Slide title**: Health Information Technology Council Meeting**

**Feb 7, 2022 draft**

Slide title: **Agenda**

**Welcome**

Undersecretary Lauren Peters

* + Approval of Nov 2021 minutes (vote)

**Attestation-Update**

Pam Boutin-Coviello

**ENS – Utilization Update**

Bert Ng

**Unsolicited Notifications via Direct Messaging**

Kevin Mullen

**Clinical Gateway API Development-Update**

Kevin Mullen

**Conclusion**

Undersecretary Lauren Peters

Slide Title: **Welcome**

Undersecretary Lauren Peters

Slide Title: **Vote: Approve minutes**

MOTION: That the Health Information Technology Council hereby approves the minutes of the council meeting held on November 1, 2021 as presented/amended

Slide Title: **Attestation update**

*Pam Boutin-Coviello*

Slide title: **HIway attestation: HIway connection requirement overview**

The HIway connection requirement requires providers to engage in health information exchange via the Mass HIway as set forth in M.G.L. Chapter 118I, Section 7, and as detailed in the Mass HIway Regulations (101 CMR 20.00).

Provider organization First year requirement applied Submit in 2021

Acute care hospitals 2017 Yr 5 attestation form

Large and medium medical ambulatory practices 2018 Yr 4 attestation form

Large community health centers 2018 Yr 4 attestation form

Small community health centers 2019 Yr 3 attestation form

HIway annual connection requirement

Year 1 Send or receive HIway Direct messages for at least one use case

Year 2 Send or receive HIway Direct messages for at least one **provider-to provider (P2P)** use case

Year 3 Send HIway Direct messages for at least one P2P use case, **and** Receive HIway Direct messages for at least one P2P use case

Year 4+Meet Year 3 requirement or be subject to penalties if requirement is not met

Slide title**:** **HIway attestation: 2021 timeline**

2021 Attestation timeline:
Dec. 31, 2020: Use case implementation deadline

May-July 2021: HIway outreach and education

Emails and Newsletters

Website updates

Webinars

Direct contact with POs

July 2021: Webform testing

Aug. 2, 2021: HIway attestation/exception webforms go live and begin
accepting submissions

Oct. 31, 2021: Deadline for attestation/exception submissions

November-December 2021: HIway reaches out to POs that have not submitted

Winter 2022: HIway closes webform

Slide title: **HIway attestation: HISP-HISP exchanges**

Through sub-regulatory guidance the Mass HIway will accept DirectTrust HISP-to-HISP exchange as an additional method to meet the HIway connection requirement.

Background

* Mass HIway converted to HIway 2.0 (a HISP) in order to connect to DirectTrust, a national framework for Direct Messaging
* The Council has been supportive of DirectTrust HISP-to-HISP Direct Message exchange as it leverages existing infrastructure for many POs

Technical advantage

* DirectTrust exchange can now be used in addition to 1:1 contracting for security/privacy needs. DirectTrust exchange uses a common agreement for security/privacy for HISP users and DirectTrust users
* Users of a DirectTrust HISP are now allowed to securely send messages to users of other DirectTrust HISPs avoiding the need for additional contracting

Business advantage

* Providers now have additional means to meet the connection requirement via DirectTrust Direct Messaging
* Providers may use EHR-native Direct Message capabilities instead of adding an extra connection to the HIway Direct Message System

Slide Title: **HIway attestation: 2021 statistics**

Attestation submissions got off to a slow start, we saw an influx of submissions around the attestation deadline and following the deadline. Submissions for 2021 surpassed submissions of 2020.

**As of Feb 1st 2022:**

*190 forms submitted*

Year 3/4 forms: 103

Year 5 forms: 53

Exception forms: 34

* **Acute Care Hospitals** (n=67)

53 attestations submitted

14 exception forms submitted

Submitted: 100%

* **Community Health Centers** (n=41)

24 attestations submitted

8 exception forms submitted

Submitted: 78%

* **Medium/Large Medical**

**Ambulatory Practices** (n=442)

Attestations: 314 practices

Exception forms: 65 practices

Total: 379 practices

Submitted: 86%

Slide title: **HIway attestation: 2021 statistics**

Due to the 2021 sub-regulatory guidance to count sending and receiving submissions via DirectTrust accredited HISPs, early in the attestation cycle more provider organizations submitted attestation forms vs exception forms. This trend has continued.

 Acute Care Hospital

Yr Attestation Exception Exception percent of total

2017 61 0 0%

2018 59 7 11%

2019 41 14 36%

2020 51 14 22%

2021 53 14 21%

Medium and Large Ambulatory Practices

Yr Attestation Exception Exception percent of total

2017 0 0 0%

2018 60 8 12%

2019 57 30 34%

2020 61 34 36%

2021 81 11 12%

Small and Large Community Health Centers

Yr Attestation Exception Exception percent of total

2017 0 0 0%

2018 32 2 6%

2019 32 4 11%

2020 17 15 47%

2021 21 9 30%

Slide title: **Attestation update: post-deadline outreach**

The HIway continues to remind organizations about their requirement even after the October 31, 2021 deadline and is executing an outreach plan for organizations that have not submitted.

Outreach schedule:

 Late November 2021: Bulk blast email reminder was sent to POs that had not submitted

Mid December 2021: Personal email reminders were sent to POs that had not submitted

Mid February 2022**:** Personal reminder letters will be sent via US Post to large practices, and community health centers that still have not submitted.

Slide title: **Preparing for Attestation 2022 & beyond**

Preparing for Attestation 2022 & beyond

* Identification of the “Attestation window” for 2022
* Working with development team to create a timeline for webform revision and preparation for public use
* Testing of the online webforms
* Creating Attestation date announcements; newsletters and standalone emails
* Webinar planning and development
* Developing Newsletter and Website content
* Informing HIT Council of Attestation updates
* Gathering insight from HIT Council to identify direction of future Attestation requirements
* Planning and preparing for Attestation changes beyond 2022

Slide title: **ENS Update**

 Bert Ng

Slide title: **ENS: Overview**

EOHHS ENS Initiative goal:

* Supporting timely statewide Event Notification Services (ENS) across the Commonwealth in order to improve health care delivery, quality, and coordination

EOHHS guiding principles:

* Universal access - Promoting data sharing within an ENS framework to increase accessibility to ENS for providers of all sizes
* Streamline provider experience - Crafting ENS framework to allow single point of submission and single point of reception of ADT data
* Improve notification timing - Improving timing for flow of data (real/near-real time)

Graphics picture the ENS framework:

Hospitals submit data to one of 2 certified ENS vendors, data sharing occurs between vendors in the network, ENS recipients receive data from certified vendor they have contracted with.



Scenarios :

1. Boston Hospital sends ADT to ENS1, ENS 1 Contract: Boston PCP
2. 2. Current (silo): ENS runs own matching algorithm, positive match for client: notification sent to Boston PCP however, Boston CP doesn’t know that their patient was seen at Boston Hospital. This operates under Governance: BAA (CE1/BA1).
3. Proposal: non silo operating under Governance: BAA (CE2/BA2). ENS 1 also reflects ADT copy to ENS2 and ENS3.
4. ENS2 runs own matching algorithm, there is a positive match, a notification is sent to Boston CP.
5. ENS3 runs own matching algorithm, operating under Governance: State, there is no positive match ADT is deleted, retaining only audit data

All scenarios operate under Federal obligations: HIPPA and 42 CFR Part 2 and State Obligations: HIV and Genetic testing

Slide title: **ENS: Number of reflected ADTs received**

In the third quarter of 2021, the stabilization of Statewide ENS Framework participants resulted in more than six million ADTs being reflected

Vendor Q2 2021 Q3 2021 percent increase

 Apr-Jun Jul-Sep

A 11k 45k 1030%

B 621k 2,784k 348%

* In Q2 2021, both vendors began scaling up the transactions as they worked to define the gaps in their data
* Both vendors experienced a significant increase of ADTs flowing into their systems as the gaps were increasingly closed in Q3 2021.
* The Mass HIway expects the number of reflected ADTs in Q3 2021 to estimate an initial baseline.

Slide title: **ENS: Number of notifications generated by reflected ADTs**

The number of notifications generated by the reflected ADTs increased for both vendors in Q3 2021 compared to Q2 2021.

Vendor Q2 2021 Q3 2021 Q2 2021 Q3 2021

 Apr-June Jul-Sep Apr-Jun Jul-Sep

 notice# notice% notice%

A 11k 45k 3% 1%

B 19k 182k 3% 7%

* While Vendor A saw a large growth in the number of ADTs received in Q3, it saw a percentage reduction in notifications generated
* Vendor B saw an increase in the number of and percentage of notifications based on the increased reflected ADTs received
* Notification percentages continue to remain relatively low to suggest the baseline is around the single digits.

Slide title*:* **Unsolicited Notifications via Direct Messaging**

Kevin Mullen

Slide title: **Unsolicited Notifications via Direct**

The Mass HIway has received feedback from participants regarding challenges associated with Unsolicited Notifications coming through Direct Messaging

An increase in volume of unsolicited, event notifications has been reported, driven in part by new CMS Condition of Participation (CoP) requirements on hospitals to send ADTs

Vendors offer the ability to route patient directed event notifications to providers as identified by patients as well as to requesting community provider groups via Direct Messaging.

Although the increased volume was expected, there have been increased challenges reported resulting from inconsistent or incomplete message formats and metadata which prevent effective identification, matching and routing processes

\*See Appendix B for CMS CoP background and definition of key terms

Slide title: **Unsolicited Notifications via Direct**

Direct Messaging is a payload-agnostic mechanism for secure communication of health data between two known end points and can support virtually any file attachment.

Event Notifications can be communicated via Direct Messaging today

Direct Messaging is a prominent option for the transport of patient directed event notifications, requesting community provider groups and/or when the recipient may be outside of the HIE or ENS subscriber network

Why is there a problem?

Recipients of an unsolicited, event notification via Direct Message cannot differentiate a notification from another type of Direct Message.

Recipient systems may wish to route messages to a different department or automate workflows based on such information and are not able to do so currently.

Currently, there is not a universally accepted standard for messaging and terminology preventing auto-processing solutions

Slide title: **Unsolicited Notifications via Direct**

The Mass HIway leadership team met with DirectTrust to understand how its latest standards document can help address some of the recent challenges identified with event notifications

* + DirectTrust is in the process of finalizing its latest standards document [Event Notifications via the Direct Standard](https://app.box.com/s/8goxu2a8x91f0buxi57p3gi9xohidgmi)™
	+ The standard is up for ballot and will then undergo a 30-to-60-day review and approval period by American National Standards Institute (ANSI)
	+ Epic and Meditech are actively implementing the standard, with more vendors expected to follow once approved
	+ The new standard includes **context** data to enable message routing to the appropriate person on the care team

Slide title: **Unsolicited Notifications via Direct**

Context data enhances Direct Secure Messaging for Notifications

The addition of context data allows care teams to immediately know what a Direct Secure Message is and who it’s about. This strategically selected information, including message type and patient demographic data, brings power to Direct Secure Messages by allowing care teams to properly match patients, prioritize, and enable more efficient and informed workflows.

* Instantly Informs: know what/who a Direct Secure Message message is about
* Aids Patient Matching: link a message to the proper patient
* Human Readable: Understand context data regardless of technology sophistication
* Prioritizes Critical Alerts: Determine what messages need to be addressed first
* Empowers Efficiency: Route messages manually or through automation to proper care team members
* Source: DirectTrust; Event Notifications via Direct, <https://directtrust.org/standards/event-notifications-via-direct>

Slide title: **Unsolicited Notifications via Direct**

The Mass HIway is exploring ways to collaborate with DirectTrust on educating providers and vendors on the standard to ensure good citizenship and best practices. Options include;

* + Promotion of DirectTrust Event Notifications via the Direct Standard™
	+ Communicate message format expectations, coordinate conformance testing and collaborate to resolve issues that prevent auto-processing of messages
	+ Convene provider and developer meetings to build awareness and improve sender and receiver behavior
	+ Collaborate with DirectTrust on best practice guidance for Provider Directory information to include intended use fields for receiver preferences and capabilities e.g. indicating whether an address should be used to send the notifications
	+ Consider policy changes to support and compel use of standards

Slide title: **Clinical Gateway API Development-Update**

Kevin Mullen

Slide title: **Clinical Gateway API Development**

The intent of this project is to develop a foundation for a common Application Programming Interface (API) and FHIR Integration infrastructure that can be used for multiple public health use cases.

The initial scope will focus on building the infrastructure, engaging early adopters and demonstrating use of the API for one or more public health use cases in a production exchange.

Slide title: **Clinical Gateway API Development**

Key Objectives

Build an alternative pathway to current public health reporting via Direct Messaging

Add support for multiple channels to send and receive data via RESTful & SOAP Services

Enable real time, synchronous message exchange between providers and public health registries

Implement FHIR integration and authentication protocols to support enhanced security and business functionality

Slide title: **CCG-API & FHIR Services**

Diagram shows the high-level architecture of the Consolidated Clinical Gateway

Web service and Direct Messaging connections to the CCG will process messages to backend applications.

Currently there are seven (7) applications:

-Massachusetts Cancer Registry (MCR)

-Childhood Lead Poison Prevention Program (CLPPP)

-Children’s Behavioral Health Initiative (CBHI)

-Electronic Lab Reporting (ELR)

-Immunization (MIIS)

-Intake Enrolment Assessment and Transfer Service (OTP&TB)

-Syndromic Surveillance (SYNDROMIC)

Slide title: **Clinical Gateway API Development**

Key Project Updates

* + Development work for API CCG-1 nodes complete
		- CCG-1 nodes include Syndromic, Children’s Behavioral Health Initiative (CBHI), and Mass Cancer Registry (MCR)
		- CCG-1 released to production on 1/23/22
		- CCG-2 nodes currently scheduled for 2/20/22
	+ Identification of five potential provider pilot sites
	+ Development of provider engagement plan including key tasks and timeline
	+ Creation of several provider facing documents including draft API Instructions, Implementation Guide and Test Plan

Next Steps

* + Finalize documentation and share with identified pilot providers
	+ Gain agreement from provider organizations to participate in pilot

Slide title: **CCG API & FHIR Development Timeline**

From 2021-2022

* API Design 100% complete 7/21-8/21
* API Development 100% complete 7/21-11/21
* REST/SOAP API Testing 100% complete 11/21-12/21
* API Migration Planning 100% complete 10/21-12/21
* API Migration – CG1 100% complete 12/21-1/22
* API Migration – CG2 1/22-2/22
* Design & Develop OAuth Authentication Security 10% completed 1/22-4/22
* Publish Initial API IG and Specification Feb 2022
* Stakeholder Engagement (Providers & Registries) & BRD 2/22-12/22
* Design & Develop FHIR Integration 5/22-9/22
* Publish Oauth Specification May 2022
* FHIR Integration Testing 8/22-10/22
* CG API Transition Project Team 25% completed 10/21-12/22
* Publish FHIR IG Dec 2022

Slide title: **Clinical Gateway API Development**

Longer term goals

* + The technical components (eg., Amazon Web Services, Rhapsody) and new API and FHIR capabilities of the Consolidated Clinical Gateway development could be leveraged to support other FHIR API initiatives and a range of FHIR-enabled HIE services.
	+ As the project evolves, the Mass HIway project team will identify and evaluate other strategic opportunities to utilize the API and FHIR infrastructure, to add use cases, extend utility and value and to help meet other EOHHS and Commonwealth data exchange and public health reporting requirements

Slide Title: **Conclusion**

Undersecretary Lauren Peters

Slide Title: **Next HITC meeting**

**Next HITC meeting:**

**May 2, 2022**

**3:30-5 P.M.**

Slide Title: **Appendix A: HIway Operations Update**

Slide title: **HIway participation**
**October 21, 2021 – January 20, 2022**

One New Participation Agreement

Pharmacy Online Processing System (POPS)

Confidential Draft – Policy in Development

Slide title: **HIway participation**
**October 21, 2021 – January 20, 2022**

2 New connections

Mani George, MD (Great Barrington Internal Medicine)

Pharmacy Online Processing System (POPS)\*

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

Confidential Draft – Policy in Development

Slide title: **HIway transactions**

HIway transaction volume update

* The Mass HIway processed 37.4 million production transactions during the Jan 2022 reporting period (12/21/21 through 1/20/22) with continued volume increases due to the COVID-19 queries to the MIIS. From Feb 2021 through Jan 2022, the average increased to 27.8 million production transactions per month for a total of 334 million over the past year.
* In January, Public Health Reporting accounted for 36.8 million transactions, or 98.6% of total production volume. This included 10 million Syndromic Surveillance transactions and 26 million Immunization transactions.
	+ Note: Immunization queries from commercial insurance companies for COVID-19 vaccination updates that processed through the new, high-volume “MIIS QBP” Clinical Gateway node are included in the Immunization total.
* Provider-to-provider transactions now average over 329,000 per month for the past year, with new use cases added regularly. For January, the total was 349,576.
* Quality Reporting volume has been inconsistent over the last year, but is currently averaging around 170,000 transactions per month for the past 6 months.
* 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.

Confidential Draft-Policy in Devlopment

Slide title: **2019 Mass HIway Incident Summary Dashboard** **January 2022**

 All daily service for Jan 2022 operated in “Uptime”; services up and running, with no outages

slide title: **HIway Availability Trends – January 2022**

Metric Targets:

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

All months Feb 2021 through Jan 2022 were 100% available with the exception of June 2021; 99.65%, and July 2021; 99.74%

Slide Title: **Appendix B: CMS CoP Background and Definitions**

Slide title: **ADT CoP Background**

Admission, Discharge, and Transfer Patient Event Notification Conditions of Participation (CoP)

(42 CFR 482.24(d), 482.61(f), and 485.638(d))

What are the CoP requirements for the admission, discharge, and transfer (ADT) patient event notifications within the final rule?

The patient event notification CoP requirement is limited to those hospitals, psychiatric hospitals, and critical access hospitals (CAH) that utilize electronic medical record systems or other electronic administrative systems that are conformant with the content exchange standard at 45 CFR 170.205(d)(2). However, conformance with this standard is only used to determine whether a facility will be evaluated under the CoP.

* Hospitals are not required to use a specific standard or technology to implement the electronic patient event notification required by the CoP.

Hospitals subject to this rule may transmit patient event notifications using a range of approaches, including messages based on different versions of HL7 messaging standards, summary care records using the C-CDA standard, or making notification information available via a FHIR-based API

CMS does note that a fax is not considered an electronic method of data exchange in this context

The applicability date for the patient event notifications requirement is April 30, 2021. Compliance with this requirement will be assessed through established survey and certification procedures.

Source: [https://www.cms.gov/about-cms/health-informatics-and-interoperability group/faqs/faqs#bookmark](https://www.cms.gov/about-cms/health-informatics-and-interoperability-group/faqs/faqs)

Slide title: **Terms and Definitions**

ADT: Admit, Discharge and Transfer. Refers to the system that manages patient access in an electronic health record system as well as the HL7 V2 Messaging Standard code set for these triggers. It is this Standard that is referenced in the CMS Final Rule.

Context: Information necessary to determine the type of context, the purpose of the message and to whom it may be of interest.

Message Metadata: Formatted discrete information about the data within a message that can be used for both automated and manual processing of the message by transporting systems without requiring the transporting system to extract and decode encapsulated information to determine the needed information.

Notification Subscriptions: Requests for specific types of notifications which may be routed and filtered from the source based upon an automated or manual process in such systems. Such subscriptions may be created using electronic transactions via web-services or otherwise.

Unsolicited Notifications: Sending information based on a "standing" or "blanket" subscription or an explicit patient instruction with consent. No electronic transaction is required from the intended recipient to trigger the notification transmission.

Slide Title: **Thank you!**