Peddling Out of the HIE Peloton: Some Mass HIway Providers Pulling Away from the Pack and Using HIE for True Care Coordination

By Mark Belanger, MA

The world of health information exchange remains busy in Massachusetts as the Mass HIway, the statewide health information exchange (HIE), enters its fourth year of rolling out Direct messaging statewide. Overall, Mass HIway officials feel things are going very well, with more than 580 organizations, eight public health registries, and a quality data reporting service connected through the HIE. Over 3.5 million transactions traverse the Mass HIway each month, with an 18 percent average monthly growth rate throughout 2015.[1]

A key to the statewide HIE's success is that it has remained flexible since the first message traversed the Mass HIway in October 2012. From there, Mass HIway has quickly evolved to establish and maintain its role among an expanding patchwork landscape of health information exchange services. Today in Massachusetts, health information exchange (the verb) is mutually supported by Mass HIway, 23 individual Health Information Services Providers (HISPs), several regional clinical data repository-style HIEs, Epic's Care Everywhere platform, CommonWell Health Alliance vendors, and the New England Health Exchange Network. The statewide HIE plays the role of "public option" HISP, unified public health reporting gateway, and provider of cross-organizational services, such as the statewide "Relationship Listing Service" (currently in pilot).

Public health and quality data reporting have been the leading uses of the Mass HIway Direct messaging service in its first three years. Provider-to-provider transaction volume, indicating care coordination, via Mass HIway started to grow throughout 2015 with over 175,000 transactions a month in November and 13 percent average monthly growth throughout 2015. However, growth in care coordination transactions over the Mass HIway have not been as meteoric as expected given all of the payment reform and "meaningful use" forces nudging healthcare providers to exchange health information across organizational lines in Massachusetts. At this point in time, focus is squarely on improving uptake of HIE usage for care summary exchange.

State of Care Summary Exchange

There are some Massachusetts healthcare providers leading the pack in terms of care coordination supported by new public and private HIE infrastructure. The kinds of questions they are focused on addressing include:

- How do we move patient information in a way that can save more lives, whether it is provided to the emergency department or even to an ambulance?
- How can we set up "trust, triggers, and transport" in a way that allows computers to move information around before the clinicians even know they need it?
- What is the next generation of the care summary and how can we innovate to help our clinicians distinguish the signal from the noise?
- How can we efficiently put clinical and quality information together to support our "leap of faith" into value-based purchasing contracts?

One example of using health information exchange for care coordination comes from Reliant Medical Group, a large independent multispecialty group practice in central Massachusetts, which has automated a workflow with St. Vincent Hospital that has been credited with saving lives and cost. Dr. Larry Garber, internist and medical director for informatics at Reliant, explains the process:

> When a Reliant Medical Group physician's patient registers into the St. Vincent emergency department (ED), St. Vincent automatically sends an Admit, Discharge, Transfer (HL7 ADT) message to Reliant. Reliant immediately responds by automatically sending a care summary (C-CDA) back to the ED. The C-CDA document includes the hospital's medical record number that was originally sent in the ADT so that it can file into the ED's EHR [electronic health record] without human intervention. Less than two minutes after registration, the ED team has critical information in hand for the Reliant patient. Reliant is now working to duplicate this workflow with the ambulance dispatchers with goals of providing the paramedics information they can use to administer life-saving treatment en route to the hospital, or even to head off unnecessary trips to the ED.[2]

But this example represents one of only a few healthcare providers way out in front of the pack. Those providers in the healthcare system transformation "Peloton" (for those that don't follow the Tour de France, the Peloton is the gigantic group of superhuman cyclists that are just a little bit further back than the leading superhuman riders) are still in the throes of the "meaningful use" Electronic Health Record (EHR) Incentive Program and its peculiarities.

The kinds of things these providers think about are:

- Where can I send care summaries to clear the 10 percent summary of care threshold for meaningful use?
- Who is connected to me, through which information channels, and how can I find their addresses?
- What personal health information am I sending out of my EHR? Can I review it before it goes out? Can I choose what goes in and what is redacted? Am I sending a pithy episodic summary or an extensive longitudinal summary?
- How are we going to be sure we don't inadvertently disclose sensitive information without proper patient permission?
- What else do I need to keep in mind regarding numerators and denominators and attestation?

For example, Harbor Health Services—which includes the first community health center in the nation, Geiger Gibson Health Center, along with a leading public health agency that provides accessible care for urban Boston neighborhoods, the South Shore, and Cape Cod communities—worked hard to meet stage 2 meaningful use in 2015. Harbor Health's Vice President and Chief Medical Officer Dr. Robert Hoch says that health information exchange was an important, but difficult, initiative to implement:

> We have been very focused on continuously upgrading our IT systems for multiple reasons including improved support of care coordination among our clinicians, but have come up against a number of impediments. First we had to figure out how to connect our EHR to the Mass HIway [via NextGen Share HISP]. Next we had to re-engineer our workflows in NextGen [Harbor Health's EHR] so that we could review care summaries before they go out. We are revisiting the way we release HIV, substance abuse treatment, and behavioral health information to ensure sensitive information does not go out electronically without appropriate patient consent. Surprisingly, the most difficult task has been connecting with our hospital and specialist network and identifying partners who are ready and able to receive care summaries from us. Despite all the effort we are still short of the goal—reaching the 10 percent threshold for electronic patient summaries for all our providers.[3]

The phenomenon that Harbor Health and many other Massachusetts healthcare leaders have found is that both provider and vendor focus has been on sending information without equal and opposite attention to receiving it. This is largely attributable to stage 2 of the "meaningful use" EHR Incentive Program, which focuses on sending information and will not focus on receiving information until its stage 3—previously scheduled to begin in 2017 but currently up in the air after CMS announced that it is ending meaningful use and replacing it with a yet-to-be-announced program. Right now it means that providers hit a wall when they are ready to go-live with care summary exchange.

Bad and Good Lessons to Share

It is one thing to navigate all of the complexities of sending a hospital discharge, care summary, or consult note. It is quite another to receive that data. The clinician experience of opening their first Consolidated-Clinical Document Architecture (C-CDA) care summary is analogous to an expectant child opening a holiday present to find that it is not assembled, the batteries are not included, and the instructions are missing. In Massachusetts, clinicians report receiving "empty" C-CDAs, 90-page longitudinal care summaries, referrals without notes, discharge summaries that come weeks after the patients leave the hospital, and an abundance of variation in medical terms and codes.

With Direct-based exchange there are two distinct and incredibly complicated workflows to plan and roll out—outbound and inbound. It is too hard to implement both simultaneously and it is impossible to implement one without the other. This Catch-22 is leading several Massachusetts organizations to try some seemingly good ideas that are inadvertently causing more harm and delay than good.

These include:

1. Trying to remain "unlisted:" This is where the providers want to issue Direct addresses to staff and have them start sending, but try to hide the addresses from other organizations to delay receiving messages. The trouble with this idea is that provider directories, and directory exchanges among HISPs in particular, are extremely immature right now and HISPs do not share a common concept for unlisted addresses. The idea may work when everyone is on the exact same HISP, but it falls to pieces when exchange has to happen among multiple HISPs. This is the case in Massachusetts, which currently has 24 HISPs.
2. Setting up auto replies: This is where an organization automates a reply to all incoming Direct messages that tells the sender, "thank you very much for the information but we are not ready to use it yet [which implies 'and we don't want the associated liability for using/not using your information'], so please stop sending." The trouble with this idea is that most providers are unable to consume or display the "auto reply" in any kind of usable way. At its worst, the auto replies set up an echo chamber.
3. Delaying sending until they are also ready to receive: This is where an organization tries to take the path of good citizenship and not send out care summaries until they are also ready to receive them. The trouble with this idea is that the organization has to figure out both the outbound and inbound workflows without feedback before making any real progress, while the chances of derailing along the way are multiplied.

One other approach has been working well to date. Several Massachusetts healthcare organizations are talking to one another prior to sending any clinical information electronically and creating the space needed for a successful transition. They are agreeing to parallel send information through legacy channels, and are letting each other know that the patient information sent electronically will not be used during a transition and learning period. They are setting conditions for the hard "cut-over" point when they will be using—and liable for—received information.

This mutual agreement to a transition period is giving the organizations space to get the sending part right. This includes figuring out the technology and processes for packaging up and sending clinically relevant data, policy updates for disclosing sensitive information properly, addressing, data clean-up, and staff training, among others. They are then able to look at the information that is accumulating in their inbox and systematically figure out how to consume it. This means figuring out what their EHR, and perhaps integration, software can do, how to route information to departments and individuals (teams and covering physicians), how to match patients, and what to do with the inbound information.

This transition time is also needed to open the feedback channels between senders and receivers so that the senders can quickly improve the utility of their care summaries. This includes defining when to send care summaries, what information to include, and agreement to move to standard nomenclature.

Clearly, there are weaknesses in this approach. Clinicians and attorneys alike don't like to send and receive information that is just going to go to a "holding tank" and not be used. There are medical liability issues to be worked through and security risks. These are more Catch-22 conversations that have to be navigated.

'All Give, No Take' Approach to Information Exchange Won't Work

Experience with health information exchange in Massachusetts demonstrates that exchange of care summaries is not a simple IT interface to set up and turn on. Two highly complex and inextricable processes need to be modernized within every provider organization that shares patients with other healthcare providers: an outbound process for sending patient information to another care setting; and an inbound process for receiving, routing, consuming, and using information sent by other provider organizations.

To succeed, healthcare organizations need to proceed serially with implementation of HIE systems and processes: outbound first, inbound second. An "all give, no take" approach cannot work and threatens to tie up the entire healthcare delivery system for years. Instead, healthcare leaders need to set up and protect a transition period where electronic information can start

flowing, where clinical teams can engage and work the kinks out of their workflows, and where information recipients commit to give active feedback to senders and their vendors to rapidly improve inter-organizational information sharing.

Notes

[1] Massachusetts Department of Health and Human Services. "Health Information Technology Council Meeting." December 7, 2015. www.mass.gov/eohhs/docs/eohhs/masshiway/20151207hitcouncilpresentation.pdf.

[2] Personal interview with Dr. Larry Garber, internist and medical director for informatics, Reliant Medical Group. December 11, 2015.

[3] Personal interview with Dr. Robert Hoch, vice president and chief medical officer, Harbor Health Services. December 14, 2015.

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