ICD-10 Readiness Guide: Wire Data Analytics Is the Cure for Conversion Headaches

What's In This Guide

- Why Some of Your Systems and Applications Are Not Ready for ICD-10
- Yes, Continuous ICD-9 and ICD-10 Mapping and Alerting Is Possible!
- Traditional ICD Documentation Vs. Real-Time ICD Detection
- How to Ensure Reimbursements and Keep Vendors Accountable

Executive Summary

After years of postponements, healthcare organizations have invested enormous amounts of time and money in preparation for the ICD-10 conversion set to take place on October 1, 2015. Yet for all the preparation, there will likely be issues with reimbursement for healthcare providers. There are simply too many applications and systems reliant on ICD coding, and limited means for identifying and testing all of them.

Wire data analytics is an innovative technology from ExtraHop that has proven invaluable to IT Operations teams at healthcare organizations across the United States. While primarily used for IT insights, the unprecedented visibility afforded by wire data analytics can also be easily applied to assist in ICD-10 readiness and auditing before October, as well as remediation and assurance after the conversion.

By analyzing every HL7 message traversing the network in real time, your organization can understand exactly which applications and systems are using ICD-9 and ICD-10 codes. This continuous analysis applies to all applications and systems, regardless of vendor. Your organization can use this insight to hold vendors accountable and be sure that you are not losing revenue due to rejected, delayed, or unprocessed claims.

In addition, you can also benefit from HL7 analytics technology that can give you deep clinical and operational insights, such as real-time visibility into charting and coding practices for each department and clinic.

Risks with Traditional Auditing and Testing

Healthcare organizations have had several years to prepare for ICD-10 conversion. The most proactive organizations have formed steering committees, audited systems and processes, and begun training clinicians and medical coders on the new diagnoses.

During this time, the scope and complexity of the IT systems and application reliant on ICD coding has increased dramatically. So while your organization may have tallied up the applications, systems, and interfaces using ICD-9 codes several months ago in accordance with industry best practices, the resulting documentation is more than likely outdated.[1]

The answer to this problem is not more frequent documentation. The traditional method of documenting systems using ICD codes—logging all HL7 messages for a period and then manually analyzing them in an Excel spreadsheet—is too labor-intensive and prone to human error. Additionally, there is always the chance that some applications slipped through the cracks, perhaps because they did not log any transactions during the period of inspection.

In an ideal world, you would be able to immediately answer the following questions with up-to-date information *before and after* October 1, 2015:

- What are all the applications, systems, and interfaces that interacted with ICD codes, including departmental and niche applications, during the past month?
- Have all our application and system vendors properly implemented the new ICD-10 code set?
- How well are clinicians and coders at various locations using the ICD-10 code set?
- Are there any non-compliant codes used in the production environment at any time?

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[1] The American Health Information Management Association recommends ICD audits only once each quarter to prepare for the conversion. Barnhouse, Torrey; Rudman, William. "YOU ARE HERE—ICD-10-CM/PCS Status Check: Three Hundred HIM Professionals Report." Journal of AHIMA 84, no.6 (June 2013): 38-40.
http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_050199.hcsp?dDocName=bok1_050199

Continuous ICD-9 and ICD-10 Mapping and Alerting Is Possible

For organizations worried about ICD-10 readiness, the good news is that continuous analysis of all ICD code activity in your environment is possible with wire data analytics from ExtraHop Networks. This is a mature technology that is widely used by IT Operations teams at leading healthcare organizations.

This approach analyzes every transaction traversing the network—including for web, database, storage, authentication, and other technologies. In addition, wire data analytics will parse HL7 messages traversing the network to identify:

- Which type of ICD code is used in a message
- The associated sending and receiving interfaces
- The applications using each interface
- The device from which the transaction was initiated

The ICD Detection Dashboard shown below can be configured for an ExtraHop appliance within minutes, requiring only a small download from ExtraHop. Once the bundle is installed on the appliance, the platform will automatically begin parsing HL7 messages to detect ICD-9 and ICD-10 codes, along with the associated interfaces and applications.
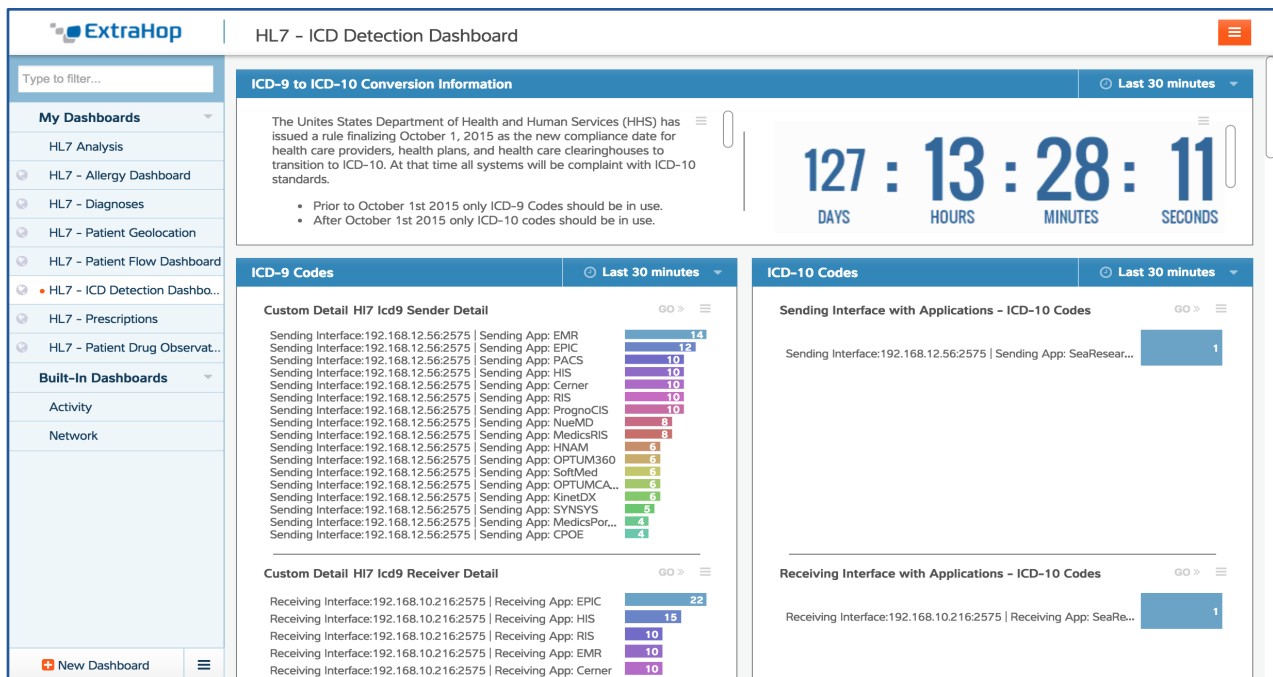
Consider the advantages of wire data analytics compared with the traditional approach to auditing ICD code activity.

Traditional ICD Documentation	ICD Tracking with ExtraHop
Periodic - Teams identify systems using ICD-9 codes on a quarterly, semi-annual, or annual basis, providing a point-in-time view that is quickly outdated.	**Continuous -** ExtraHop analyzes *all* HL7 messages passing over the network, identifying ICD-9 and ICD-10 codes in real time.
Labor-intensive - Traditional approaches require experts to compile and analyze data, often using Excel spreadsheets.	**Automatic -** Requiring only a few minutes of configuration, ExtraHop will automatically populate a dashboard for continuous detection of ICD-9 and ICD-10 codes.
Vendor-specific - HL7 interface vendors offer varying levels of monitoring and alerting functionality, and IT organizations must bridge the gaps between different interface systems when auditing ICD code use.	**Vendor-agnostic -** ExtraHop analyzes the HL7 protocol, providing consistent and complete insight regardless of the interface vendors in use.
Limited applications - The traditional approach may target only those applications that are deemed important and overlook niche applications.	***All* applications -** ExtraHop automatically discovers and classifies all application communications on the network, giving you a complete picture of ICD code activity.
Limited alerts - The organization is dependent on the alerting functionality provided by interfaces, which may or may not provide alerting based on ICD code set.	**Real-time alerts -** Based on the analysis of all HL7 messages, ExtraHop can send real-time alerts for non-compliant ICD codes.

Benefits of Real-Time ICD-9 and ICD-10 Detection

With the ability to detect any ICD-9 and ICD-10 activity on the network in real time, healthcare organizations will be much better prepared for the October 1, 2015 deadline for ICD-10 conversion.

Protect Revenue

After October 1, claims that use ICD-9 codes may be rejected, delayed, or go unprocessed. Your organization cannot afford to wait to hear back about these problems from the payers. With real-time detection of ICD-9 codes, you will receive alerts immediately if a stray system, application, or even the medical coder uses non-compliant codes.

Analysis of Charting and Coding Practices

With continuous analysis of ICD activity, your organization will be able to see how clinicians and coders are using the diagnoses code sets. This information can help you decide what additional training may be needed to improve charting and coding.

Vendor Accountability

While you should definitely ask your software vendors to test their systems prior to the October 1 deadline, it is advisable to take a "trust but verify" approach to avoid impacts to revenue. Continuous analysis of ICD activity will enable your organization to hold vendors accountable for supporting ICD-10 code sets.

Avoid Possible Fines

While the federal government has not specified the fines for using non-compliant ICD codes, there is precedent of fines for violations of HIPAA transaction and code sets.

Cost Savings for Audit Efforts

With or without the ExtraHop platform, you must audit and test your applications for ICD-10 readiness. For a large provider, engaging a consulting firm to perform an internal audit can cost hundreds of thousands of dollars, and even this effort will only provide a point-in-time view of your readiness. The ExtraHop platform offers a more efficient and effective alternative to traditional ICD readiness methods.

HL7 Analytics Beyond ICD-10 Readiness

The ExtraHop platform offers tremendous value to healthcare organizations beyond helping them deal with ICD-10 conversion. In the realm of clinical and business analytics, IT organizations can analyze HL7 messages track prescriptions by drug type, physician, and location, for example (see screen below).

What makes this capability especially powerful is that it is programmable. That means that your organization can program ExtraHop's real-time stream processor to parse any data contained within a transaction—say, patient admissions across facilities to determine wait times. This data can then be visualized in the ExtraHop user interface in real time, or streamed to a datastore where it can be combined with data from other sources for multi-dimensional analysis.

Conclusion

The ExtraHop wire data analytics platform enables you to uncover the insights that lie untapped in your data in motion, including which applications and interfaces are using ICD-9 and ICD-10 codes. These real-time insights will prove invaluable to healthcare organizations both before and after the October 1, 2015 deadline for ICD-10 conversion. Healthcare organizations will be able to immediately identify non-compliant codes in production, ensure proper reimbursement and gain intelligence about how clinicians and coders are using the expanded code set. Beyond ICD-10 conversion, the ExtraHop platform can reveal important real-time clinical and operational insights, such as those contained in HL7 messages.

To learn more about the ExtraHop wire data analytics platform, visit
www.extrahop.com/extrahop-in-action/health-informatics

ExtraHop is the global leader in real-time wire data analytics. The ExtraHop platform analyzes all L2-L7 communications, including full bidirectional transactional payloads. This provides the correlated, cross-tier visibility essential for today's complex and dynamic IT environments. The ExtraHop platform scales up to 20Gbps and deploys without agents in 15 minutes.

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