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Health Information Technology Council Meeting

November 6, 2023

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Agenda

Welcome

Statewide Event Notification Services (ENS) Framework Update

* + ENS Framework Quarterly Report
  + ENS Challenges & Opportunities

ADT Landscape Improvements

ADT Workflow Improvement Project

* + Lynn Community Health Center

Conclusion

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Welcome

*Karen Tseng / Kevin Mullen*

Slide 4 Statewide ENS Framework  
Q2 ENS Vendor Report  
*Angela Miller*

*Slide 5*

ENS framework:

Hospitals submit data to one of 3 certified ENS vendors, data sharing occurs between vendors in the network, ENS recipients receive data from certified vendor they have contracted with.

\*Statewide ENS Framework includes regulations and a vendor certification process that govern an Interoperable ENS Network.   
 3 Certified ENS Vendors shown in illustration. Actual number will be based on ENS vendors that meet ENS certification criteria.

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Illustration of the Statewide ENS Framework: Detail view

1. Boston Hospital sends ADT to ENS 1
2. ENS 1 runs its matching algorithm, positive match for client, notification sent to Boston PCP (Boston CP does not yet know that their patient was seen at Boston Hospital)
3. ENS 1 also sends ADT copy to ENS 2 and ENS 3
4. ENS 2 runs its matching algorithm, there is a positive patient match 🗹, notification sent to Boston CP
5. ENS 3 runs its matching algorithm, there is no positive patient match 🗷, ADT data deleted, retaining only audit data

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**Type of Notification:** ADT Feeds (Subscribed), **Type of Messages:** ADT Alerts, ED and Discharge Reports, **Method of Receipt:** Certified ENS Vendor Portal, Direct message in EHR, Population Health Management Tool, **Patients Included:** Dependent on roster being sent to certified ENS Vendor (ACO patients, high risk patients, etc. **Things to Consider:** Does your organization have more than 1 ADT feed based on different patient rosters?

**Type of Notification:** CMS Conditions of Participation Messages**:**(Unsolicited), ADT Alerts, **Type of Messages:** ADT Alerts, **Method of Receipt:** Direct message in EHR, **Patients Included:** Patients who identify their PCP during their hospital or ED encounter, **Things to Consider:** These alerts will go directly to the provider named as the patient’s PCP (therefore not all inclusive)

**Type of Notification:** Directly from Hospital, (Organization specific), **Type of Messages:** ADT alerts, EDand Discharge Reports**, Method of Receipt:** Fax, EHR, or portal login, **Patients Included:** Most likely will only receive from hospitals that your organization has an existing relationship with, and for patients who identify their PCP during their encounter. **Things to Consider**: These reports will contain all pertinent clinical information, including medication information and discharge instructions.

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Q2 ENS Vendor Reporting

Certified ENS Vendor reporting for Quarter 2 (4/1/23 – 6/30/23) was due on 7/31/23

This was the second submission using the new ENS Vendor Quarterly Reporting Template, which was updated during the amendment process

Both certified ENS vendors, Bamboo Health and Collective Medical Technologies, submitted their reporting on time

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The new ENS Vendor Quarterly Reporting Template revealed unforeseen complexities in metric calculations.

The Mass HIway Team has collaborated with the Certified ENS Vendors to refine reporting definitions and methodologies.

This partnership has:

* + Enhanced Mass HIway's understanding of the ENS/ADT landscape.
  + Strengthened ties with ENS Vendors.
  + Unearthed issues in the Statewide ENS Framework.

In September, Mass HIway convened both ENS Vendors to address reporting discrepancies, ensuring unified reporting methodologies.

Both vendors identified and will implement updates to their reporting methods by Q3.

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2023-Q2 ADT Message Volume

**Number of ADTs received from Massachusetts Acute Care Hospitals**

Vendor A: 29,973,476\*

Vendor B: 33,488,282

**Number of Reflected ADTs received from other ENS Vendor**

Vendor A: 2,840,449

Vendor B: 3,196,340\*\*

**Number of Notifications sent using Reflected ADTs**

Vendor A: 303,203

Vendor B: 128,609

\* Vendor A's reported ADT volume is post-processing. They aim to report raw ADT numbers from acute care hospitals in Q3.

\*\* Vendor B's data excludes certain ADTs from Vendor A. Changes to include these will be made in Q3.

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Quality of Demographic Information Table

Percent including Date of Birth: Vendor A: 100%, Vendor B: 100%

Percent including Sex: Vendor A: 100 %, Vendor B: 100%

Percent including Address Line 1: Vendor A: 99%, Vendor B: 99%

Percent including City/Town: Vendor A: 99%, Vendor B: 99%

Percent including zip code: Vendor A: 99%, Vendor B: 99%

Percent including phone number: Vendor A: 96%, Vendor B: 91%

Percent including social security number: Vendor A: 80%, Vendor B: 68%

Quality of Clinical Information

Percent of A01 messages with Chief Complaint: Vendor A: 53%, Vendor B: 0%

Percent of A03 messages with Diagnosis Code: Vendor A: 47%, Vendor B: 51%

Percent of A03 messages with Diagnosis Description: Vendor A: 47%, Vendor B: 51%

Quality of Clinical Information Table Notes:

A01 Message: Admit Message

A03 Message: Discharge Message

\* Vendor B does not currently process Chief Complaint information.

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Organization Types Receiving Notifications via Subscriptions

FQHC: Vendor A: 0, Vendor B: between 10 and 20

CP: Vendor A: less than 10, Vendor B: between 10 and 20

IT Vendor: Vendor A less than 5, Vendor B: Less than 5

BH/SUD: Vendor A: less than 10, Vendor B: less than 10

Payer: Vendor A: less than 10, Vendor B: less than 10

ACO: Vendor A: Less than 10, Vendor B: between 10 and 20

Ambulatory: Vendor A: less than 10, Vendor B: 0

SNF: Vendor A: between 10 and 20, Vendor B: between 20 and 30

HHA: Vendor A: 0, Vendor B: between 50 and 60

Other: Vendor A under 10, Vendor B:0

**Note:** Many organizations represent multiple facilities, which were not included in these counts

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Statewide ENS Framework Challenges and Opportunities*Angela Miller & Liz Reardon*

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Challenges within the Statewide ENS Framework

Issues identified with:

Acute Care Hospital ADT Feeds

Certified ENS Vendor Processes

Understanding by Provider Organizations

Participation of Free-Standing Psychiatric Hospitals

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Challenges with Acute Care Hospital Feeds & ENS Vendors

Acute Care Hospital ADT Feeds Challenges:

* + Variations in direct ADT feeds to ENS vendors.
  + Incomplete ADT feeds to vendors despite regulations.
  + Common data quality issues hinder ADT alert utility.
  + Hospitals filter out specific health information due to regulatory interpretations.

Certified ENS Vendors Challenges:

* + Reflection based on facility level, leading to incomplete ADT reflections.
  + Varying data quality requirements complicate reflected feed processing.
  + No post-go-live data quality monitoring; hospitals bear the responsibility.
  + Difficulties in ENS Vendor Quarterly Reporting.

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Provider Specific Challenges

Understanding by Provider Organizations Challenges:

* + Multiple ENS alert sources lead to confusion and can overwhelm clinical workflows

Participation of Free-Standing Psychiatric Hospitals Challenges:

* + Despite technical capabilities, psychiatric hospitals aren't sharing ADTs with ENS Vendors, likely due to Behavioral Health privacy regulation concerns.

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Next Steps

The Mass HIway will continue partnership with the Certified ENS Vendors and collaboration with ENS participants and stakeholders to identify and address issues and improvement opportunities.

Improvement opportunities and focus areas include;

* + Optimizing ENS vendor processes
  + Standardizing ADT feed protocols and data quality controls
  + Clarifying regulatory guidelines for participants
  + Educating providers on ENS alert integration
  + Addressing psychiatric hospitals' privacy concerns
  + Forming a collaborative forum for continuous improvement

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ADT Landscape ImprovementsAngela Miller & Liz Reardon

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ADT Landscape Surveys

Psychiatric Facility Survey

FQHC Survey

ADT Landscape Webinar

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Introduction

The Mass HIway conducted two surveys to understand capabilities and challenges in the ADT landscape for freestanding psychiatric hospitals, hospital psychiatric units, and Federally Qualified Health Centers (FQHCs).

Findings will help EOHHS identify support areas and improvement opportunities.

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Survey Distribution

Psychiatric Hospital Survey

Psychiatric Hospital Survey was sent to all freestanding psychiatric hospitals and inpatient psychiatric units within the state.

Partnerships with the Massachusetts Department of Mental Health and the MassHealth Office of Behavioral Health were used to distribute the survey.

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Psychiatric Facility Survey Results

100% response rate from 55 psychiatric facilities (16 freestanding psychiatric facilities and 39 hospital psychiatric units).

96% of all facilities have or are in the process of implementing an EHR.

EHR systems used by freestanding psych. facilities: Epic, HCS, Medsphere CareVue, Avenues-Angel Systems, Netsmart, Cerner, and IRIS (built on Salesforce).

EHR systems used by hospital psych. units: Meditech, Epic, Cerner, Meditech *transitioning to* Epic, Online Medical Record *transitioning to* Epic.

Two freestanding facilities without EHRs cited cost and implementation/training as top reasons for not using an EHR.

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ADT Capabilities

Psychiatric Facility ADT Capabilities

Responses indicate 69% of freestanding psychiatric facilities and 79% of hospital psych. units are confident they can send ADTs.

Adjusting for confirmed-certified EHRs and/or electronic Patient Registration Systems, the potential abilityto send ADTs improves to near 100% for both groups.

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Opportunities & Challenges

Opportunities

Widespread EHR adoption among surveyed organizations.

Sufficient ADT capabilities for most organizations.

Potential to increase ADT exchange levels from these groups.

High interest in participating in workgroups to address barriers (41/55 facilities willing to participate).

Challenges

Activating ADT interfaces presents financial and operational challenges for some organizations.

Barriers remain with ADT data consistency and quality, inclusion of clinical details, privacy consent issues, and organizational limitations.

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FQHC Survey Distribution

The FQHC Survey was distributed to all state FQHCs, excluding those based in hospitals.

Partnership with the Massachusetts League of Community Health Centers was established to distribute the survey. The ADT Questions were included in the Mass League’s annual IT survey, which goes out to IT leaders from each of the FQHC sites.

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61% response rate from 38 FQHCs IT Leads.

74% of respondents reported receiving ADT alerts, while 13% reported not receiving ADT alerts, and 13% were unsure.

Of those FQHCs receiving ADT alerts, 53% reported receiving them via >1 method.

The most common methods of receipt reported were through an EMR or a certified ENS Vendor Portal.

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FQHC ADT Follow-up Workflows

Of the FQHCs receiving ADT alerts:

82% review and act on their ADT alerts daily.

47% use criteria to prioritize which ADT alerts they follow-up on, the most common criteria being clinical information like diagnosis and risk score.

88% cited staffing capacity as a barrier that impacts their ADT alert utilization. Other common barriers include ADT format and method of receipt.

From comments submitted by respondents, lack of clinical information within ADT alerts is a major pain point in many FQHCs’ follow-up workflows.

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FQHCs’ confidence in their follow-up workflows**:** Respondents were asked to rate their confidence in their ADT follow-up workflow from a scale of 1 – 5 (1 being not confident at all and 5 being very confident).

IT Lead Response

Two respondents graded confidence at a “1”

One respondent graded confidence at a “2”

Nine respondents graded confidence at a “3”

Two respondents graded confidence at a “4”

Three respondents graded confidence at a “5”

QI/Nurse Manager Response\*

One respondent graded confidence at a “1”

Three respondents graded confidence at a “2”

One respondent graded confidence at a “3”

Two respondents graded confidence at a “4”

No respondents graded confidence at a “5”

\*Data from April 2023 Mass League QI Forum Zoom poll

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ADT Webinar Update

*Angela Miller & Liz Reardon*

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ADT Webinar

The Mass HIway hosted an ADT Webinar on Tuesday, June 20th

Webinar content was developed based on results from the ADT Landscape surveys

Promotion for the event was done via the Mass HIway and MeHI newsletters and the Mass League of Community Health Center communication channels

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ADT Webinar: Registrants & Attendees

58 webinar registrants, 39 (67%) attended

During registration, participants were invited to suggest topics for the webinar.

Topics included:

EHR integration methods

Workflow integration of ADTs across organizations

Efforts to align more Mass HIway participants with the Direct Standard for Event Notifications

Statewide developments in ENS

Benefits of ENS for practices and providers.

Registrant Organization type and attendance broke down as follows:

ACO: five registered, fewer than five attended

BHCP: five registered, five attended

ENS Vendor: fewer than five registered; fewer than five attended

FQHC: registered: between 15 and 20, attended: between 10 and 15

Government Org: registered: fewer than 5, attended: fewer than 5

LTSS CP: registered: fewer than 5, attended: fewer than 5

Payer: registered: fewer than 5, attended: fewer than 5

Provider Org: registered: between 5 and 10, attended: between 5 and 10

School: registered: less than 5, attended: zero

SNF: registered: less than 5, attended: zero

Vendor: registered: between 5 and 10 , attended: between 5 and 10

VNA: registered: fewer than 5 , attended: fewer than 5

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ADT Webinar Agenda

1. Mass HIway Overview
2. What are ADT Alerts?
3. Understanding the Massachusetts ENS Landscape
4. Statewide ENS Advantages
5. Common ADT Alert Utilization Barriers
6. Making the Most of ADT Alerts
7. Provider Organization Spotlight: Manet Community Health Center
8. Q&A

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ADT Webinar Feedback

How confident do you feel in your understanding of the ENS and Statewide ENS Framework? (after our review)

Very Confident: 22%

Confident: 53%

Neutral: 17%

Not Confident: 4%

Unsure (still digesting): 4%

How likely are you to apply information learned during this webinar to workflows at your organization?

Very likely: 55%

Unsure: 45%

Unlikely: zero

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Next Steps

Partnering with 3 FQHCs to follow their ADT workflow improvement journeys and consult as needed

Develop best practice documentation for provider organizations to optimize their ADT workflows

Outreach to hospitals with low ADT Data Quality rates per ENS Vendor Reporting

Working closely with the DirectTrust, as well as EHR and ENS Vendors to understand the gaps leading to non-conformance to the DirectTrust Event Notification Standard

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Lynn Community Health Center  
Hospital and ED Discharge Follow-up WorkHeather Shipp, Quality Improvement Manager

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Lynn Community Health Center Core Values:

Our People: Engage and develop our people every day

Our Community: Improve the lived experience of our patients

Quality: Make excellence routine

Stewardship: Safeguard our future vitality

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Lynn CHC Hospital and ED Follow-up Background

Lynn CHC is working to revamp their Hospital and ED Discharge Follow-up workflow

Improvement of this workflow aligns with Lynn CHC’s core value of providing high quality health care to the Lynn community

Lynn CHC participates in the Mass Health ACO and is looking to improve performance on the Mass Health ACO quality measures

Hospitalization for Mental Illness

Emergency Department Visit for Mental Illness, which require timely follow-up after an event

After a QI review, 3 Key Problem Contributors were identified in their current workflow. Subscription to an ENS Vendor with portal access has been identified as a countermeasure that can help to improve these problem areas

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Problem Contributor 1: Reactive Process

Key problem contributor:

Process is reactive – notification of patient discharge comes to LCHC from acute care setting sometime after discharge (ranging from day of to weeks after or never)

Effect:

Sitting and waiting for patients to be presented to LCHC has resulted in regularly missing the 7-day ED/Hospital follow-up criteria.

Countermeasures:

Short-term:Use ADT list provided by C3 to proactively find ACO patients and redesign staff workflow

Long-term:Subscribe to ENS Vendor to receive ADT alerts for all patients, as well as ENS Vendor Portal features

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Problem Contributor 2:   
High No-Show Rate

Key Problem Contributor: High no show rate for hospital/ED follow-up appointments

Reasons include:

Patient didn’t know about visit

Contact info. wrong/disconnected/do not pick up

Transportation issues

Elements of paranoia, depression and low motivation after ED/Hospital visit for Behavioral Health dx

Effect:

Patients don’t receive essential care

Hospital/ED follow-up appt. slots severely under utilized

Countermeasure:

ENS Subscription to ensure timely notification of events and most up to date patient contact information

Scheduling patients within 3 days of discharge so there’s another opportunity if they miss appt.

Follow-up outreach with patient when appt. missed

Patient appt. reminder calls a head of scheduled visit

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Problem Contributor 3:   
Lack of Discharge Summary

Key Problem Contributor: Discharge summary not present at follow up

Effect: Discharge summary needed for provider to complete follow-up visit

Countermeasure: ENS Subscription: Discharge summaries available in ENS portal if shared by hospital (CCDA) and real time notification of event gives LCHC staff more time to request discharge summaries from hospitals

HIPPA clause accessible for LCHC staff to cite when hospitals push back on discharge records request

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Recap of ENS Subscription Benefits to Lynn CHC

Control over roster of patients

* + Will be able to receive ADTs for all patients vs. just ACO patients

Control over which event types they want to review and ability to filter ADT feed as needed

ENS Vendor Portal Offerings:

* + Most recently provided patient contact information
  + Tracking of sub-groups of specific patient populations (ex. Chronic disease patients)
  + Hospital discharge summary information (CCDA) available *if* included by hospital
  + Ability to add case manager contact information to specific patients for hospital staff

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Mass HIway Support

Presentation on ENS and FQHC ADT Survey Results at the Mass League Quality Improvement Coordinator and Nurse Manager Forum

Sharing of “ADT Alerts: Understanding the Massachusetts ENS Landscape and Making the Most of ADT Alerts” June webinar

Monthly meetings with Mass HIway Account Manager to answer ENS and ADT questions including:

* + Clarifying types of ENS Alerts and different aspects of the Statewide ENS Framework
  + Review of the Lynn CHC ENS Alert Current State and discussion of current barriers
  + Overview of different ENS Alert options
  + Sharing of tips on how to leverage historical ADT data to inform health center operations and scheduling

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Next HITC meeting

Monday, February 5th, 2024

3:30 p.m. - 5 p.m.

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Appendix A: HIway operations update

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Mass HIway Participation   
April 21, 2023 – October 20, 2023

13 New Connections

Wildflower Health\*

Talkiatry\*

Orthopedic Surgical Center of the North Shore

Fairview Hospital (ePOLST Pilot)\*

Fairview Commons (ePOLST Pilot)\*

Nest Health\*

Medical Associates Pediatrics\*

Reading Pediatric Associates\*

Kitman Labs, Inc.\*

Cochrane Dental Associates\*

Absolute Home Health Agency, LLC\*

Emerson Hospital (changed connection type)

Pediatric Associates of Brockton (Canton)

*\* Participants that were enrolled and connected in the same period.*

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One New participation agreement

Mass General Brigham Community Physicians - Burlington

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Mass HIway transaction volume update

The Mass HIway processed over 107.6 million production transactions between 7/21/2023 – 10/20/2023.

During the 7/21/2023 – 10/20/2023 time period, Public Health Reporting accounted for ~105.6 million transactions, or 98% of total production volume. This included 39.7 million Syndromic Surveillance transactions and 65.6 million Immunization transactions.

Note: Immunization queries from commercial insurance companies for COVID-19 vaccination updates that processed through the “MIIS QBP” Clinical Gateway node are included in the Immunization total.

Provider –to-provider transactions supporting several use cases accounted for 1% (1,422,749 transactions) of total production volume for the 7/21/2023 – 10/20/2023 time period.

Quality Reporting volume was 540,422 for the 7/21/2023 – 10/20/2023 time period.

The Mass HIway team continuously monitors transaction levels, both to support operations and to identify data that provide additional insight into HIway trends and progress.

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Mass HIway Incident Summary Dashboard

October 2023

Graph indicates all dates for 10/1/23 through10/31/23 in uptime

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HIway Availability Trends – October 2023 Target availability and monthly availability operating at 100%

Metric Targets:

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

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Thank you!