



**Mass HIway**  
**Event Notification Service Stakeholder Session**

*Getting Up to Speed on the  
Massachusetts Health Information Highway (Mass HIway)*

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# Agenda



- 1. Revisiting the Mass Hlway**
- 2. Hlway Direct Messaging**
- 3. Anticipated Hlway-sponsored Services on the Mass Hlway (Event Notification Service)**



# Revisiting the Mass Hlway



# What is the Mass Hlway?



**The Mass Hlway is the statewide Health Information Exchange (HIE) operated by the Executive Office of Health and Human Services (EOHHS).**

**Mass Hlway provides secure, electronic transport of health-related information between healthcare organizations.**

- ✓ Hlway Direct Messaging is used by providers to easily send patient information—such as laboratory orders and results, patient referrals, or discharge summaries—directly to another health care professional.
- ✓ Hlway Direct Messaging functions like regular e- mail with additional security measures to ensure that messages are only accessible to the intended recipient, per the protection regulations of the Health Insurance Portability and Accountability Act (HIPAA).
- ✗ **The Mass Hlway is not a clinical data repository HIE.**
- ✗ **The Mass Hlway is not the state health *insurance* exchange known as the Health Connector.**



# What 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:

- Information for calculation and reporting of clinical quality measures

### Public Health Reporting:

- Securely comply with reporting regulations for the Mass. Department of Public Health
- 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)
- E-Referral

**Note:** What makes DPH submissions different: There is no cost for a HIway connection that is used exclusively for DPH reporting.



## The Mass Hlway has two core functions

- **Function #1 – Hlway Direct Messaging:**  
i.e., a secure method of sending a transmission from Provider A to Provider B, where the Hlway does not use, analyze or share information in the transmissions
- **Function #2 – Hlway-sponsored services:**  
i.e., services such as the forthcoming state-wide Event Notification Service (ENS), where the Hlway may use, analyze, and/or share the minimal amount of information necessary to conduct the service, on behalf of Hlway participants



# Use Cases for Hlway Direct Messaging



Use Case Categories	Example Use Cases
<b>Provider-to-Provider Communications</b>	<ul style="list-style-type: none"><li>• Hospital sends a discharge summary to a Skilled Nursing Facility (SNF) or Long Term/Post Acute Care (LTPAC) facility</li><li>• Primary Care Provider (PCP) sends a referral notice to a specialist</li><li>• Specialist sends consult notes &amp; updated medications list to patient's PCP</li><li>• Hospital ED requests a patient's medical record from a PCP</li><li>• PCP sends a CCD or C-CDA with Problems, Allergies, Medications, and Immunizations (PAMI) to a Hospital caring for their patient</li></ul>
<b>Payer Case Management</b>	<ul style="list-style-type: none"><li>• ACO sends quality metrics to a payer</li><li>• Provider sends lab results to a payer</li><li>• Provider sends claims data to payer</li></ul>
<b>Quality Reporting</b>	<ul style="list-style-type: none"><li>• Provider sends clinical data to Business Associate for quality metrics analysis</li><li>• Provider sends quality metrics to Business Associate for report preparation</li></ul>
<b>Public Health Reporting</b>	<ul style="list-style-type: none"><li>• <b>Provider sends to DPH:</b><ul style="list-style-type: none"><li>○ Massachusetts Immunization Information System (MIIS)</li><li>○ Syndromic Surveillance (SS)</li><li>○ Opioid Treatment Program (OTP)</li><li>○ Childhood Lead Paint Poison Prevention Program (CLPPP)</li></ul></li><li>• <b>Provider sends to other agencies:</b><ul style="list-style-type: none"><li>○ Occupational Lead Poisoning Registry (Adult Lead)</li><li>○ Children's Behavioral Health Initiative (CBHI)</li></ul></li></ul>



# Anticipated Hlway-sponsored Services on the Hlway (Event Notification Service)



## Recap: The HIway has heard the demand for a state-wide ENS



- In summer 2015, the Cross-Agency Workgroup considered multiple programs, services, and initiative to improve eHealth in the state.
- **A statewide Event Notification Service (ENS)** was identified as one of the top priorities that providers in the state were looking for the HIway to provide
- **Private ENS services** are already being used and introduced, but none of them provide the statewide scope that is needed to support payment reform and delivery system improvements

Source: HIT Council 12/2015



# Recap: Reasons that the HIway is planning an Event Notification Service (ENS)



- **ENS can improve care coordination:**
  - Event Notification Service (ENS) would provide real-time notifications to providers when a patient is admitted, discharged or transferred to, from, or within a hospital. This in turn would allow clinicians to respond with information and/or clinical support.
- **ENS has been identified as a need in MA:**
  - The need and the demand for ENS from providers is increasing as a result of payment and care delivery reform
  - Other statewide HIEs have already successfully implemented an ENS, and several providers have inquired about the possibility of HIway offering an ENS
  - Some providers are piloting ENS through private vendors; however, overall penetration is limited.
  - Several providers stated that providing a robust public option with an ENS through the HIway ensures that all providers (and patients) could benefit.

Source: HIT Council 12/2015



- A HIway Event Notification Service (ENS) will facilitate real-time notifications to providers when a patient is admitted, discharged or transferred to or from an inpatient setting. This in turn allows clinicians to respond with information and/or clinical support and coordination of care.
- **Value of a Statewide ENS:**  
Private ENS services currently are accessed by individual providers or systems, but none provide the scope to support payment reform and delivery system improvement efforts statewide
- **Approach:**  
In Spring 2017, the HIway is doing the following:
  1. Gathering input from stakeholders including representatives from hospitals, individual clinicians, vendors, as well as healthcare organizations
  2. Publishing a Request for Information (RFI) for ENS. RFI released June 6, 2017.

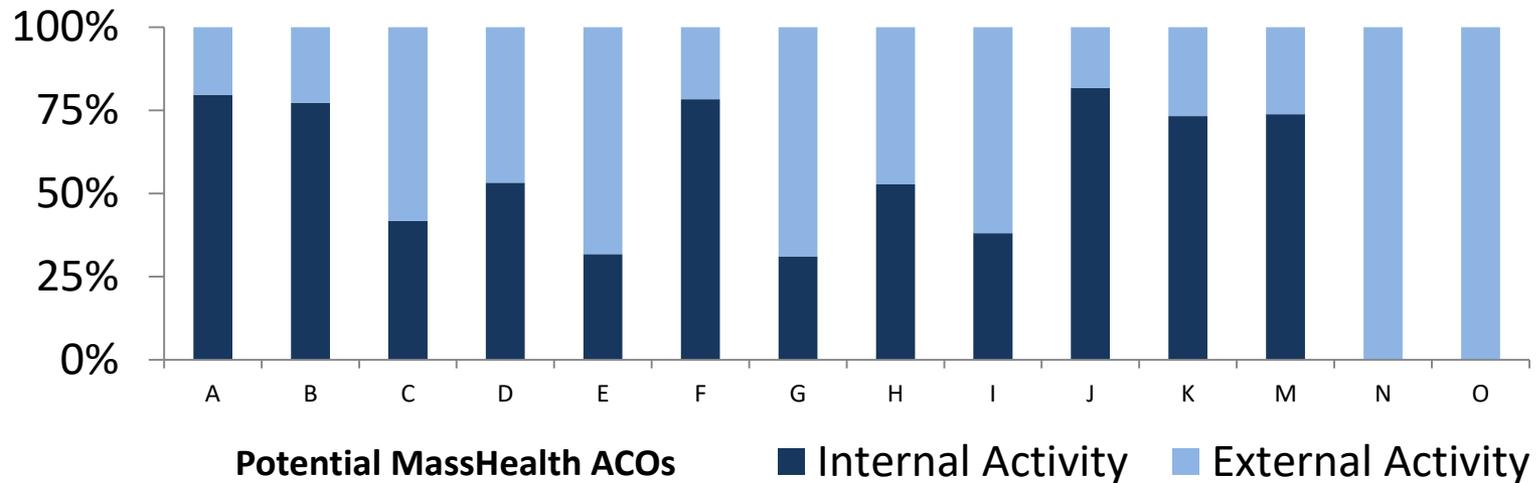


# Recap: Why is a statewide ENS needed?



- **Analysis by MassHealth shows that a statewide ENS may assist potential MassHealth ACOs obtain information useful to effectively manage utilization.**
- Among potential MassHealth ACOs an average of 50% of acute inpatient hospital spend is for activity occurring external to the ACO entity

## Acute Inpatient Hospital Spending (Calculated from claims)



Source: HIT Council 12/2015



## Key considerations:

1. ENS could be built upon the current demographic data that is collected through Admit Discharge Transfer (ADT) messages.
2. To implement an ENS, the HIway would begin utilizing information that is contained in ADTs (e.g., the “message type” information that conveys if the ADT is related to an admission vs. transfer vs. discharge). Once the ENS is implemented, acute care hospitals will be required via HIway regulations to send the ADTs for populating the ENS within 1yr of ENS establishment.
3. HIway regulations will require providers to inform their patients through written notice about their ENS participation (i.e. Opt-In through written notice). If patients decide to Opt-Out, then their decision will be managed by a centralized opt-out mechanism managed by the HIway.



# Sample: Other States' Experiences



State	ENS	Clinical Data Included?	Lessons Learned
Vermont	Patient-Ping	No	<ul style="list-style-type: none"> <li>• Opt-In was a challenge.</li> <li>• Data quality is a concern.</li> <li>• Encourage diversifying among HIE and ENS vendors.</li> </ul>
New Hampshire	Promoting CMT PreManage ED as an ENS	No (recommends including clinical data with ENS however)	<ul style="list-style-type: none"> <li>• HIE and ENS are constrained due to strong concerns around privacy and security.</li> <li>• Recommends peer learning and user groups and training for HIE and ENS.</li> <li>• Experienced some resistance from Hospital IT departments regarding devices such as LANDs being installed as they viewed it as extra hardware to maintain.</li> </ul>
New York	Initiate	Clinical data is exchanged	<ul style="list-style-type: none"> <li>• Opt-In was challenging at first but participation rates are improving.</li> <li>• Seek public and private input and install governance.</li> <li>• While the HIE/ENS mechanisms are in place, the data quality is of concern.</li> </ul>



- **Good data quality is essential:** Even if the Mass HIway ENS is functional, the data need to be accurate to be useful. The HIway will need to work closely with providers to clearly define ADT and notification formats and standards.
- **Need successful implementation of Opt-In/Opt-Out:** Multiple states cited challenges with Opt-In; the HIway will need to ensure smooth rollout of its Opt-In/Opt-Out mechanisms, including providing a sample of Opt-In written notice, as well as a robust centralized Opt-Out mechanism
- **Variety of event notification systems in place in MA:** Mass HIway ENS development will need to account for both providers with and without existing ENS



# Use Cases for Hlway Event Notification Service



## Example Use Cases

- A patient from Eastern Massachusetts is admitted to a Hospital in Western Massachusetts, and the patient's primary care physician is alerted via the Hlway's anticipated ENS. The primary care clinic then may call the Hospital to exchange information regarding medication allergies.
- A Home Health Care provider is notified via the Hlway's anticipated ENS that one of their patients has been discharged from the hospital. The Home Health Care provider then may call the patient regarding follow up care.
- A primary care physician is notified via the Hlway's anticipated ENS that her patient is being transferred to a skilled nursing facility



**Stakeholders sessions have provided key feedback regarding how the forthcoming ENS may be designed and what the various needs are of different stakeholders**

## **Data Quality and Integrity:**

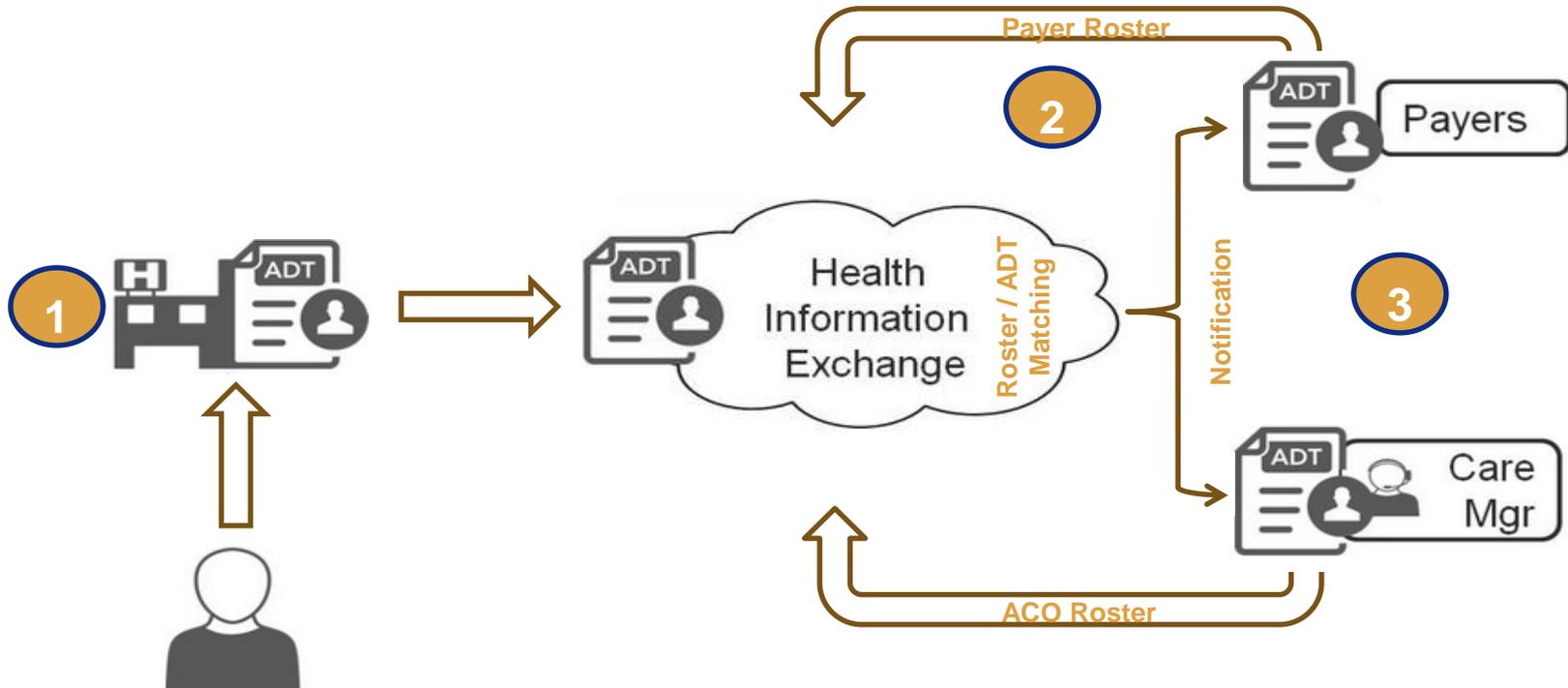
- Patient matching (i.e., uniquely identifying patients) is a challenge
- Patient and physician relationship management is vital to the successful operations of an ENS
- Avoiding alert fatigue will be important for a statewide ENS

## **Information Distribution:**

- The most efficient scenario for an ENS is that the ADT (Admission, Discharge, Transfer) notification is sent EHR-to-EHR
- Other care providers besides the primary care provider for the patient should receive notifications as well
- Some stakeholders indicate that attachments to notifications (such as a discharge summaries) would be useful



# ENS: How does it work?



- 1 Patient event (admission, discharge, or transfer) triggers ADT message from participating provider organizations – usually hospitals – that provide an ADT feed to the HIE
- 2 Subscribers (e.g. provider organizations and or health plans) and their terms of use may vary based on the HIE’s policy decisions. In a typical scenario, the subscriber provides the HIE with a list of active patients for whom they want notifications.
- 3 ENS tool compares hospital notices to the provider organization or health plan’s patient lists; if a match is made, notice of the patient’s hospital encounter is securely delivered to the provider organization or health plan.



- **Scope:** EOHHS is seeking information on technology and services that exist in the market to support the following examples of major functions of an ENS system
  - Management of patient information such as accurate identification
  - Management of provider information such as addresses etc
  - Management of the provider-patient relationship
  - Management of a centralized opt-out mechanism
  - Mechanism for publishing and subscribing
  - Management of Operations and Security
  - Other functions not described in the RFI
  - Experience with State-sponsored HIE and Implementations
  - Product Hosting Model



# Thank you