancy	0%	0%
Improve Medication Reconciliation	0%	0%
Internet Reliability	0%	1%
Market Competition and Merger Activity	0%	1%
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 Fall River and New Bedford community interviews centered on the requirements related to *Sensitive Information Sharing and Consent*, lack of *Financial Capital* and *Staffing Resources* and the general lack of *Data Integration-Interoperability*. These are fairly consistent with the most commonly reported internal challenges across the state, with two exceptions; *Sensitive Information Sharing and Consent* and *Data Integration-Interoperability* were reported more frequently in the Fall River and New Bedford region.

Sensitive Information Exchanges and Consent

Community stakeholders shared comments, expressed concerns understanding and managing “privacy and security” requirements. Operationalizing and supporting multiple requirements for consent and disclosure was reported as a significant challenge. It was also noted that configuring systems and

workflows to support a variety of legal relationships for data access and sharing is becoming increasingly difficult.

Data Integration and Interoperability

There were a few comments regarding the difficulty and wasted effort managing multiple processes for information exchange. Organizations have to dedicate significant staff and infrastructure resources to "chasing down" incoming and outgoing information which may take many different forms and pathways – HL7, "magic button", access to partner EHRs, fax and paper and now Direct messaging. Complicating matters, is the semantic interoperability and ontology variation among organizations.

Managing Workflow and Change

A few respondents noted that 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). And, a few stakeholders reported a lower number of technical staff with xml based experience compared with current experience in HL7 interface standards. It was also noted, the adoption of MU2 and ICD-10 will hit many organizations at the same time, which will have a significant impact on workflow and operations.

External Barriers

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

External Barriers	FR - NB	MA
Lack of Interoperability and Exchange Standards *	29%	23%
Lack of HIE / HIway Trading Partners & Production Use Cases	14%	23%
Lack of HIE / HIway Education *	14%	6%
Meeting Regulatory Requirements *	14%	19%
Lack of EHR Adoption	14%	1%
Vendor Alignment	14%	4%
Sensitive Information Sharing and Consent	0%	6%
Market Confusion	0%	1%
External Attitudes and Perceptions	0%	1%
Market Competition & Merger Activity	0%	4%
Cost of Technology / Resources	0%	9%
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 Fall River and New Bedford community interviews centered on the lack of *Interoperability and Exchange Standards*, lack of *HIE/HIway Trading Partners and Production Use Cases* and lack of *HIE / HIway Education* the ability to meet *Regulatory Requirements*. These are mostly consistent with the commonly reported external barriers across the

state.

HIE / HIway Education and Awareness

The need for improved HIway-HIE education and support resources was mentioned by community stakeholders. Respondents noted on-going confusion regarding current and future capabilities of the HIway, HISPs and pathways for various EHR vendors. Also mentioned, was a lack of understanding of which organizations are connected to the Mass HIway.

HIE / HIway Trading Partners and Production Use Cases

A few organizations acknowledged that progress on HIE efforts have been slow. Some are anticipating increased HIE activity from involvement in programs which involve connections to the HIway, as well as Meaningful Use requirements. The group discussed and recognized some exchanges that would be particularly valuable, such as discharge notifications from the hospital to primary care providers. And, closing referral loops between primary care, specialists and other care settings.

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. Confusion and wasted effort managing multiple processes for information exchange – Providers are dedicating large numbers of staff and infrastructure to chasing down information going out and coming in to the organization through electronic HL7 interfaces, “magic button” access to partner EHRs, paper (mail and courier), fax, and now Direct messaging.
2. Patient matching – Providers are challenged to positively match records of patients from one organization to another.
3. Identifying patient’s primary care team - Inpatient providers are also challenged to know which organization to send patient information to upon hospital discharge.
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5. Semantic interoperability/ ontology variation among organizations
6. Misalignment of Meaningful Use and Patient Care – MU requirements are pushing providers to do things they are not ready for and on schedules that are rushed
7. ICD-10 conversions will happen at same time as MU stage 2 attestation period
8. Low number of technical staff that are current with xml vs. large number of staff that are expert with HL7 interfacing standards

Reported HIT Improvement Ideas

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

HIT Improvement Ideas	FR - NB	MA
Enable Interoperability & Exchange *	38%	28%
Promote Costs Savings	13%	3%
Improve Vendor Cooperation	13%	3%
Provide Funding & Resources	13%	10%
Enable Population Health Analytics	13%	4%
Improve Care Coordination *	13%	9%
Enhance Alternative Payment Models (APM)	0%	0%
Increase Education & Awareness *	0%	15%
Expand Consumer Engagement Technologies	0%	3%
Access to Clinical Information	0%	8%
Know Patients, where they are & their status *	0%	1%
Improve Care Quality & Patient Safety	0%	6%
Enhance Reporting to State	0%	2%
Better Align Program / Policy	0%	6%

*Identified as a top priority need during community roundtable

The most frequently cited improvement ideas centered on enabling *Interoperability & Exchange*, promoting *Cost Savings*, improving *Vendor Cooperation* and providing *Funding and Resources*. These were consistent with the most commonly reported ideas across the state although, *Education & Awareness* was cited less frequently among the Fall River and New Bedford community interviews.

Interoperability and Exchange

There were comments regarding the need to establish default pathways for data exchanges. Currently, multiple EHR systems, HIE connections, state, payer and program specific portals create a myriad of pathways for clinical information exchanges, causing complex and indistinct workflows. A few commenters suggested the development of regional, use case specific standards for data sharing.

And again, there were comments and suggestions 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, such as Admission, Discharge, Transfer (ADT) messages, or Emergency Department and Discharge Summaries.

Vendor Cooperation

Commenters suggested a need to leverage the statewide approach to vendors and that the vendor

pathways could be better established by the state. Improving vendor cooperation was noted as an area of attention to help improve exchange among 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.

Funding and Resources and Cost Savings

There were a variety of suggestions related to funding and resources. Suggestions included providing technical assistance at the site level to support IT teams, HIE advisory, consulting and project management resources and grants for HIE participation. A few others mentioned potential cost savings by collecting and sharing patient migration patterns, improved patient management, reducing readmissions and reducing testing duplication.

	IDENTIFIED eHEALTH PRIORITY AREAS	
	Meet regulatory and incentive requirements	
	Manage healthcare for patients for which the organization is accountable and at financial risk	
	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	

	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	Collaborate to identify the primary care organization that serves a patient cohort and inform the inpatient settings so they may send admission notifications and discharge summaries to the right care team	
4	Engage resources to convene and educate both technical and clinical staff	
5	Begin using the Mass HIway Relationship Listing Service to identify where else patients are going	
6	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	

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