COMMMUNITY eHEALTH ASSESSMENT – WEST MERRIMACK/MIDDLESEX

REGION: Northeast

COMMUNITY: West Merrimack/Middlesex

PARTICIPATING ORGANIZATIONS:

Organization	Organization Type
D'Youville Life and Wellness Community	Long Term and Post-Acute Care
Lahey Health –Burlington	Health Network
Lowell Community Health Center	Federally Qualified Health Center
Salter Healthcare	Long Term and Post-Acute Care
Wilmington Pediatrics	Group Practice
Winchester ACO	Accountable Care Organization
Winchester Highland Management	Physician Association
Winchester Hospital	Hospital
Winchester eLINC HIE	Health Information Exchange (HIE) Services
Winchester Hospital Home Care	Home Health
Winchester Physicians Associates	Accountable Care Organization
Woburn Pediatric Associates	Physicians Group
Youth Villages	Behavioral Health and Social Services

DATE REVIEWED / UPDATED: 5/26/15

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 West Merrimack/Middlesex Community:

Identification of eHealth Priority Areas: The primary need identified by stakeholders in the West Merrimack - Middlesex region is for timely hospital admission notifications and discharge summaries to flow from the acute care settings to the post-acute care providers. Specifically the stakeholders would like the following:

1. Access to clinical data, specifically around the areas below:
    a. Send care providers Hospital and Emergency Department (ED) discharge summaries and patient's medications immediately upon discharge, for both avoidance of drug-to-drug adverse events, medication reconciliation, and for patient medication management.
    b. Inform post-acute care providers of patient's lab orders and results to inform patient treatment plan and avoid duplicate tests.
    c. Exchange of care plan goals to align patient care across organizations.
2. Identify providers that are part of the patient's care team, whether it's an internal or external networks, and identify when the patient gets care at these organizations.
3. Enhance patient population analytics to stratify patients to identify high-risk and high utilizers to reduce health care costs.
4. Implement policies for patient consent and sharing of sensitive information

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

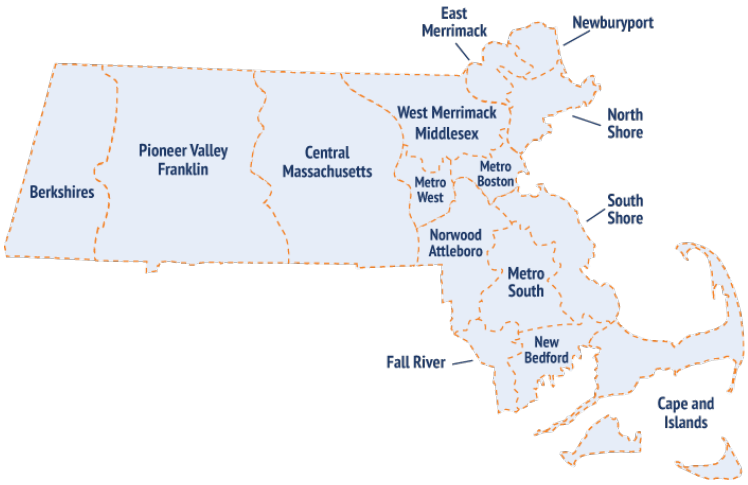
1. Lack of clarity on how information should travel from one care setting to another – Confusion over use of Health Information Services Providers (HISPs), the Mass HIway, Integration Engines, etc.
2. Lack of staffing resources. Not all organizations and trading partners have enough resources to move forward with interoperability pilots and use cases.
3. Need for positive patient matching among organizations though a unique patient identifier.
4. Lack of system capabilities to easily connect to an HIE and promote sure electronic exchange of patient data. Some Vendors cannot exchange due to available capabilities and Direct Trust regulations.
5. Lack of knowledge around which trading partners are actively transacting and sending information securely through an HIE.

6. Lack of Common Agenda. Competing priorities fragment Vendor and organization attention and resources to ensure compliance with regulatory and payment requirements.
7. Lack of financial capital with small practices and post-acute organizations to enhance EHR adoption and participation with HIE technology.

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

1. The HIway could provide a map to community organizations to show what each organization is capable of sending, what they are capable of receiving and make the toolsets available to see what can be done today with the HIE to move people forward.
2. Publish a provider directory or list of Direct addresses to facilitate increased HIE transactions among community organizations.
3. Narrowly identify a clinical initiative such as "Improve identification of high risk patients." Use this clinical initiative to involve appropriate clinical, business, and IT resources in each organization. Systematically address organization connectivity, technology, workflow process, and human resource components until there is functioning information flow among organizations.
4. Create a Regional HISP group, facilitated by the Statewide HIE, for collaboration and idea sharing. The group should include Vendors as well as state and local HISPs representatives.
5. Deploy programmatic staff that can facilitate a consumer engagement group to identify patient opinions on the HIway and other HIEs, assess what their level of education is around the technology and what their needs are to move forward with consent.

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

The West Merrimack/Middlesex community consists of 40 cities and towns: Acton, Arlington, Ayer, Bedford, Billerica, Boxborough, Burlington, Carlisle, Chelmsford, Concord, Devens, Dracut, Dunstable, Groton, Hanscom Air Force Base, Harvard, Lexington, Lincoln, Littleton, Lowell, Maynard, North Reading, Nutting Lake, Pepperell, Pinehurst, Reading, Shirley, Still River, Stoneham, Stow, Sudbury, Tewksbury, Townsend, Tyngsboro, Watertown, West Groton, Westford, Wilmington, Winchester, Woburn.

Population - Total population of the West Merrimack/Middlesex Community is 689,351 living in the 507.58 square mile area. The population density is estimated at 1,358.12 persons per square mile which is greater than the national average population density of 88.23 persons per square mile. Between 2000 and 2010 the population in West Merrimack/Middlesex grew by 18,429 persons, an increase of 2.79%.

Income Per Capita - For the West Merrimack/Middlesex Community the income per capita is $41,896. This is higher than the Massachusetts statewide income per capita which is $35,484.

Poverty - In the West Merrimack/Middlesex Community, 15.81% or 106,835 individuals are living in households with income below 200% of FPL, which is lower than the Massachusetts average of 24.76% and 6.53% or 44,127 individuals are living in households with income below 100% FPL. This is lower than the Massachusetts aaverage of 11.38%.

Linguistically Isolated Populations – The West Merrimack/Middlesex Community does not have a significant percent of linguistically isolated populations with a rate of only 3.31%. 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 5.24%.

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 West Merrimack/Middlesex, this indicator is 6.38% compared to the Massachusetts state indicator of 8.84%.

Population by Race Alone - The racial make-up of West Merrimack/Middlesex County is 82.97% White, 2.57% Black, 9.67% Asian, 0.12% Native American, 0.03% Native Hawaiian, 2.54% Some Other Race and 2.16% Multiple Races:

Information acquired from **Community Commons on April 27, 2015**
http://www.communitycommons.org/

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

HEALTHCARE LANDSCAPE

Access to Primary Care –West Merrimack/Middlesex has 117.47 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.

Lack of a Consistent Source to Primary Care – This indicator reports the percentage of adults aged 18 and older who self-report that they do not have at least one person who they think of as their

personal doctor or health care provider. For West Merrimack/Middlesex, this indicator is 9.65%, or 41,680 people. This is slightly below the state indicator of 11.53%. This indicator is relevant because access to regular primary care is important to preventing major health issues and emergency department visits.

Facilities Designated as Health Professional Shortage Areas (HPSA) – West Merrimack/Middlesex has a total of 13 HPSA facility designations: 5 in primary care facilities, 3 in mental health care facilities and 5 in dental health care 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.

Population Receiving Medicaid – In West Merrimack/Middlesex, the percent of insured population receiving Medicaid is 13.95%, or 91,995, 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 20.53%.

Information acquired from **Community Commons on April 27, 2015**
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: **West Merrimack/Middlesex** (153 records)*	# Organizations
Ambulatory, General	60
Behavioral Health	19
Community Health Centers	2
Hospital, General	6
IDN/Health System/Network	5
Lab/Pharm/Imaging	12
Long-Term Post-Acute Care	49

REPORT OF COMMUNITY NEEDS

Seven interviews and two community roundtables were completed within the West Merrimack - Middlesex community for the Connected Communities Program to inform the Community and Statewide eHealth Plans. These discussions included participants from multiple organization types –

Hospitals, Long-term and Post-Acute Care, Home Care, Rehabilitation, Behavioral Health, local HIE and ACOs and small physician group practices. In the interviews and roundtables, organizations were asked to identify the top clinical and business needs that organizations are trying to solve with technology, top obstacles related to Health IT, and top ideas where technology may improve healthcare in Massachusetts. Obstacles related to Health IT were broken down into challenges faced within the organization and barriers perceived in the external healthcare market. The consensus view of stakeholders around community needs, ideas and obstacles is reflected in the Executive Summary section of this document.

Reported Clinical-Business Needs

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

	Reporting Area-Frequency	
Clinical-Business Needs	**West Merrimack/Middlesex**	**MA**
Access to Clinical Information	38%	21%
Improve Care Management	13%	9%
Improve Care Quality and Patient Safety	20%	9%
Improve Internal Processes & Operations	6%	13%
Meet Regulatory/Incentive Requirements	6%	10%
Improve Medication Reconciliation	6%	14%
Improve Interoperability and Exchange	6%	9%
Enhance Alternative Payment Model (APM) Reporting	6%	4%
Increase Public Health Reporting	6%	3%
Remain competitive and grow business	6%	2%
Improve Population Health Analytics	0%	7%
Know Patients, where they are and their status	0%	2%
Enhance Clinical Quality Reporting	0%	3%
Promote Patient- & Family-centered Care	0%	3%
Enhance Remote Patient Management	0%	4%
Improve Care Transitions	0%	2%
Enable Interstate Exchange	0%	<1%

**Identified as a top priority need during community roundtable*

At the West Merrimack community roundtables, contributing organizations reviewed statewide and community specific clinical and business needs identified through interviews with individual organizations. The results from the West Merrimack-Middlesex community interview findings were compared to the statewide findings for the clinical and business needs category. Priority themes were identified through thoughtful discussion around the preliminary interview findings in the first roundtable. As you will see in the table above the identified themes are similar across the state and the West Merrimack-Middlesex community. Individual organization interviews and multi-organization group roundtable discussions focused on similar themes throughout the data collection and validation process.

The highest priority need discussed with the West Merrimack-Middlesex roundtable members was directly in line with the top identified state clinical and business need. The community felt that access to clinical information, from outside care organizations or hospitals, would greatly assist in clinical decision making. Access to clinical information allows the provider to increase patient safety through proper medication reconciliation, avoid duplicate testing and align care plans to better streamline goals for the patient and family. Sharing and accessing a patient's clinical information allows providers to see the whole picture and provide patient-centered care.

To further identify the top clinical and business needs of focus during the second roundtable meeting, the West Merrimack-Middlesex community reviewed the needs discussed in the first round table in further detail. The goal was to revisit the multiple needs that face the community organizations to further tease out the remaining top areas of focus. The information below identifies the needs identified in the first round table and was used to facilitate the discussion.

1. Cost containment
2. Patient engagement
3. Manage organizational resources more effectively
4. Access to clinical information
5. Manage high-risk utilization
6. Improve internal processes and operations
7. Improve medication reconciliation
8. Remote patient management
9. Improve care quality and patient safety
10. Improve care transitions

Through review of the needs listed above, the group recognized a second priority need of identifying providers in the patient's care team, within outside networks, and identify when they get care at these organizations. This is closely tied with the top priority need of access to clinical information. The group posed the question, "how do we know to collect patient care information if we are unaware of the care received at the outside organization?" This information would improve organization internal processes and operations by focusing resources on collecting and organizing known care information. Knowing a patients care team can also ensure the organization is sending CCD and care information to appropriate outside organizations as well.

Lastly, the group identified the need for cost containment; through enhanced patient population analytics, to stratify patients as high-risk or high utilizers and reduce health care costs. The group felt that this can be achieved through solving their top priority need of consistent and timely access to clinical information. By having greater access to clinical information from outside organizations, they can reduce duplicate testing, reduce readmission rates through proper medication reconciliation and identify high risk patients and frequent ED users for proactive outreach to provide additional care management support. Proactive outreach can reduce acute care episodes and greatly enhance the treatment of costly chronic conditions.

Community Priority Needs

The primary need identified by stakeholders in the West Merrimack - Middlesex region is for timely hospital admission notifications and discharge summaries to flow from the acute care settings to the post-acute care providers. Specifically the stakeholders would like the following:

1. Access to clinical data, specifically around the areas below:
    a. Send care providers Hospital and Emergency Department (ED) discharge summaries and patient's medications immediately upon discharge, for both avoidance of drug-to-drug adverse events, medication reconciliation, and for patient medication management.
    b. Inform post-acute care providers of patient's lab orders and results to inform patient treatment plan and avoid duplicate tests.
    c. Exchange of care plan goals to align patient care across organizations.
2. Identify providers in the patient's care team, within outside networks, and identify when they get care at these organizations.
3. Enhance patient population analytics to stratify patients to identify high-risk and high utilizers to reduce health care costs.
4. Implement policies for patient consent and sharing of sensitive information

Reported Internal Challenges and External Barriers

Internal Challenges

What are your top HIT related challenges within your organization?

Internal Challenges	West Merrimack/Middlesex	MA
Lack of Staffing Resources	38%	25%
Meeting Operational and Training Needs	23%	15%
Lack of Financial Capital	15%	22%
Managing Workflow and Change	15%	14%
Technology Insufficient for Needs	8%	9%
Lack of Data Integration - Interoperability	0%	3%
Market Competition and Merger Activity	0%	1%
Data Relevancy	0%	>1%
Leadership Priorities Conflict with IT Needs	0%	2%
Market Competition and Merger Activity	0%	1%
Internet Reliability	0%	1%
Improve Medication Reconciliation	0%	>1%

**Identified as a top priority need during community roundtable*

The internal challenges identified through interviews completed in the West Merrimack community were closely aligned with the challenges faced by those interviewed across the state of

Massachusetts. Rising to the top of the list for this community was a lack of staffing resources and a financial capital. Financial capital is a need that the group felt tied in with the other top identified needs from the interview collection process. It was noted that it is hard to have resources available to train and assist with operational workflow changes when financial capital is not readily available. Also, the community felt that staffing resources is an issue because not only is it hard to find qualified Health IT staff, but it is also difficult to retain the staff because the market is so competitive at this time and most organizations need IT resources with a basic skill level. This can be particularly frustrating to organizations because they will invest the time to onboard and train the staff only to lose them to another Health organization in a year or two. The group also felt that the technology available is not always sufficient for the needs of the organization or up to speed with HIE and interoperability. Aboveis a table that details the internal challenges interview results for the West Merrimack community and how they align with the interview findings in the state of Massachusetts.

In the first round table the group reviewed the interview findings noted in the table above. There was much discussion around the usability of IT systems. Participants felt that they were not able to fully use the technology functions in their current IT systems and provide ongoing training and optimization for sustainable physician workflows. Sustainable workflows require dedicated resources for training and monitoring, which many community organizations do not have at this time. Training from Vendors needs to be designed with workflow and the end user in mind. Participants stated that it is often a battle to get clear instructions, in an easily digestible format, for all skill levels. Many of the EHR systems are not user friendly and this is also an internal challenge for clinicians. Clinical and front line staff need to be motivated to use the systems and optimize the technology at hand. Staff needs long term support and education to continue to progress in the adoption of Health IT. Without these resources, the sustainability of initiatives is at risk. The contributing organizations felt that funding for additional resources would help with sustainable workflows, ongoing training for staff, issue resolution and optimize EHR and HIE capabilities. The group felt it would be great to develop a constituency for this process, including everyone in the community. Each participating organization would bring a resource for collaboration. This process would need vendor involvement so all types of contributors can see their part in moving forward with Health IT adoption. In the end, the roundtable group felt that Vendors understand the mandates and stakeholder needs, but are ultimately a business and are working to remain competitive.

In the second roundtable the group worked to further tease out the top internal challenges faced by organizations in the West Merrimack community. Through careful review of the feedback from the first roundtable, with a list of items discussed below, and the interview data presented the group, the discussion continued to focus on a lack of resources and staffing for IT optimization and issue resolution and a lack of Financial Capital.

1. Developing a constituency and maintaining engagement with the group (of other organizations involved in community initiative)
2. Motivation of staff resources
3. Long-term, ongoing support to sustain IT initiatives
4. Education/understanding of Health IT and initiatives among all levels in an organization
5. Lack of staff resources
6. Lack of Financial Capital

Roundtable two's discussion focused on a lack of financial and staffing resources and a competing focus in the healthcare market. Practices are going through EMR implementation and working to meet requirements for programs such as Meaningful Use. Resources at all levels and positions are needed in organizations big and small to implement and create sustainable workflows. Current initiatives are often defined by regulations and do not align with what the organization is trying to do for optimal patient care. Dedicated resources are needed to monitor performance against IT regulations and another group of resources to optimize the EHR and interoperability to enhance patient care.

External Barriers

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

External Barriers	West Merrimack/Middlesex	MA
Meeting Regulatory Requirements	33%	19%
Lack of HIE / HIway Trading Partners & Production Use Cases	22%	23%
Sensitive Information Sharing and Consent	22%	6%
Vendor Alignment	22%	4%
Lack of Interoperability and Exchange Standards	32%	23%
Lack of HIE / HIway Education	14%	6%
Market Competition & Merger Activity	14%	4%
Cost of Technology / Resources	9%	9%
Lack of Reimbursement/Unreliable Payments	0%	2%
Lack of EHR Adoption	0%	1%
Market Confusion	0%	1%
External Attitudes and Perceptions	0%	1%

**Identified as a top priority need during community roundtable*

Community organizations face many external challenges that often fracture focus and hinder progress towards Health IT adoption. Four of the top six external barriers identified through interviews completed across the state are directly aligned with the top barriers discussed in the West Merrimack community interviews. The priority areas identified by this community were a need to meet regulatory requirements, costs of technology and staffing resources, lack of HIE and HIway trading partners and production use cases and a need for Vendor alignment with initiatives, regulations and interoperability. The interview findings, noted in the table below, were leveraged to facilitate discussion in both roundtables around identifying additional barriers and pinpointing the most challenging external barriers for organizations.

The first roundtable had discussion around the external barrier of a lack of a common agenda. The community felt that the organizations with mutual patients need to come to an agreement on what all the providers are currently working on to move towards creating a level playing field and standardize electronic exchange processes across the community. During discussion a few contributing members

stated that this may be the highest priority external barrier. Organizations need to know what they and other community groups are capable of sending and receiving to maximize interoperability. The group also felt that there is often a lack of resources in outside organizations. Many of the larger organizations and early adopters of HIE technology are ready to work with trading partners to set up systems and agreements for electronic exchange. These groups who have resources to test and work on new processes are often limited in implementation due to a lack of resources on the trading partner's end. They found they can only progress as far as the groups they are collaborating with are capable. The group felt that the Orion, the statewide HIE Vendor, resources were not sufficient to streamline HIE connection, onboarding and trouble shooting. A lack of resources with this Vendor is an external barrier for HIway participants, both current and prospective.

Health Information Exchanges (HIE) were discussed as a prominent external barrier. The Winchester community participants stated they work to integrate twenty-four different EHR Vendors with the HIway services. Vendor coordination, HIE resources and a working around a lack of HIE capabilities for many EHR vendors makes for a daunting undertaking for both large organizations and physician associations, such as IPAs and PPOs. There was much discussion around provider directories for the MA HIway. The group felt there was a lack of a published full directory of those providers on the MA HIway as well as those with Direct addresses from their Vendor or the Winchester community HIE, eLINC. Policy decisions about the restrictions around publishing Direct addresses and organizational directories impedes progress towards easy adoption of HIE technology. The barrier of Direct Trust Accreditation and the HIway makes the use of the statewide HIE difficult because it limits the HISPs and Vendors an organization can communicate with through HIE technology. Lastly on the topic of HIE and the state wide exchange, the organizations discussed the lack of a unique patient identifier. Information is and will be sent more frequently as technology matures and the group noted the barrier of not having a national or state level identifier makes patient matching more difficult and could result in errors in patient care.

To continue discussion around the external barriers in the second roundtable, the group reviewed all the items discussed in roundtable one, shown below.

1. Lack of common agenda among community organizations
2. When working in groups, projects can be limited by other's resource capacity and education
3. Competing focus areas with vendors
4. Lack of HIway resources and timing of resources
5. Lack of vendors connected to the HIway
6. Trading partners don't always have adequate levels of staff to support initiatives
7. HIway Policies- Need to improve sharing of participant info and Direct addresses, participate in Direct Trust
8. No vendor can provide functionality for all needs
9. Lack of unique patient identifier

The group discussion echoed the findings from the interviews and discussion from the first roundtable. In the second roundtable, the discussion focused on the lack of Vendors connected to

the HIway. The participating organizations felt that the HIway needs to participate in the Direct Trust Accreditation and actively work to get certified. They felt as though this barrier could be eliminated and could double or triple the number of trading partners on the HIway. The community participants were informed that the HIway is pursuing certification in early 2016. Also tied to Direct exchange of information is a lack of knowledge around what trading partners are actively transacting and sending securely through an HIE. The participants discussed the need to having a map to navigate how to send information. Any provider can have multiple Direct address, for a number of reasons, but they need to know who they can send to and what each organization is capable of receiving.

Another identified external barrier was the competing focus areas for Vendors. They are so busy trying to tailor their products to meet regulations such as new stages of Meaningful Use and ICD-10 and still maintain their place in the highly competitive market place. This leads to Vendors struggling at making the functionality reliable and user friendly for the end user, decreasing willingness to adopt new IT workflows in the practice.

Community Priority Barriers

The primary barriers identified by stakeholders to addressing these needs are:

1. Lack of clarity on how information should travel from one care setting to another – Confusion over use of Health Information Services Providers (HISPs), the Mass HIway, Integration Engines, etc.
2. Lack of staffing resources. Not all organizations and trading partners have enough resources to move forward with interoperability pilots and use cases.
3. Need for positive patient matching among organizations though a unique patient identifier.
4. Lack of system capabilities to easily connect to an HIE and promote sure electronic exchange of patient data. Some Vendors cannot exchange due to limited capabilities and Direct Trust regulations.
5. Lack of knowledge around which trading partners are actively transacting and sending information securely through an HIE.
6. Lack of Common Agenda. Competing priorities fragment Vendor and organization attention and resources to ensure compliance with regulatory and payment requirements.
7. Lack of financial capital with small practices and post-acute organizations to enhance EHR adoption and participation with HIE technology.

Reported HIT Improvement Ideas

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

HIT Improvement Ideas	West Merrimack/Middlesex	MA
Access to Clinical Information	33%	8%
Increase Education & Awareness	17%	15%
Improve Care Quality & Patient Safety	17%	6%

Enable Interoperability & Exchange	8%	28%
Enable Population Health Analytics	8%	4%
Improve Care Transitions	8%	3%
Know Patients, where they are & their status	8%	1%
Improve Care Management	0%	6%
Promote Costs Savings	0%	3%
Expand Consumer Engagement Technologies	0%	3%
Provide Funding & Resources	0%	10%
Improve Vendor Cooperation	0%	3%
Enhance Reporting to State	0%	2%
Enhance Alternative Payment Model (APM) Reporting	0%	>1%

**Identified as a top priority need during community roundtable*

Community Prioritized HIT Improvement Ideas

Discussion of HIT Improvement ideas focused on solutions that would address the priority needs of the West Merrimack/Middlesex Community. All of the ideas that were discussed during the West Merrimack/Middlesex Community Roundtables are included in the *HIT Improvement Ideas* section below, but the group agreed that the following ideas should be prioritized, because these ideas directly addressed the clinical and business needs of the community:

1. The HIway could provide a map to community organizations to show what each organization is capable of sending, what they are capable of receiving and make the toolsets available to see what can be done today with the HIE to move people forward.
2. Publish a provider directory or list of Direct addresses to facilitate increased HIE transactions among community organizations.
3. Narrowly identify a clinical initiative such as "Improve identification of high risk patients." Use this clinical initiative to involve appropriate clinical, business, and IT resources in each organization. Systematically address organization connectivity, technology, workflow process, and human resource components until there is functioning information flow among organizations.
4. Create a Regional HISP group, facilitated by the Statewide HIE, for collaboration and idea sharing. The group should include Vendors as well as state and local HISPs representatives.
5. Deploy programmatic staff that can facilitate a consumer engagement group to identify patient opinions on the HIway and other HIEs, assess what their level of education is around the technology and what their needs are to move forward with consent.

	IDENTIFIED eHEALTH PRIORITY AREAS	
1	Access to clinical data, specifically around the areas below: • Send care providers Hospital and Emergency Department (ED) discharge summaries and patient's medications immediately upon discharge, for both avoidance of drug-to-drug adverse events, medication reconciliation, and for patient medication	

	management. • Inform post-acute care providers of patient's lab orders and results to inform patient treatment plan and avoid duplicate tests. • Exchange of care plan goals to align patient care across organizations.	
2	Identify providers in the patient's care team, within outside networks, and identify when they get care at these organizations.	
3	Enhance patient population analytics to stratify patients to identify high-risk and high utilizers to reduce health care costs**.**	
4	Implement policies for patient consent and sharing of sensitive information	

	HIT IMPROVEMENT IDEAS	
1	The HIway could provide a map to community organizations to show what each organization is capable of sending, what they are capable of receiving and make the toolsets available to see what can be done today with the HIE to move people forward.	
2	Publish a provider directory or list of Direct addresses to facilitate increased HIE transactions among community organizations. This is currently against HIway agreements.	
3	Narrowly identify a clinical initiative such as "Improve identification of high risk patients." Use this clinical initiative to involve appropriate clinical, business, and IT resources in each organization. Systematically address organization connectivity, technology, workflow process, and human resource components until there is functioning information flow among organizations.	
4	Create a Regional HISP group, facilitated by the Statewide HIE, for collaboration and idea sharing. The group should include Vendors as well as state and local HISPs representatives.	
5	Deploy programmatic staff that can facilitate a consumer engagement group to identify patient opinions on the HIway and other HIEs, assess what their level of education is around the technology and what their needs are to move forward with consent.	

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 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*