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WHITE PAPER

# How a Vendor-Neutral Archive Can Support You Through Stage 2 Meaningful Use and Beyond

By Dr. James Whitfill  
April 2015

Sponsored by: Hitachi Data Systems

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## Executive Summary

Stage 1 Meaningful Use was designed to stimulate the economy and encourage adoption of Electronic Health Records (EHR) and it seems to have been successful in this regard. Prior to the legislation, around 20% to 25% of healthcare providers in the U.S. had EHRs. Today, this number is well over 75%. This rapid increase has placed pressure on EHR vendors who need to focus their efforts on supporting their customers and ensuring that their software is functioning appropriately. This leaves little time for vendors to become familiar with the finer points of the legislation. As we leave the incentives of Stage 1 behind and enter into the penalty realities of Stage 2, key stakeholders need reliable information about what the regulations require them to do – and what they don't.

This white paper examines the details of two specific measures in the Stage 2 Meaningful Use requirements that address image enabling the EHR, outlining requirements, exemptions and possible solutions for ensuring compliance. Of course, while meeting regulatory requirements is top of mind, we shouldn't lose sight that the core intent of Meaningful Use is to make the healthcare system more efficient and the delivery of services more affordable so that we can provide patients with the best possible care. This white paper also outlines how the right Vendor-Neutral Archive (VNA) solution can help to easily meet some of the requirements of Meaningful Use today, while also providing a natural infrastructure platform that will ready sites for future directions in healthcare delivery.

## Demystifying Stage 2 Meaningful Use

Meaningful Use legislation was introduced to U.S. healthcare in an attempt to push the predominantly paper-based system towards widespread use of Electronic Health Records. Stage 1 of the Meaningful Use program offered healthcare providers financial incentives for investing in EHR technology. In Stage 2, providers that aren't in compliance with the regulations will be subject to Medicare reimbursement cuts.

Currently, there is a lot of misinformation and confusion around requirements of the Stage 2 Meaningful Use regulations. Healthcare providers need to be able to differentiate between the nice-to-haves and the must-haves, all while viewing Meaningful Use in the larger context of supporting the ultimate goal for everyone in the field of healthcare delivery: providing the best possible care to patients.

### Separating Fact From Fiction

Because of the incompatibility between the one-size-fits-all Meaningful Use requirements and the workflow realities of some practitioners, anesthesiologists, pathologists and radiologists are now exempt from Stage 2 penalties. Exemptions aside, if you produce medical images, there is still great value in being aware of the nuances in Stage 2 Meaningful Use so that you can understand the pressures your referring physicians are facing and be prepared to help them stay in compliance.

Stage 2 Meaningful Use regulations contain 2 sections related to medical imaging on which non-exempt healthcare providers need to report:

- **Core Measure 1 of 17** – There are 17 total Core Measures; eligible providers must report on all of them. The first Core Measure addresses use of Computerized Physician Order Entry (CPOE) for radiology and other orders. In Stage 1 Meaningful Use, this Core Measure was limited to medication. The change in Stage 2 is the addition of laboratory and radiology orders. Here's what you need to know about compliance with this Core Measure:
  - Providers who write fewer than 100 orders during the reporting period are exempt from this Core Measure.
  - Many EHR vendors are interpreting this Core Measure to mean that there needs to be an HL7 (Health Level 7) interface between the CPOE system and the radiology facility that is filling the order. This is not accurate as the order only needs to be *created* electronically, but can be *transmitted* by any mechanism including manually (e.g., by fax, mail, hand delivered, etc.).
- **Menu Set Measure 3 of 6** – Stage 2 Meaningful Use has 6 Menu Set Measures in total: Electronic Notes, Record Family History, Access to Images, Submit to a Cancer Registry, Submit to a Specialty Registry, and Submit Syndromic Surveillance Data. Providers only need to report on 3 of the Menu Set Measures. The choice of which 3 to report on is up to each provider.

Menu Set Measure 3 specifically relates to imaging. It requires providers who order tests in the EHR to ensure that at least 10% of those images are available through their Certified Electronic Health Record Technology (CEHRT). Here are some tips on complying with this measure:

- In order to be eligible a provider must refer more than 100 studies in the reporting period. The reporting period can change from 90 days to 365 days depending on the year of Meaningful Use program.
- Uploading images and reports into the EMR can be one way to meet this measure. Practices should consider whether their EHR can upload images and reports. If it can, how many studies will be ordered during the reporting period? If the number is high, the workflow tends to be overwhelming. Also, keep in mind that legislation only requires 10% of images ordered in the reporting period to be available, so workflow that involves uploading images might be workable for some practices.
- One way to meet this requirement is to embed a secure URL within the HL7 report. That URL would then launch a web browser and, after authentication, the ordered study and report could be viewed from a Vendor-Neutral Archive (VNA) or Picture Archiving

and Communication System (PACS). Even in this case, it is critical to understand the capability of the EHR to manage these URLs and to launch the correct Internet browser before undertaking this effort.

### The Power of a Vendor-Neutral Archive in Meeting Requirements

Providing image access through a combination of a Vendor-Neutral Archive and viewing environment is a highly efficient way to meet Menu Set Measure 3, but also gives you the power to take things much further, increase efficiencies along the way. As mentioned above, Menu Set Measure 3 of 6 only requires a minimum of 10% image sharing. A VNA empowers you to extend your image sharing beyond radiology and cardiology to include many different types of images, all for the same financial investment. It's a highly practical solution for stretching your healthcare technology dollars while bringing a broad cross-section of medical images and data to clinicians so they get a clearer picture of patient health. Investing in the right VNA now will carry you above and beyond Meaningful Use, expanding into the clinical enterprise and providing a foundation upon which you can manage content and perform analyses to drive greater population health management.

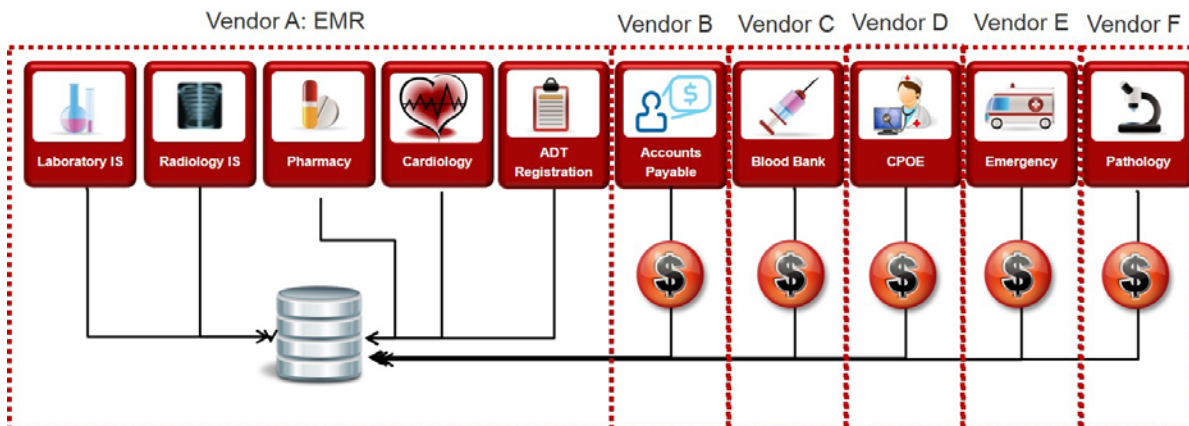
#### What is a Vendor-Neutral Archive?

A Vendor-Neutral Archive (VNA) is a system that acts as a long-term archive and data-sharing platform, typically providing image and information storage and management services to one or more PACS and/or imaging modalities. It may also be used for storage and management of clinical or so-called enterprise images.

### Not All Vendor-Neutral Archives are Created Equal

Traditional VNAs simply apply DICOM (digital imaging and communications in medicine) wrappers to non-imaging data, which makes long-term data accessibility difficult, increases regulatory risk and impacts the quality of patient care. Investing in one of the new generation of VNAs will take you beyond imaging to provide centralized access to clinical data, no matter what the source, to support faster, more accurate clinical decision making and diagnosis. See Figure 1.

**Figure 1: Without the right VNA, data consolidation within the EMR requires complex and costly point-to-point integration scenarios.**



EMR – electronic medical records  
IS = information systems

ADT = admissions, discharge, transfer  
CPOE = computerized physician order entry

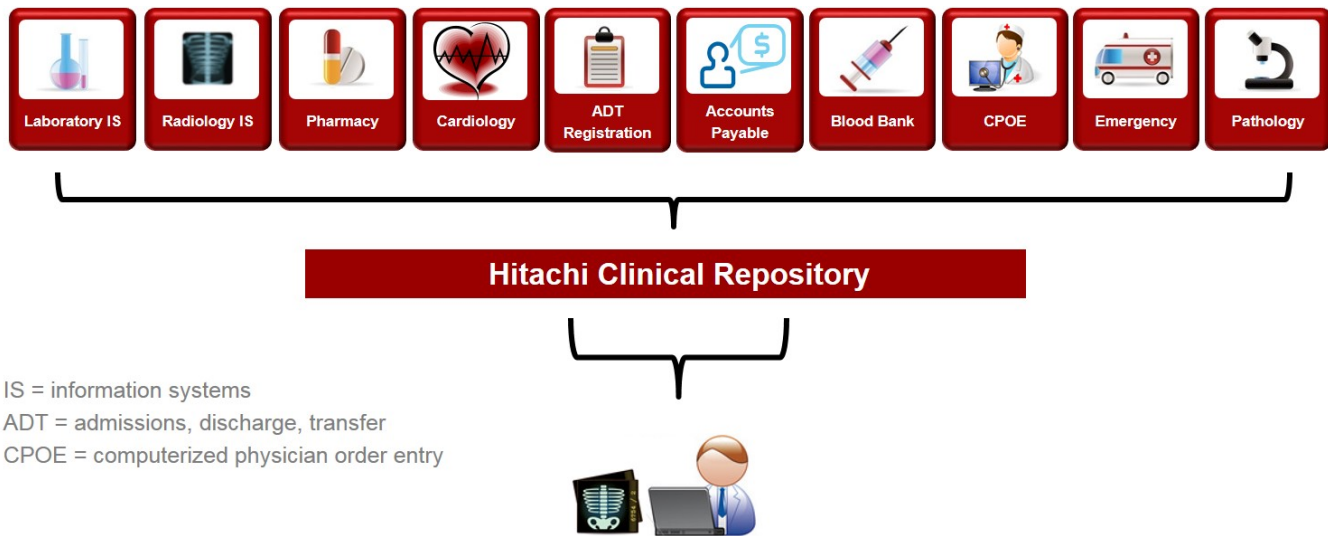
Investing in one of the new generation of VNAs will take you beyond imaging to provide centralized access to clinical data, no matter what the source, to support faster, more accurate clinical decision making and diagnosis. See Figure 2.

- **Flexibility** – Your VNA should be able to ingest different types of data, including unstructured data, into a centralized repository while maintaining original file format.
- **Sharing** – PACS vendors can capture diagnostic imaging but they aren't particularly adept at sharing. The VNA you choose should be able to share all content, including .pdfs, Excel spreadsheets and Word docs.
- **Future proofing** – VNAs were born from the notion that we don't want to lock data into a particular vendor or proprietary standards. Your VNA should act as a natural infrastructure platform that will support image enabling the EHR now, while also providing the flexibility and scalability to fluidly adapt to future digital imaging priorities and standards.
- **Expertise** – A VNA and a medical image archive are not one and the same. Make sure to shop around and ensure that any VNA you choose has roots in archiving, and that it can manage all content and store data to give you a foundation on which you can build out clinical analytics capabilities.

You can find more details on what the new generation of VNAs can offer you in the white paper entitled *Hitachi Clinical Repository: for Vendor-Neutral Archive Environments*.



**Figure 2. Through consolidation of the different storage systems into a single, searchable, consolidated view that is independent of the source applications, healthcare providers are realizing productivity-boosting and cost-saving opportunities.**



IS = information systems  
 ADT = admissions, discharge, transfer  
 CPOE = computerized physician order entry

## Conclusion: How to Get Ready for What's Coming Next

While we don't know what the next stage of Meaningful Use will bring, the feeling is that usability, safety and interoperability will be the three big items. As always, any regulations will come from an underlying drive to make the healthcare system more efficient and affordable so we can deliver the best care possible to those who need it. As our image-sharing needs move beyond radiology and cardiology towards enterprise imaging, the ability to pass data among systems in a way that gets the right images and information to the right place at the right time will be critical to improving workflow and providing more effective care. Having the right Vendor-Neutral Archive in place ensures that you will have a highly scalable and secure clinical data platform to meet healthcare's evolving clinical and regulatory priorities, empowering you to improve the health of your business and your patients.

## About the Author

Dr. James Whitfill has served in leadership roles within a variety of settings, including large academic institutions, large practices, as well as clinically integrated organizations. His focus has been on the use of business intelligence for clinical and operational improvement within healthcare organizations; leadership and team development; workflow-focused information technology; as well as technology and cultural issues within corporate mergers. Currently he serves as the Chief Medical Officer of Scottsdale Health Partners and President of Lumetis, LLC.

Dr Whitfill is a nationally recognized expert in Medical Imaging Informatics. He instructs in these topics at the University of Arizona College of Medicine-Phoenix and the Arizona State School Graduate Program in Informatics, and has consulted on information technology required in the formation of clinically integrated organizations and ACOs.

He received his AB (Bachelor of Arts) from Princeton University, and his MD (Doctor of Medicine) from University of Pennsylvania. He did his residency in Internal Medicine at the Hospital of the University of Pennsylvania and was the first physician to complete a fellowship in Informatics in the University of Pennsylvania Department of Medicine.