Commonwealth of Massachusetts

Executive Office of Health and Human Services



Health Information Technology Council Meeting

August 7, 2017





- 1. Welcome Alice Moore
- 2. Mass HIway infrastructure update Dave Bowditch
- 3. HIway connection requirement: Year 1 update Michael Chin
- 4. Mass HIway Event Notification Service (ENS) update David Whitham
- **5. BMC's PreManage ED implementation** *Arthur Harvey*

Appendix A: HIway Operations Update

Appendix B: Additional slides regarding the Mass HIway infrastructure update





Mass HIway infrastructure update

Dave Bowditch



Implementing the new Mass HIway Direct Messaging System: "HIway 2.0"



- At the May 2017 HIT Council meeting, we reviewed the reasons why a new Direct Messaging System is required and the benefits to be achieved, including:
 - Accredited by EHNAC for participation in DirectTrust
 - Current standards supported making it easier to connect to other systems
 - Commercial solution with regular enhancement releases and product support
 - New features and improved functions that are easier to use

See Appendix B for the two slides that presented this information in more detail at the May 2017 HIT Council meeting.

Progress Update:

- EOHHS is currently negotiating a contract with the selected vendor to implement a new Mass HIway Direct Messaging System, also known as HIway 2.0.
- The parties expect to sign a contract before the end of October 2017.



Implementing "HIway 2.0" (continued)



Implementation Timeline

The following are some of the key milestones, with specific dates to be determined based on the date the contract is signed.

3 Months After Contract Signing

- HIway 2.0 goes live
- Start onboarding all new Participants to HIway 2.0
- Start migrating existing Participants from HIway 1.0 to HIway 2.0
- HIway 1.0 continues to operate in maintenance-only mode with no new enhancements or upgrades

12 Months After Contract Signing

- Finish migrating existing Participants from HIway 1.0 to HIway 2.0
- Decommission HIway 1.0 after all Participant migrations have completed



Implementing "HIway 2.0" (continued)



Set-up Activities Prior to Go-Live

- Initial Setup & Install 2 months
 - Connection of EOHHS to a platform that is EHNAC Accredited and DirectTrust Certified
 - HISP-to-HISP setup for HIway 2.0 domains and services
- Pilot Participant connections 1 month
 - Pilot Participant sites
 - Specific sites to be identified by EOHHS
 - Early adopter planning: OCHIN, MEDITECH Multi-Recipient Users, etc.
 - Initial Webmail migrations
 - Optional depending on readiness and priorities



Implementing "HIway 2.0" (continued)



Participant Migration Plans

- Selected vendor to develop project plan for EOHHS approval
- EOHHS to determine priority of participants and/or connection methods
 - Migration Volumes (as of March 2017):
 - Webmail: 277 participants @ 4 hours each = 1,108 hours (~7 months FTE)
 - LAND: 150 participants @ 5 hours each = 750 hours (~5 months FTE)
 - Direct: 45 participants @ 40 hours each = 1,800 hours (~12 months FTE)
 - o HISP: N/A Direct Trust
- Task Details by Connection Type
 - Webmail:
 - o Data Migration
 - User Migration
 - Direct:
 - o Domain Migration
 - Endpoint Migration
 - LAND:
 - Remote application upgrade or hardware replacement





HIway connection requirement: Year 1 update

Michael Chin



Year 1 Attestation Form: Who, When, How



• Who & When: Provider organizations that have HIway connection dates that are specified in the Mass HIway Regulations are required to submit a Year 1 Attestation Form by July 1st after their initial HIway connection requirement.

Provider Organization	Date of the "Year 1" HIway connection requirement	Due date of the Year 1 Attestation Form		
Acute Care Hospitals	February 10, 2017	July 1, 2017		
Large and Medium Medical Ambulatory Practices	January 1, 2018	July 1, 2018		
Large Community Health Centers	January 1, 2018	July 1, 2018		
Small Community Health Centers	January 1, 2019	July 1, 2019		

• **How**: Year 1 Attestation Forms should be submitted to the Mass HIway (via email at: MassHIwayAttestation@state.ma.us)

• The Year 1 Attestation Form (and instructions) are available on the Mass HIway web page.



Year 1 Attestation Form: What



The Year 1 Attestation Form is two pages long, and will be used by provider organizations that have a HIway connection requirement date.

The form will provide information about: (1) how the organization met the requirement, and (2) their EHR (if they have one), and how they connect to the Mass HIway.

The Year 1 Attestation Form collects the following information:

- 1. How the organization met the Year 1 Hlway connection requirement:
 - The Year 1 requirement: To send or receive HIway Direct Messages for at least one use case (The use case may be within any category of use cases)
 - Questions on the attestation form include:
 - The use case is within what category of use cases?

 Categories include: (1) Provider-to-Provider Communications, (2) Payer Case Management,

 (3) Quality Reporting, (4) Public Health Reporting, (5) Other
 - Describe the use case
 - o Approximate # of HIway Direct Messages per month for the use case
- 2. Describe whether or not the organization has an EHR (and if so, how does it connect to the HIway):
 - Questions on the attestation form include:
 - Name and version of the EHR?
 - o Is the EHR an ONC Certified Health IT Product?
 - Options include: (1) EHR directly to HIway, (2) EHR via a HISP, or (3) via Mass HIway webmail



HIway connection requirement: Years 2-4



The HIway connection requirement follows a four-year phased-in approach that progressively encourages use of the Mass HIway for Provider-to-Provider communications and bi-directional exchange of health information.

How Provider Organizations connect:

- <u>Year 1</u>: Send or receive HIway Direct Messages for **at least one use case**. The use case may be within **any category** of use cases.
- <u>Year 2</u>: Send or receive HIway Direct Messages for **at least one use case that is within the Provider-to-Provider Communications category** of use cases.
- <u>Year 3</u>: **Send** HIway Direct Messages for at least one use case, **and also receive** HIway Direct Messages for at least one use case. Both of these uses cases should be within the **Provider-to-Provider Communications category** of use cases.
- <u>Year 4</u>: The provider organization may be **subject to penalties**, if that organization has not met the requirements established in this section. Penalties do not take effect until Year 4 of the connection requirement (i.e., in January 2020, at the earliest).

Acute Care Hospitals: In addition to using HIway Direct Messaging, Acute Care Hospitals are also required to send Admission Discharge Transfer notifications (ADTs) to the Mass HIway within 12 months of the ENS' launch as a part of the HIway connection requirement.



Year 1 Attestation Form: Status update



- As of mid-July 2017: the HIway received Year 1 Attestation Forms from 53 acute care hospitals in the Commonwealth
- The HIway is in the process of doing the following:
 - a) Reviewing individual attestation forms (and following up with hospitals if needed)
 - b) Aggregating information from the forms
 - c) Using information from the submitted forms to make minor improvement to the forthcoming:
 - Year 2 Attestation Form
 - Revised Year 1 Attestation Form (which is expected to be an on-line form)
- Some preliminary findings from the Year 1 Attestation Forms:
 - a) What type of use case is being used to meet the HIway connection requirement?
 - ~ 66% Public Health Reporting
 - ~ 32% Provider-to-Provider Communications
 - ~ 2% Quality Reporting
 - b) How are the hospital EHR systems connecting to the Mass HIway?
 - ~ 96% via EHR connecting directly to the Mass HIway
 - ~ 2% via EHR connecting via a HISP to the Mass HIway; ~2% via a LAND device





Mass HIway Event Notification Service (ENS) update

David Whitham



Mass HIway ENS: Overview



Goal of the Mass HIway ENS:

The goal of the Mass HIway Event Notification Service is to provide real-time notifications to authorized health care providers and organizations when a patient is admitted, discharged, or transferred to or from a hospital emergency room or inpatient setting.

Preparatory activities to date:

- Dec 2016 March 2017: HIway performed a scan of the existing ENS landscape around the nation
- March 2017 June 2017: Stakeholder sessions were conducted throughout the state
- June 6 July 28, 2017: RFI was released in early June 2017 in order gain more detailed insight
 into the ENS landscape, and to inform the forthcoming RFR



RFI preliminary findings



Highlights:

- Seven vendors responded to the RFI
- Several vendors have a strong market presence in Massachusetts

Preliminary findings:

- 1. Vendors' volume ranges from hundreds of thousands to millions of ENS notifications sent monthly
- 2. All vendors have connections to EHRs as well as HIEs
- 3. All vendors support standard ADT formats (HL7)
- All vendors have the capability of managing an opt-in/opt-out mechanism
- 5. Two vendors have stand-alone opt-in/opt-out mechanisms (which may enable the HIway to potentially use this mechanism for other HIway-sponsored Services in addition to ENS)
- All vendors provide provider-patient relationship management in an on-going fashion (frequency of updates is flexible for the subscribers to define)
- 7. Most vendors are above the 99.9 percentile for accuracy with patient identification
- 8. Granularity of information in the notifications can be user-defined
- 9. Deployment timelines vary from three months to eight months
- 10. Most vendors can send ADTs and ENS notifications via Direct Messages



Mass HIway ENS: anticipated timeline



- ✓ March June 2017: Hold stakeholder sessions to gain input regarding the ENS.
- June August 2017: Release RFI, review responses, meet with respondents as needed
- February September 2017: Prepare and release RFR
- Late 2017: Review RFR responses, select vendor, negotiate contract
- **Early 2018:** Preparations for launching the ENS (e.g., establish business processes, testing, defect remediation)
- **Summer 2018:** ENS soft launch

Note: this timeline is the anticipated timeline, and exact dates may be subject to change





BMC's PreManage ED implementation

Arthur Harvey



PreManage ED at BMC

August 7, 2017



PreManage ED



- Care management system for tracking patients across multiple ED visits at different systems
- Project initiated by MHA in response to "Guidelines for Emergency Department Opioid Management"
- As of July there were 10 systems live with 7 more planned to be live by August, and an additional 11 by the end of 2017

BMC – Emergency Department



- 67 Bed Unit including: Adult, Pediatric, Urgent Care,
 Psychiatric Emergency Services and 3 Trauma Bays
- ACS Certified Level 1 Trauma Center
- High Volume Department
 - FY 2016: 132,149 Visits

PreManage ED at BMC



- Principal use case is to assist in managing opioid utilization via bidirectional sharing of ED visit histories between organizations.
- In addition to the principal use case BMC felt that many of these 130,000+ visits, and subsequent Inpatient readmissions, can be prevented with early identification and better mechanisms for patient outreach.
- BMC believed that any type of duplicate data entry or reviewing patient records in multiple systems was likely to result in limited adoption due to volume and staffing levels.

How it Works at BMC



- Patient arrives at BMC ED.
- 2. Patient Demographic and Visit information is sent to PreManage ED via ADT interface
- PreManage matches patients against their database of patient and visit history across all clients
- If patient meets criteria set by BMC and/or the MHA, a result is sent via ORU interface to BMC's Epic ED application (ASAP)

Clinicians to not have to directly access PreManage ED at all, data is automatically interfaced into and out of Epic

ED Trackboard



My Side			A Side						
ED Pediatric Care		Room Ped Waiting Room		🎇 Fast Tracl			<u>⊠</u> % F		
S	Bed	Patient Nam	ne	Age	Complaint	E.	. E. 🔻	П	R
	B T	Bello, Carmen R (F)		3				6	48
	B 06	Bedhold, J	ason	3	PAIN			1	12
	B 04	Stewart, Jor	n (M)	3	PAIN			2	13
	B 02	Qpath, Kilo	(F)	3			1	1	19
	B 01	Test. Danie	I (M)	8				1	60
								J	

Icons:



Indicates the patient matches MHA criteria.

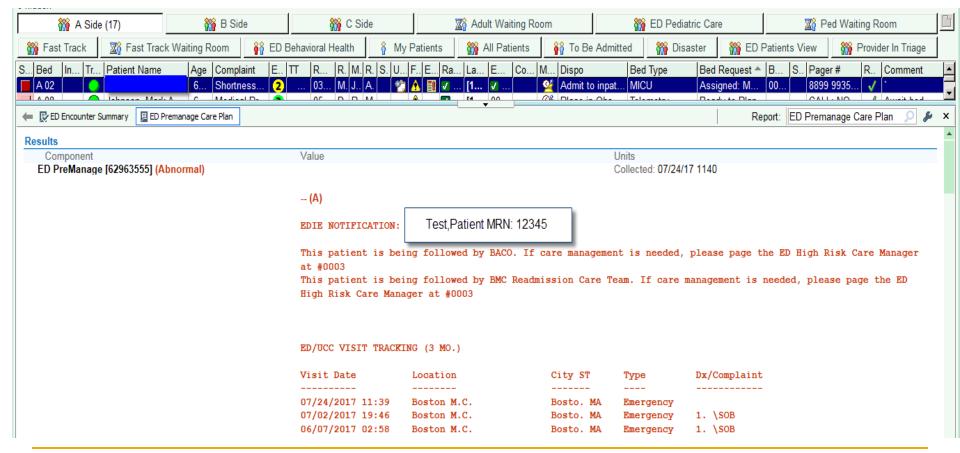


Indicates the patient is a BMC Identified high utilizer.

Trackboard and Report



A report will display attached to the Trackboard, containing the reason for inclusion, recent ED visits, recent IP visits, Care Plans, Security Events



Benefits and Challenges



- More timely access to care management team has had an impact on utilization
- ED staff has been pleased with the minimal impact to their workflows
- Product Vendor (Collective Medical Technologies) has been accommodating and easy to work with
- BMC IT team has worked directly with other organizations to share Epic integration code
- Currently most of the impact has come from BMC internal data since there is not yet "critical mass" of participants
- Current inability to access prescription information from MassPAT is reducing the ability to influence opioid use





Conclusion

Alice Moore



HIT Council - Meeting Schedule:

- Typically the 1st Monday of every third month
- Meetings are from 3:30 to 5:00 PM unless otherwise noted
- All meetings are at One Ashburton Place, 21st Floor, Boston
- Planned 2017 Meetings:
 - ✓ Monday, February 6, 2017
 - √ Monday, May 8, 2017
 - ✓ Monday, August 7, 2017
 - Monday, November 6, 2017

Commonwealth of Massachusetts

Executive Office of Health and Human Services



Thank you!





Appendix A: *HIway Operations Update*

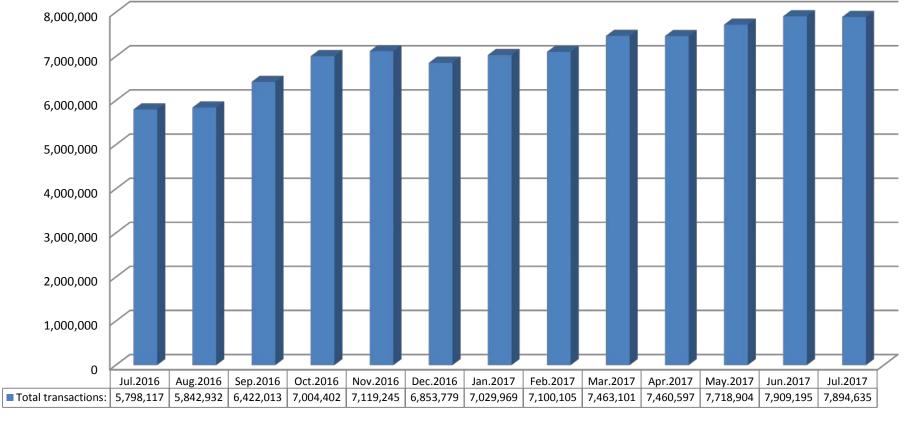


HIway Transaction Activity



13 Month Hiway Transaction Activity

7,894,635 Transactions* exchanged in July (06/21/2017 to 07/20/2017**) **158,342,312** Total Transactions* exchanged inception to date



^{*} Note: Includes all transactions over Mass HIway, both production and test

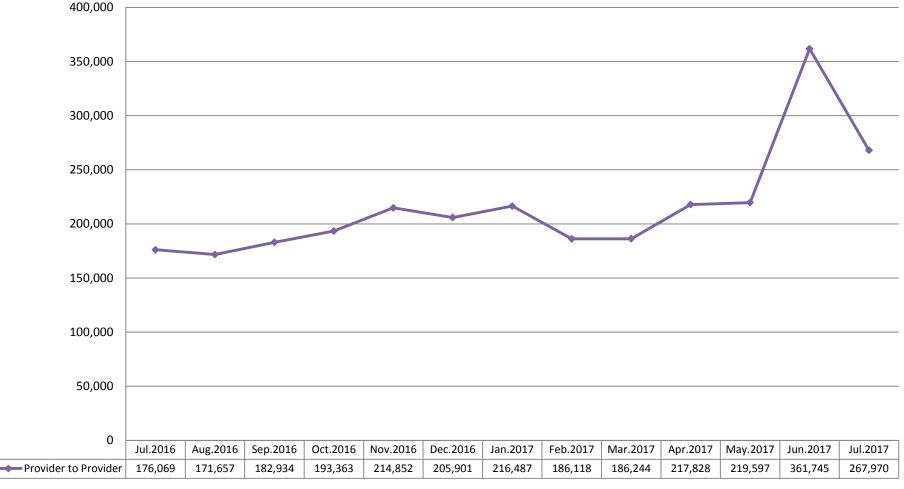
^{**} Note: Reporting cycle is through the 20th of each month.





<u>HIway Production Transaction Trends – Provider to Provider (Jul 2016 – Jul 2017)</u>

3% of HIway activity in July* was for Provider to Provider transactions



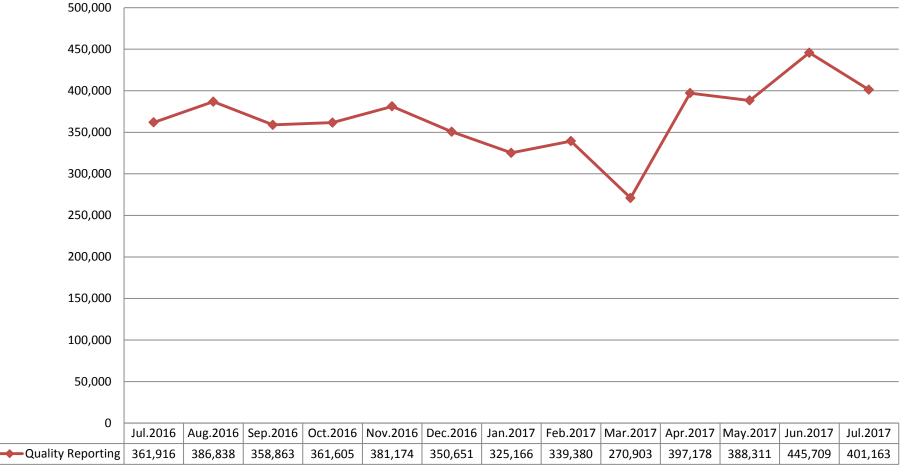
^{*} Note: Reporting cycle is through the 20th of each month.





<u>HIway Production Transaction Trends – Quality Reporting (Jul 2016 – Jul 2017)</u>

5% of HIway activity in July* was for Quality Reporting transactions



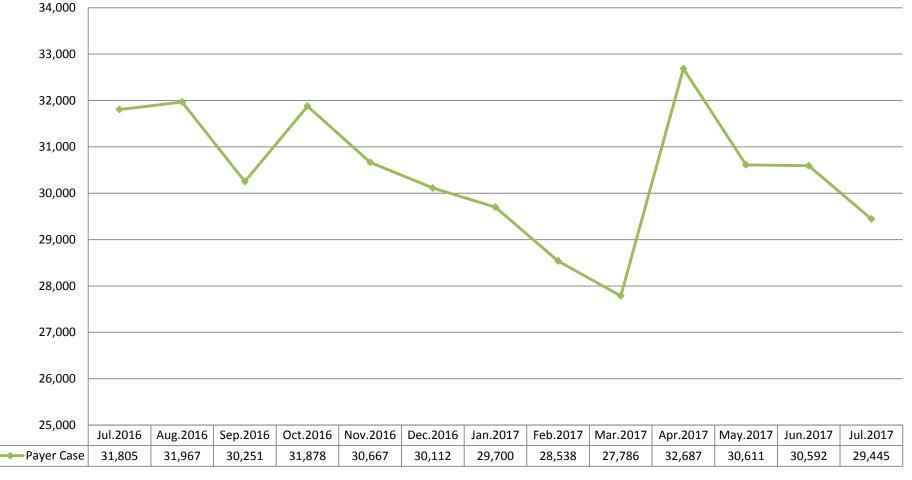
^{*} Note: Reporting cycle is through the 20th of each month.





<u>HIway Production Transaction Trends – Payer Case Management (Jul 2016 – Jul 2017)</u>

< 1% of HIway activity in July* was for Payer Case Management transactions



^{*} Note: Reporting cycle is through the 20th of each month.

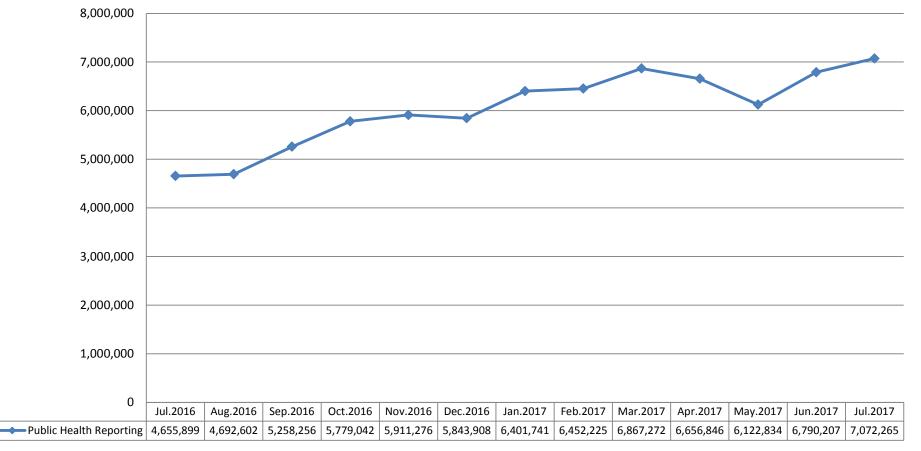




<u>HIway Production Transaction Trends – Public Health Reporting (Jul 2016 – Jul 2017)</u>

91% of HIway activity in July* was for Public Health Reporting transactions.

These Public Health transactions are analyzed by application on the following slides.



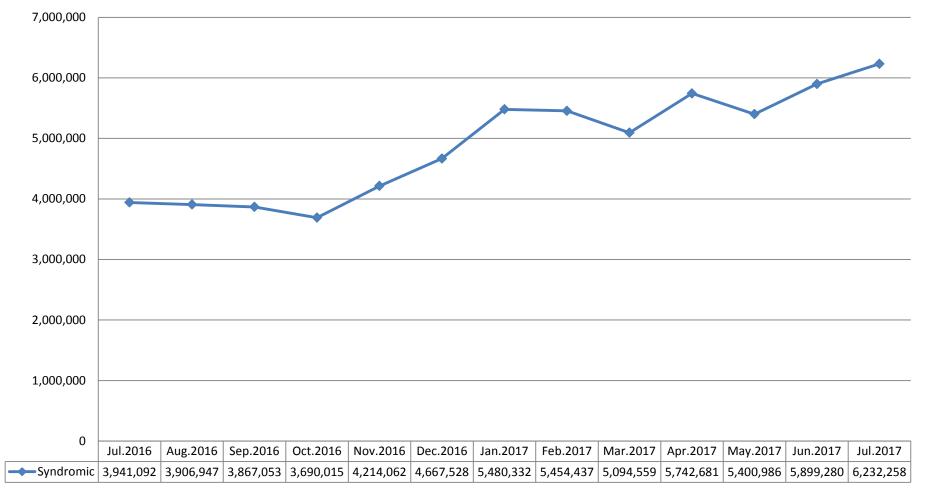
^{*} Note: Reporting cycle is through the 20th of each month.





Public Health Reporting – Analysis by Application (Jul 2016 – Jul 2017)

Syndromic Surveillance Transactions

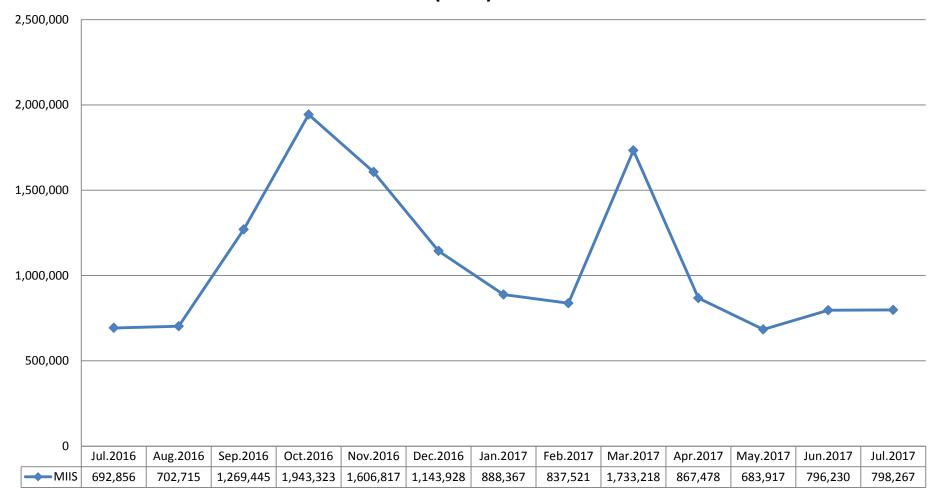






Public Health Reporting – Analysis by Application (Jul 2016 – Jul 2017)

Immunization (MIIS) Transactions

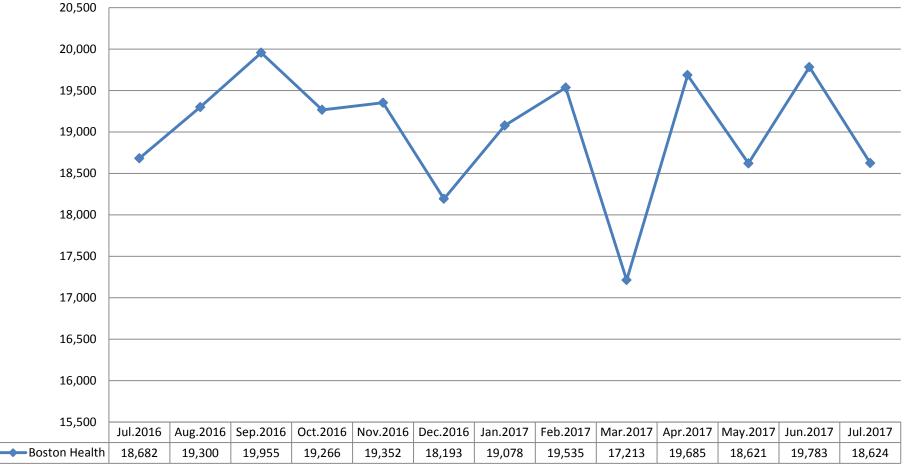






Public Health Reporting – Analysis by Application (Jul 2016 – Jul 2017)

Boston Public Health Commission Transactions



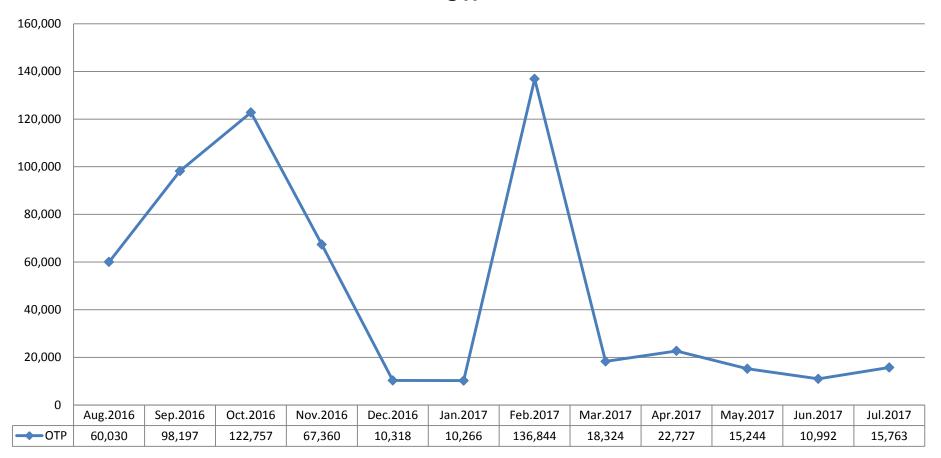




Public Health Reporting – Analysis by Application (Aug 2016 – Jul 2017)

Opioid Treatment Program (OTP) Transactions **

OTP



^{*} Note: Reporting cycle is through the 20th of each month.

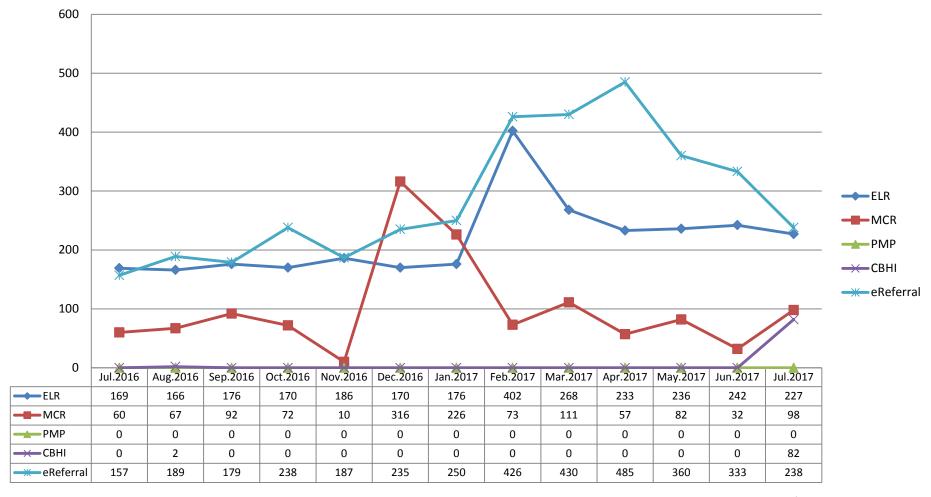
^{**} Note: OTP data available starting August 2016.





Public Health Reporting – Analysis by Application (Jul 2016 – Jul 2017)

Other Public Health Transactions





Customer Status Dashboard (July 20, 2017)



Tier (As of Jul 20 2017)	Universe (Est.)	Actively Using	%ActivelyUsing	Connected	%Connected	Enrolled	Tier Total
1a. Large hospitals/Health Systems	37	27	73%	5	14%	5	37
1b. Health plans	9	3	33%	2	22%		5
1c. Multi-entity HIE	11	5	45%	6	55%		11
1d. Commercial imaging centers & labs	5	3	60%	2	40%		5
2a. Small hospitals	51	36	71%	15	29%		51
2b. Large ambulatory practices (50+)	33	19	58%	13	39%		32
2c. Large LTCs (500+ licensed beds)	8	2	25%		0%		2
2d. Ambulatory Surgical Centers	63		0%	1	2%		1
2e. Ambulance and Emergency Response	39		0%	1	3%		1
2f.Business associate affiliates	5	1	20%	1	20%		2
2g. Local government/Public Health	8	1	13%	7	88%		8
3a. Small LTC (<500 licensed beds)	310	30	10%	41	13%		71
3b. Large behavioral health (10+ licensed providers)	14	2	14%	11	79%		13
3d. Large FQHCs (10-49)	30	15	50%	10	33%		25
3e. Medium ambulatory practices (10-49)	365	50	14%	24	7%		74
4a. Small behavioral health(<10 licensed providers)	90	6	7%	15	17%	1	22
4b. Home health, LTSS	149	26	17%	33	22%	4	63
4c. Small FQHCs (3-9)	29	4	14%	1	3%	1	6
4d. Small ambulatory practices (3-9)	1595	126	8%	128	8%	1	255
5a. Very Small ambulatory practices (1-2)	4010	164	4%	347	9%	5	516
Grand Total	6861	520	8%	663	10%	17	1200



HIway Participation Apr 21 – Jul 20



20 New Participation Agreements

- Alexeyenko Medical Associates
- Boschetti, Michael J. DMD
- Boston Retina
- Carlyle House We Do Care, Inc.
- Coleman House
- Commonwealth OB-GYN, PC
- Community Services Institute
- Douglas, David W. MD
- Elder Services of Worcester
- Mystic Valley Elder Services
- Neyshtadt, Alla I. MD, PC
- North Shore Oral Surgery
- Peabody Podiatry
- Pediatric Healthcare at Chestnut Hill
- Retina Consultants of Boston
- Sterling Village, LLC
- The Brien Center (Northern Berkshire Counseling Center)
- Tri-Valley, Inc.
- Village Square
- Wayland Personal Physicians



HIway Participation Apr 21 – Jul 20



20 New Connections

- Alexeyenko Medical Associates
- Boston Retina
- Cape Cod Healthcare
- Carlyle House We Do Care, Inc.
- Coleman House
- Commonwealth OB-GYN, PC
- Douglas, David W. MD
- Franciscan Children's Hospital
- Habit Opco, Inc.
- MAeHC
- Mystic Valley Elder Services
- North Shore Oral Surgery
- Old Colony Elder Services
- Peabody Podiatry
- Pediatric Healthcare at Chestnut Hill
- Retina Consultants of Boston
- Riverside Community Care
- Sterling Village, LLC
- Tri-Valley, Inc.
- Windsor Nursing Home
- Plus Non-Participant Orgs 15



HISP to HISP Connectivity



25 HISPs Connected to Mass Hiway

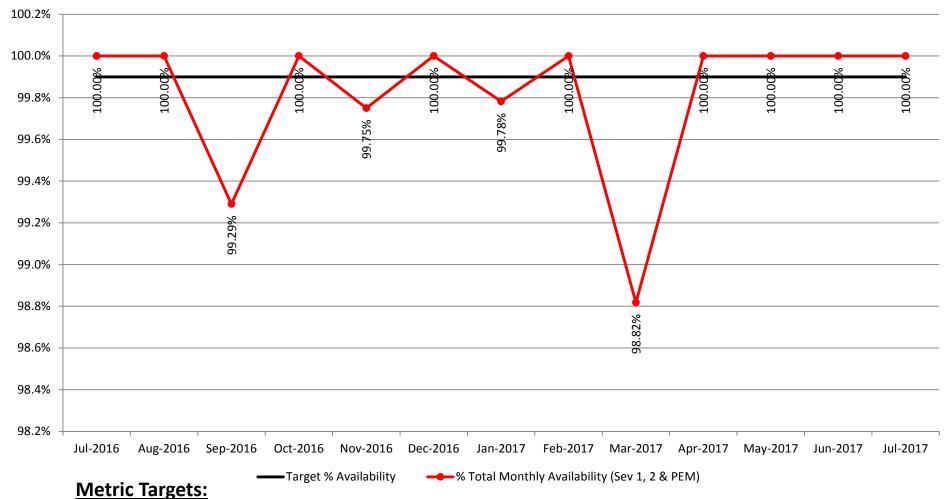
- 1. Allscripts (MedAllies HISP)
- 2. Aprima
- 3. ASP.MD
- 4. Athenahealth
- 5. CareAccord
- CareConnect (NetSmart HISP)
- 7. Cerner
- 8. DataMotion
- 9. eClinicalWorks
- 10. eClinicalWorks Plus
- 11. eLINC
- 12. EMR Direct
- 13. Inpriva

- 14. MaxMD
- 15. MatrixCare
- 16. McKesson (RelayHealth)
- 17. Medicity
- 18. MyHealthProvider (Mercy Hospital)
- 19. NextGen Share
- 20. NHHIO
- 21. PCE Systems
- 22. SES
- 23. Surescripts
- 24. UpDox
- 25. Wellport (Lumira HISP)



13 Month Hlway Availability Trends





• "Total Monthly Availability" – no lower than 99.9% (downtime no more than ~44 minutes/month)





Appendix B:

Additional slides regarding the Mass HIway infrastructure update



Implementing the new Mass HIway Direct Messaging System



This slide and the following slide are a recap of information that was presented on this topic at the May 2017 HIT Council meeting

The Mass HIway has an active procurement in progress to implement a new Mass HIway Direct Messaging System, with an expected go-live date of September 2017

Why Is This Necessary?

- 1. The Mass HIway custom designed the current system while Direct Messaging standards were being developed. Some common standards now in use are not supported by the Mass HIway.
 - As an example, the Mass HIway uses a single private key certificate for both message signing and encryption. The HISP used by OCHIN no longer accepts this approach and requires the use of two separate certificates.
- 2. DirectTrust is now the primary facilitator of HISP-to-HISP communications across the nation. By procuring a new system that is part of the DirectTrust, the Mass HIway will:
 - More easily connect to other HISPs
 - Be prepared to exchange messages with certain federal agencies including the Veteran's Administration



Implementing the new Mass HIway Direct Messaging System (continued)



Benefits of Procuring a New System:

- The Mass HIway can procure a commercial product that is in use by other state and regional HIEs, and that is supported with regular enhancements to adapt and evolve with the industry.
 - New features are expected to make the Mass HIway easier to use, especially for Webmail users, and most products are enhanced regularly with improvements for efficiency, security, and usability.
- 2. The Mass HIway can procure a product that is already accredited by EHNAC (the Electronic Healthcare Network Accreditation Commission) for participation in DirectTrust.
- 3. **Connecting to the Mass Hiway will be easier,** whether directly from an EHR system as a Mass Hiway Participant or through another HISP.
 - EHR vendors may follow the prevalent standard for making an XDR Direct connection to the Mass HIway.
 - HISPs that are members of DirectTrust will be automatically connected.