Commonwealth of Massachusetts
Executive Office of Health and Human Services

Improving Care Coordination by using Mass HIway Direct Messaging

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Today's Presenters

Elisabeth Renczkowski
Content Specialist, Outreach and Education, Mass HIway
Massachusetts eHealth Institute (MeHI)
Renczkowski@masstech.org

Keely Benson
Account Management and Consulting Project Director, Mass HIway
Massachusetts eHealth Institute (MeHI)
benson@masstech.org

This presentation has been reviewed and approved by the Mass HIway,
and the presenters are acting as authorized representatives of the Mass HIway.

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Mass HIway – Massachusetts's statewide HIE

Mission: Enable Health Information Exchange by healthcare providers and other HIway users regardless of affiliation, location or differences in technology

HIway Direct Messaging

- Secure method of sending transmissions from one HIway User to another
- HIway connection for Massachusetts Public Health Reporting
- *HIway does not use, analyze or share information in the transmissions and does not currently function as a clinical data repository*

HIway Provider Directory

- Provider Directory listing in-state and out-of-state providers connected to HIE
- Contains information for 21,000+ HIway Users

HIway-Sponsored Services

- State-wide Event Notification Service (ENS) - anticipated to launch in 2019

HIway Adoption and Utilization Support (HAUS) Services

- Assistance for eligible organizations in the deployment of HIE to enhance care coordination

Care Coordination Drivers

Meaningful Use (MU)

- Specified transaction level targets for Hospitals, Physicians, Specialists, NPs
- Does not include Behavioral Health (BH), Long Term Care, SUD programs, or Long Term Support Services (LTSS)

Quality Payment Program (QPP) – Value Based Payment

- Merit-based Incentive Program (MIPS) – Promoting Interoperability
- Advanced Alternative Payment Models (APM)

MA 1115 Waiver

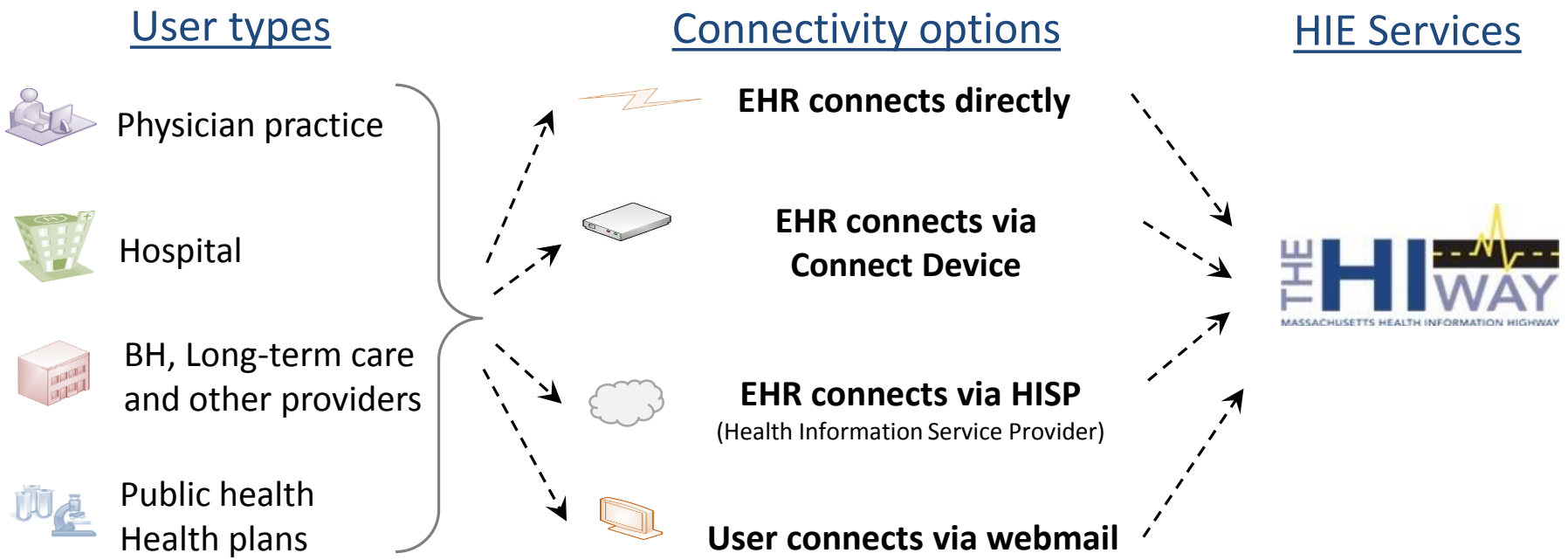
- Focus on integrating Behavioral Health Community and Accountable Care Organizations
  - Mental health and substance use disorder treatment
  - Support for the social determinants of health
- Community Partners include LTSS and BH orgs which may not use C-CDA documents
  - Often don't have electronic exchange capability. E.g.: may use PDF assessments

HIway Direct Messaging

Secure method for transmitting messages between providers for wide variety of use cases

Supported Use Case Categories

- Public Health Reporting
- Provider-to-Provider Communications
- Payer Case Management
- Quality Reporting (as per the Mass HIway Policies & Procedures)



Migration to Mass HIway 2.0 is in progress

Mass HIway 2.0 is a member of DirectTrust and is connected to many private HISPs. This offers a rich network for HIway Direct Messaging to MA providers.

What type of documents can you send?

The HIway is 'content agnostic,' and does not restrict message types

Patient clinical information

- Summary of Care / Transition of Care Record (TOC)
- Request for Patient Care Summaries
- Discharge Summaries
- Referral Summary Information
- Specialist Consult Notes
- Progress Notes

Patient clinical alerts

- Emergency Department Notification
- Mortality Notification
- Transfer Notification
- Disposition Notification (admit/discharge)

Quality reporting

- Reporting of clinical quality measures (CQMs)

Public Health Reporting*

Securely comply with reporting regulations for the Massachusetts Department of Public Health (DPH)

- Massachusetts Immunization Information System (MIIS)
- Electronic Lab Reporting (ELR)
- Syndromic Surveillance (SS)
- Massachusetts Cancer Registry (MCR)
- Opioid Treatment Program (OTP)
- Childhood Lead Poisoning Prevention Program (CLPPP)
- Occupational Lead Poisoning Registry (Adult Lead)

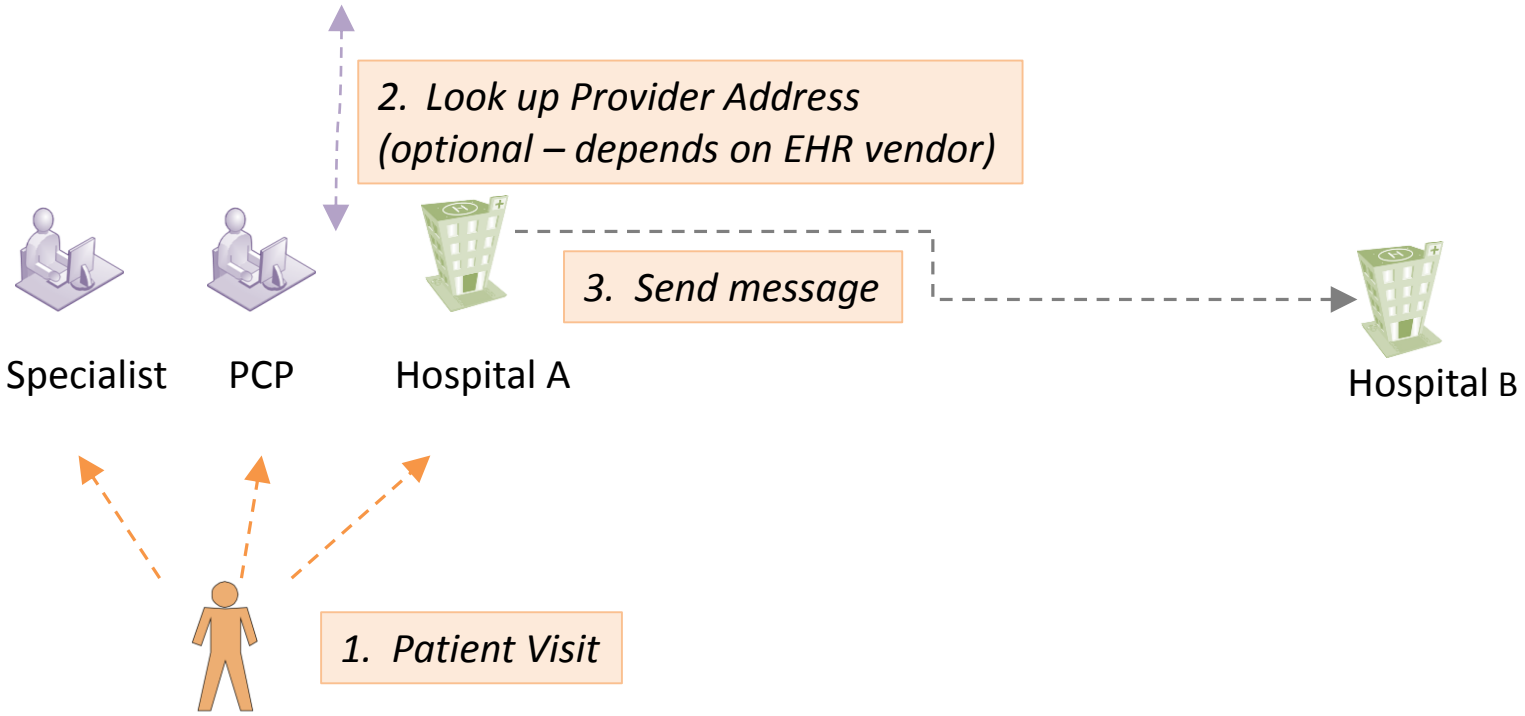
* There is no cost for a HIway connection that is used exclusively for DPH reporting.

Example of Direct Messaging

Data holder sends patient information to recipient

Provider Directory

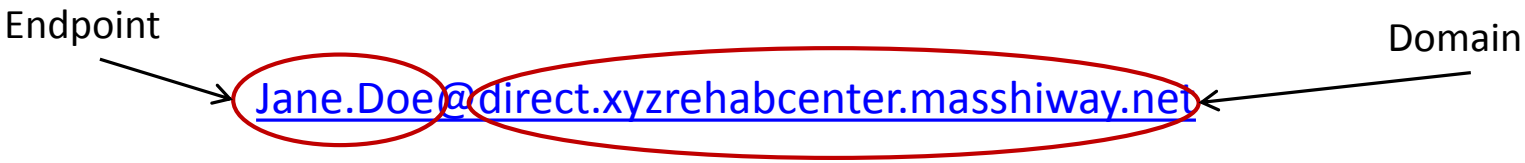
Provider name	Local name	Institution	Direct address
Smith, Marilyn M	Smith, Marilyn	Hospital	Marilyn.Smith@direct.HospitalB.masshiway.net
Smith, Marilyn M	Smith, Mary	HPC Primary Care	Marilyn.Smith@direct.HPC.masshiway.net



Direct Messaging

Direct Messaging is encrypted email sent to secure Direct email addresses

Individual Direct email address:



Organization Direct email address:

XYZRehab@direct.xyzrehabcenter.masshiway.net

Departmental Direct email address:

PresurgicalTestingCenter@direct.abchospital.masshiway.net

Third-Party HISP Direct email addresses:

john.smith@practicename.eclinicaldirect.com

john.smith.x@xxxx.direct.athenahealth.com

johnsmith@xxxxx.allscriptsdirect.net

johnsmith@xxxxx.circlehealthdirect.org

Mass HIway Provider Directory (PD)

Searchable directory of individual and organizational Direct email addresses

Purpose of the Mass HIway PD

- Provides destination addresses for Direct messaging (i.e. Direct email address)
- In-state and out-of-state Direct addresses (requires HIway 2.0)
- Stores the specific details such as organization name, provider name, specialty, contact info, NPI and personal/organizational email address, Direct email address

Mass HIway PD contains over 21,000+ addresses

- Organization, department, and individual level addresses

Account Manager will assist you in operationalizing the Mass HIway PD

- Identify who of your trading partners are in the Mass HIway Community
- How to engage additional trading partners to exchange on the HIway

Participants can get on the distribution list by emailing us at masshiway@state.ma.us

What are Use Cases?

Use Case Categories		Example Use Cases
Provider-to-Provider Communications		• Hospital sends a discharge summary to a Skilled Nursing Facility (SNF) or Long Term/Post Acute Care (LTPAC) facility • Primary Care Provider (PCP) sends a referral notice to a specialist • Specialist sends consult notes & updated medications list to patient's PCP • Hospital ED requests a patient's medical record from a PCP • PCP sends a CCD or C-CDA with Problems, Allergies, Medications, and Immunizations (PAMI) to a Hospital caring for their patient
Payer Case Management		• ACO sends quality metrics to a payer • Provider sends lab results to a payer • Provider sends claims data to payer
Quality Reporting		• Provider sends clinical data to Business Associate for quality metrics analysis • Provider sends quality metrics to Business Associate for report preparation
Public Health Reporting	**to DPH**	• Massachusetts Immunization Information System (MIIS) • Syndromic Surveillance (SS) • Opioid Treatment Program (OTP) • Childhood Lead Paint Poison Prevention Program (CLPPP)
	to other agencies	• Occupational Lead Poisoning Registry (Adult Lead) • Children's Behavioral Health Initiative (CBHI)

Transition vs Summary of Care (CMS)

Event: Transition of Care (TOC) and Referrals

TOC — The movement of a patient from one setting of care to another

- Hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility

Referrals — Cases where one provider refers a patient to another, but referring provider maintains care of the patient as well

Content: Summary of Care

Summary of Care — Key clinical information shared during a TOC, typically from an EHR

C-CDA — Consolidated Clinical Document Architecture, is a human and machine readable Summary of Care, e.g. CCD

Transport: Must be Machine readable and HIPPA compliant

Examples

- Direct Protocol – Mass HIway, 3rd party HISP
- Secure email, Query based exchange

Why focus on TOC Summaries?

Improved Care Coordination

- Problems, Allergies, Medication Reconciliations, Med Allergies & Social History
- Care plans, Discharge instructions and Assessments

Improved Patient Experience

- Eliminate that patients and families have to chase down their records
- Avoid unnecessary or duplicative tests and other adverse situations
- Reduce readmission rates

Increased Efficiency, Reduced Costs, Security

- ~3.2 M avoided fax pages to process
  = 800,000 discharges per year * avg. 4 page discharge summary = ~213 trees in paper when printed
- Have the right info, securely, at the right time, and for the right patient

Significant opportunities to streamline the workflows

- Improved quality of data in summary of care documents
- Improved HIE compatibility across vendors to accept all documents

Example: Hospital Discharge

Transition of Care – Hospital Discharge

Patient Scenario:

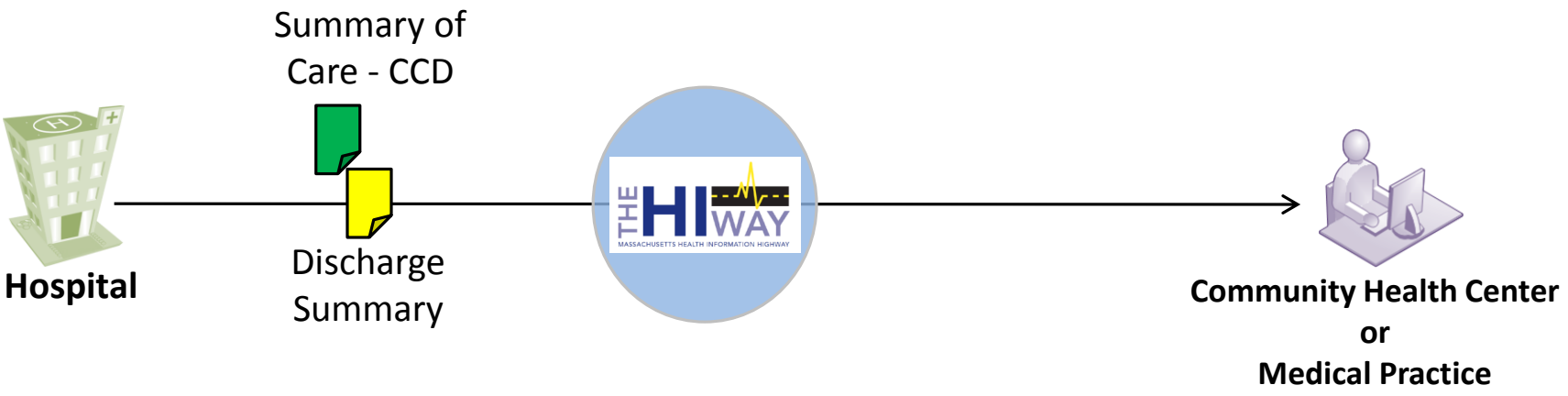
1. Patient discharged from Hospital
2. Discharge C-CDA is sent via Mass HIway to PCP and/or other providers involved in follow up care
3. Patient sees PCP and other providers for follow up

Information Flows:

A. Hospital identifies patient's PCP and other care team members

B. Hospital sends Discharge Summary to patient's PCP and other care team members at discharge (may be automated or manual)

C. PCP receives information about the patient's hospital visit that is critical to follow up care



Example: Specialist Referral

Transition of Care – Specialist Referral and Consult

Patient Scenario:

1. Patient sees PCP
2. PCP refers patient to a specialist
3. Patient sees specialist
4. Patient sees PCP for follow up care

Information Flows:

A. PCP sends Specialist a summary of care document via the Mass HIway

B. Specialist sends PCP a consult note via the Mass HIway

Example: ER, Inpatient & BH Exchange

Emergency Behavioral Health Assessment

Patient Scenario:

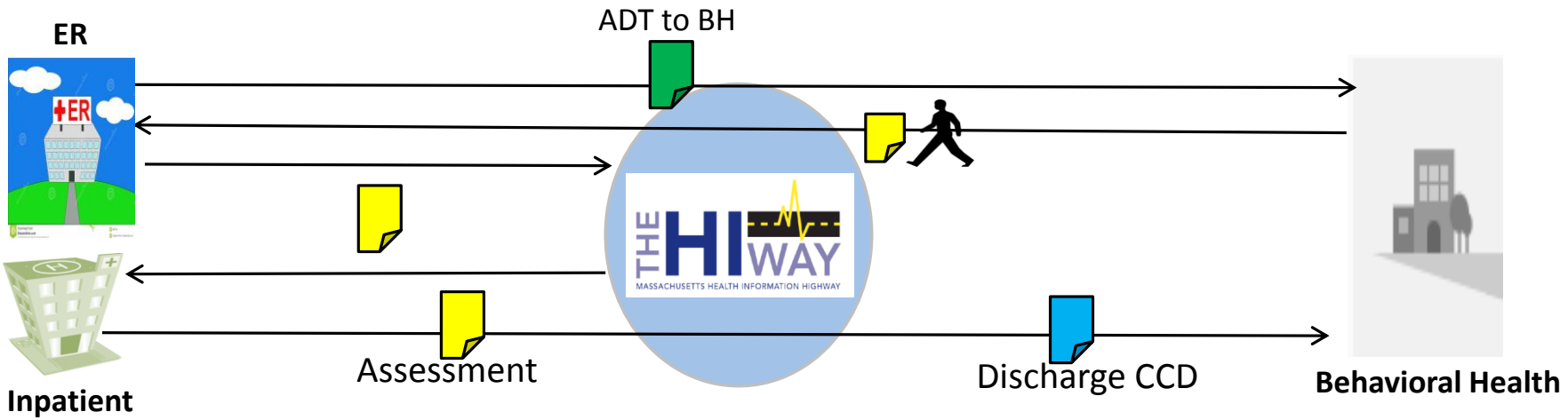
1. Patient arrives at hospital ED
2. Patient requires Behavioral Health assessment
3. Behavioral Health provider comes to ED and performs assessment
4. Patient admitted

Information Flows:

A. A behavioral health provider completes assessment (PDF) while the patient is in ER

B. BH health provider sends the assessment to the inpatient behavioral health unit

A. Upon discharge, Inpatient unit sends final assessment and discharge CCD to BH facility for follow-up



Creating a Useful Summary of Care

Does the Summary of Care have the data that the next provider of care needs?

Continuity of Care Documents, Discharge Summaries, and Referrals

- C-CDA templates that can be changed to incorporate additional data sections
- What information is needed by who and when?
- Can the recipient find what they need? Too much history?
- Are the workflows and triggers for data capture and sending well understood?
- Are receiving organizations ready to consume summary of care?
- If not, how will the document be sent so the recipient can receive and view it?
- Have all the required document types been tested for consumption?

Improve Care Coordination via Interoperability

Focus on providing actionable health information at the point of care

- Collaborate with trading partners to encourage electronic exchange
- Optimize access to patient information across multiple/redundant systems
- Ensure published Direct addresses are active
- Ensure the owners of the HIE accounts have been trained to use them
- Engage the Mass HIway Account Management Team

This is NOT just an IT Project: Engage clinical & business operations

Important Notice: Participants must use active Mass HIway addresses and verify that the intended recipient is ready to receive the type of message the Participant is sending over the Mass HIway. If the Participant is made aware that the intended recipient is not ready to receive that message type over the Mass HIway, the Participant needs to find an alternative means to send the information.

Use Case: Cape Cod Healthcare Center

Develop a consistently reliable way to track and manage the process of sending clinical information to outside care providers when a patient is discharged

Milestone 1
Resolve connectivity issues, develop clinical documentation standards, test direct messaging, and finalize the standards

Milestone 2
Develop care coordination prototypes

Milestone 3
Streamline process improvement plans, develop reports to track performance, and correct process breakdowns

Milestone 4
Expand workflows with two collaborating orgs to create foundation for sustainability and expansion plans

Cape Cod Healthcare

Challenges

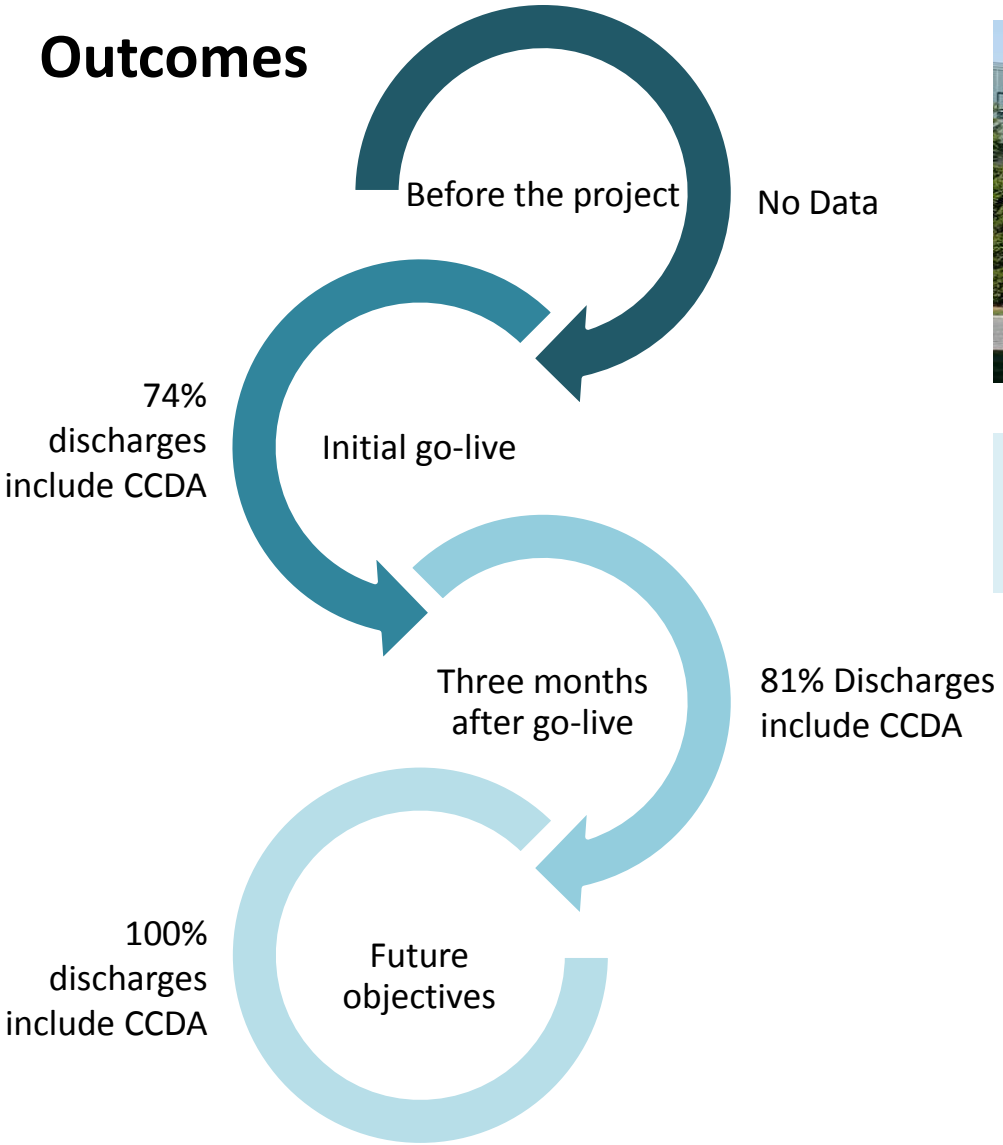
- Coordinating activities between so many different stakeholders and organizations with varying levels of sophistication
- Needing to update the system to transmit CCDAs electronically
- Collaborating organizations continuing to print CCDAs

Feedback

- Option to add data to the CCDA
- Ability to see a patient identifier in the transaction list before opening a file
- Capability to separate organizations that use the Mass HIway from those that do not

Use Case: Cape Cod Healthcare Center

Outcomes



New workflows resulted in major improvement from previous methods of manual communication, accelerating exchange of messages between providers

Next Steps

Expanding the process to other organizations throughout Cape Cod

This will allow CCHC access to real-time medical information for all patients immediately upon admission

Use Case: Brockton Neighborhood Health Center

Develop care coordination improvements for

- Patients with behavioral health needs
- Patients in detox or inpatient SUD treatment who experience medical emergency
- Patients requiring Section 12 emergency psychiatric evaluation

Brockton Neighborhood Health Center

Consent to release information

- Most time consuming issue
- Required revisions to release forms at multiple orgs
- Ultimately developed an eConsent module in EHR
  - Block transmission if consent is denied
  - Release form available in languages for the 1st time

Use Case: Brockton Neighborhood Health Center

THE HIWAY
MASSACHUSETTS HEALTH INFORMATION HIGHWAY

Accomplishments

- Established ability to exchange CCDs and electronic referrals between trade partners
- Developed streamlined workflows to better coordinate care and eliminate paper document exchange
- Implemented new Authorization to release info form via eConsent module
- Smaller volumes of CCDs/electronic referrals exchanged

Outcomes

- **Measure:** Repeat ED visits for all BH diagnoses
  - Baseline: 20.4%
  - Target: 18.4%
  - **Actual: 19.9%**
- **Measure:** Readmissions for all BH diagnoses
  - Baseline: 11%
  - Target: 9%
  - **Actual: 5.3%**

Lessons Learned

- Collaboration is key
- Evaluating consent to release information is extremely important
- Clinicians like being able to send info electronically
- Working with EHR and HISP vendors can be a challenge
- Competing IT priorities can hinder implementation
- Implementing new workflows is challenging in emergency situations

Next Steps

BNHC hopes to continue its work with Brockton Hospital's psychiatric unit

Connect directly with CCBC Crisis team via similar workflow

Connect with Gosnold Treatment Center

Continue community-wide efforts to coordinate care for behavioral health patients

Brockton Neighborhood Health Center

Multiple Use Cases: Circle Health

THE HIWAY
MASSACHUSETTS HEALTH INFORMATION HIGHWAY

Live

Integration
Circle Health to Atrius Health

- Approximately 1000-1100 ADTs sent per week from LGH over the Mass HIway
- Atrius Health creates admit/discharge encounters from the ADT feed in their EMR to notify the providers when their patients have been seen at LGH
- Reports distributed to case management and nursing for post acute care workflows

Live

CCDs and ADT notifications
Tufts Medical Center to Lowell General PHO Practices

- LIVE at 17 practices
- Currently receive both notifications and faxes
- Goal is to eliminate fax
- Office staff matches the patient and forwards Direct message to the provider (saves time)
- Helps staff in making sure patients come in timely to see their PCP
- Plan is to roll-out to other Circle Health affiliated practices with ability to receive ADTs

Testing

Integration
Circle Health Mother Infant Unit and Tufts L&D Dept

- Reports and clinical documents sent to Tufts Specialists
- Old process involves sending 50 pages by fax per patient for consults and transfers
- NST reports, Consult documents, OB notes
- Future of utilizing Direct messaging will streamline workflows
- Goal is to replace fax workflows with HIE-based workflows

Live

Integration
LGH Medical Group, Women Health and Tufts Maternal Fetal Medicine

- Referrals for Level 2 Ultrasounds
- Current process involves multi-page fax per patient
- Referral letter, Labs, Imaging results, OB notes
- Future state process of utilizing Direct messaging would help streamline the workflow

circlehealth
Complete connected care℠

Use Case: Circle Health

Challenges

- Direct messaging workflow – multiple Direct addresses
- Practice workflow – Message Pool vs. Provider inbox
- Variation between EMRs and workflows
  - Standards (no "Direct" standards from non CCDA exchange)
  - Type of documents that can be exchanged
- Transmission problems (certificate issues, technical challenges to exchange info among up to 4 vendors
- Data reconciliation (meds reconciliation, lack of data consistency, SNOMED vs. ICD-10, clinical workflow)
- Organizational challenges – competing priorities, lack of resources to devote to interoperability projects

Lessons Learned

- Achievable goals driven by use cases
  - Transitions of care
  - ADT notifications
  - Secure communication
  - Consult requests between physicians
- IT knowledge base
- Governance
- Emphasis on value
- Patients think we already have this capability

The 1-2-3 of connecting to Mass HIway

1. **Ask your EHR vendor** if they are connected to, or able to connect to, the HIway

2. **Contact us.** We will connect you with a Mass HIway Account Manager to get your organizations enrolled and connected

3. **Develop and deploy a Use Case to Exchange** with your trading partners!

The Massachusetts Health Information Highway (Mass HIway)
Phone: 1.855.MA-HIWAY (1.855.624.4929)
Email for General Inquires: MassHIway@state.ma.us
Email for Technical Support: MassHIwaySupport@state.ma.us
Website: www.MassHIway.net

Mass HIway Account Management Team

Front-line Mass HIway support to get you enrolled, connected and using Direct Messaging

- ✓ Enrollment
- ✓ Use case identification
- ✓ Trading partner identification
- ✓HIE best practices

Keely Benson
Account Management and Consulting Project Director
benson@masstech.org

Andrea Callanan
Account Manager
callanan@masstech.org

Joe Kynoch
Account Manager
kynoch@masstech.org

Liz Reardon
Account Manager
reardon@masstech.org

How Can We Help?

Enroll, Connect, and Actively Use of HIE

- Assess HIE opportunities and barriers for your organization and providers
- Identify viable exchange trading partners and relevant use cases
- Engage, facilitate and manage electronic exchange across trading partners
- Operationalize mutually agreed upon, testing protocols, workflows and processes
- Get the right information, securely, to the right provider, at the right time
- Streamline/Optimize workflows – internal & external
- HIE Educational services to all levels of the organization
- Share lessons learned among the various HIE participants

HIway Adoption & Utilization Support (HAUS) Services

Mass HIway offers HAUS Services to assist organizations in the deployment of electronic health information exchange to enhance care coordination

HAUS Account Management team will assist organizations with

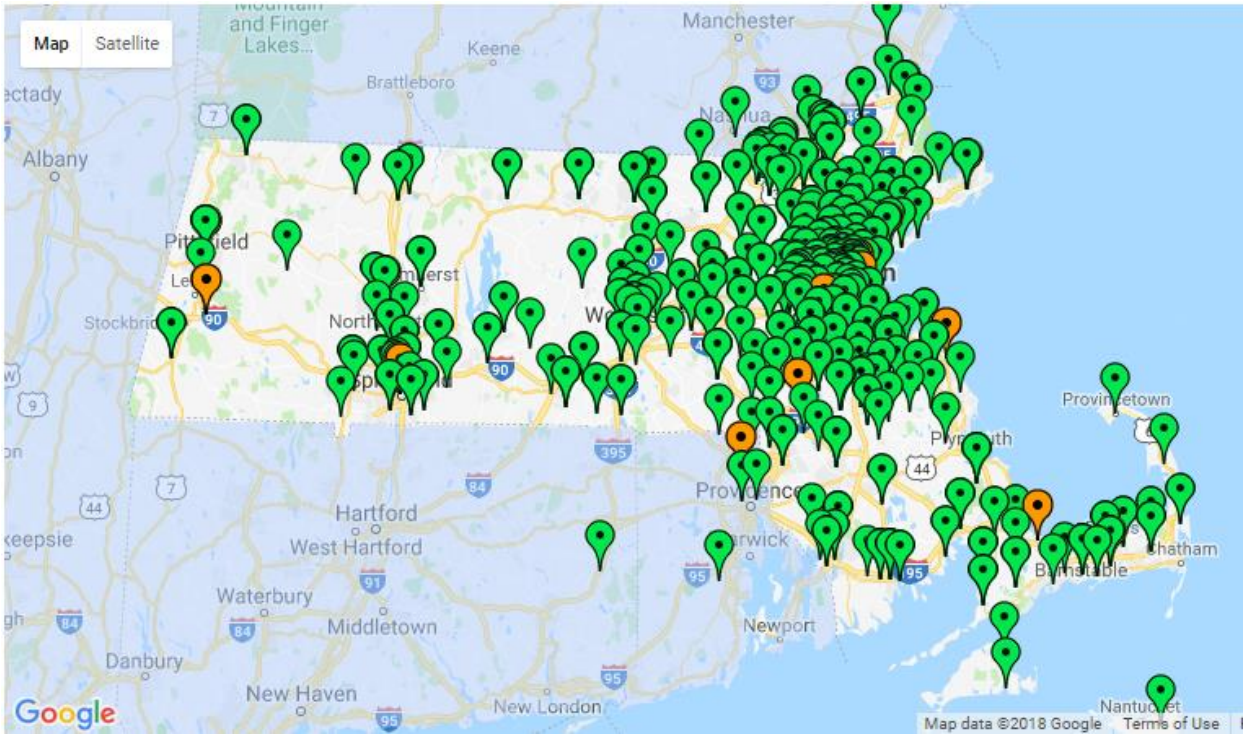
- Technical Connectivity Assessment
- New or improved utilization of HIE in care coordination, through the development and implementation of HIE-supported use cases
- HIE Technology and Workflow Project Plan

Two tracks available to receive HAUS Services

- HAUS for MassHealth Accountable Care Organizations (ACOs), Community Partners (CPs), and Community Service Agencies (CSAs), in partnership with MassHealth
- HAUS for other healthcare organizations that need to connect to the Mass HIway for the purposes of meeting the regulations

Who is connected to the Mass HIway?

An interactive Mass HIway Participant Map is available on Mass HIway website*
It includes over 1,400 participants across the care continuum



Hospitals

Ambulatory Practices

Community Health Centers

Behavioral Health

Long-Term Post-Acute Care

Social Services

PCPs

Specialists

* Find the map on the Mass HIway website: www.masshiway.net. Under the Resources drop-down menu, select Participant List. The map is maintained in partnership with MeHI, the Massachusetts eHealth Institute

The Mass HIway Regulations

Establishes requirements for organizations that use the Mass HIway

Implements state requirement for providers to connect to Mass HIway, which is referred to as the *HIway Connection Requirement*

Establishes mechanism to allow patients to opt-in and opt-out of Mass HIway

Regulations went into effect on February 10, 2017

- Require information be transmitted via HIway Direct Messaging in compliance with applicable federal and state privacy laws and implementing regulations

Supporting documentation available on Mass HIway website

Mass HIway Regulations Summary

Mass HIway Regulations FAQs

Mass HIway Policies & Procedures (version 3)

Mass HIway Fact Sheet for Patients

Mass HIway Education Webinars

HIway Connection Requirement Phased in over 4 years

The statutory requirement that Provider Organizations implement "interoperable EHR systems" that connect to the Mass HIway will be fulfilled by implementing HIway Direct Messaging

How organizations must fulfill the HIway Connection Requirement is phased in over 4 years

1. **The connection requirement gets progressively stricter in each year of implementation**
2. **Penalties for not meeting the HIway Connection requirement begin in Year 4 of implementation**
3. **The 4 year phase-in period is based on when the Provider Organizations must be connected**

Organization Type	Year 1	Year 4
Acute Care Hospital	2017	2020
Large and Medium Medical Ambulatory Practices	2018	2021
Large Community Health Centers	2018	2021
Small Community Health Centers	2019	2022

Provider types not yet specified in the regulations are anticipated to be required to connect at a future date. Guidance to the affected providers will be provided with at least one year notice.

HIway Connection Requirement Phased in over 4 years

The 4 year phase-in approach progressively encourages providers to use the Mass HIway for Provider-to-Provider communications via bi-directional exchange of health information

Progressive HIway Connection Requirements

Year 1 **Send or receive** HIway Direct Messages for at least one use case
- Can be from **any use case category** listed below

Year 2 **Send or receive** HIway Direct Messages for at least one use case
- Must be a **Provider-to-Provider Communications** use case

Year 3 **Send** HIway Direct Messages for at least one use case, **and**
Receive HIway Direct Messages for at least one use case
- Both must be **Provider-to-Provider Communications** use cases

Year 4 Meet Year 3 requirement, **or** be subject to penalties if requirement isn't met
- Penalties go into effect in the applicable Year 4 (E.g. Jan 2020 for Acute Care Hospitals)

2018

Future

Additional ENS Requirement for Acute Care Hospitals Only

Send Admission Discharge Transfer notifications (**ADTs**) to HIway within 12 months of ENS launch

Use Case Categories:

1. Public Health Reporting
2. Provider-to-Provider Communications
3. Quality Reporting
4. Payer Case Management

Mass HIway Pricing Rates

THE HI WAY
MASSACHUSETTS HEALTH INFORMATION HIGHWAY

Massachusetts Health Information Highway Rate Card effective December 1, 2017

Tier	Category	Description	One-time set-up fee (per node)	Direct Messaging Service		
				Annual Services Fee (per node)	Annual Services Fee + LAND (per node)	Annual Services Fee Webmail (per mailbox)
Tier 1	1a	Large hospitals/Health Systems	$2,500	$15,000	$27,500	$60
	1b	Health plans				
	1c	Multi-entity HIE or Technical Integrator (see 14.1.1)				
	1d	Commercial imaging centers & labs				
Tier 2	2a	Small hospitals	$1,000	$10,000	$15,000	$60
	2b	Large ambulatory practices (50+ licensed providers)				
	2c	Large LTCs (500+ licensed beds)				
	2d	Ambulatory Surgery Centers				
	2e	Ambulance and Emergency Response				
	2f	Business associate affiliates				
	2g	Local government/Public Health				
	2h	MassHealth ACO, CP, or CSA Technical Integrator (see 14.1.1)				
Tier 3	3a	Small LTC (< 500 licensed beds)	$500	$2,500	$4,500	$60
	3b	Large behavioral health (10+ licensed providers)				
	3d	Large FQHCs (10+ licensed providers)				
	3e	Medium ambulatory practices (10-49 licensed providers)				
Tier 4	4a	Small behavioral health (< 10 licensed providers)	$25	$175	$250	$60
	4b	Home health, LTSS				
	4c	Small FQHCs (< 10 licensed providers)				
	4d	Small ambulatory practices (3-9)				
	4e	Community Service Agency (CSA)				
	4f	CP or CSA management-only entity				
Tier 5	5a	Very Small ambulatory practices (1-2)	$25	$60	$60	$60

Mass HIway Website and Newsletter

To learn more, visit the www.MassHIway.net website

- **Select Resources for additional info, or News and Events for on demand presentations,**
- **and sign up to receive the HIway newsletters and notices**

Mass HIway Contact Information

Thank you!

The Massachusetts Health Information Highway (Mass HIway)
Phone: 1.855.MA-HIWAY (1.855.624.4929)
Email for General Inquires: MassHIway@state.ma.us
Email for Technical Support: MassHIwaySupport@state.ma.us
Website: www.MassHIway.net