The Value of a VNA
How vendor neutral archives help contain costs and improve patient care
The shift within healthcare delivery and reimbursement from fee-for-service to value-based is driving providers to improve efficiencies in all aspects of care. For many organizations this effort began with the deployment of electronic health records (EHRs) that met federal requirements for “meaningful use.” Now, they’re moving on to next steps, investing in technologies that integrate with the EHR to collect and manage patient data from across the healthcare enterprise. These technologies vary according to organizations’ specific needs, as well as the medical devices used, but one solution in particular — the vendor neutral archive (VNA) — is proving itself indispensable.

VNAs are a favored technology of many health systems primarily because they offer a convenient, secure and scalable way to manage large volumes of images. To succeed in the world of value-based care, health systems must be able to securely store imaging data and access it quickly when and where it is needed. A well-designed VNA makes this possible while facilitating data sharing and collaboration. VNAs help providers and care teams make informed decisions about patient care — and ultimately adds value to the care delivery process.

This paper provides a closer look at how the VNA goes beyond the departmental functionality of a PACS to create a consolidated view of a complete patient record, and how the best VNAs can help healthcare providers manage their imaging data not only securely, but efficiently and cost effectively as well.
A Healthcare Imperative: Improve Efficiencies and Contain Costs

Since the passage of the Affordable Care Act in 2010, healthcare providers have faced tremendous pressure to improve efficiencies and contain costs. At the federal level, the U.S. Centers for Medicare and Medicaid Services has stated it intends to tie 90% of Medicare fee-for-service payments to quality or value by 2018. This, in turn, has spurred other major payers, including state agencies and commercial insurers, to create and adopt value-based models of their own. For example, members of the Health Care Transformation Task Force, a consortium of prominent health systems and public and private payers, have committed to putting 75% of their respective businesses under such reimbursement models by 2020.

Healthcare providers have responded to this shift by making fundamental changes to the way they run their businesses. Many are joining accountable care organizations, while others are merging with long-time competitors to build economies of scale and reduce the cost of capital. In 2016, according to the American Hospital Association, there were 102 hospital mergers in the U.S. “For healthcare to flourish in today’s environment,” the AHA reports, “the type of efficiencies that mergers create are often the only means to obtain meaningful cost and quality benefits.”

While organizations view such moves as essential to future earnings in the value-based landscape, most also realize that long-term success depends on their ability to manage patient data — and to do so across the continuum of care. According to one recent estimate, the market value of the healthcare “Internet of Things,” the network of digital devices capable of collecting and exchanging medical data, will reach $117 billion by 2020. Many of these devices produce “structured” data (like numbers and dates) that can be easily managed in standard databases, but most medical information is “unstructured” data. Medical imaging data, which is part of this latter category, accounts for the majority of healthcare data and is growing in volume year after year.

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“Increasing average study volumes, evolving regulatory guidelines and continuing reliance on imaging by the clinical enterprise” are the primary...
drivers of this trend, according to a recent market report by Frost & Sullivan. With the number of medical images expected to balloon to 115 billion by 2021, the challenge for organizations is making this imaging data accessible to all stakeholders in each patient’s care. “Providers no longer view the continuance of expanding monolithic and disparate image archives for each imaging department as a sustainable approach,” concluded Frost & Sullivan’s principal analyst, Nadim Daher.

Indeed, the potential for enterprise imaging archives like a VNA to provide a single point of access to diagnostic images from multiple sources has led to an estimated doubling of the VNA market between 2011 and 2018. Healthcare providers — tasked with both reducing costs, and improving patient care — are turning to VNAs to help get the job done.

Reduces Costs through Improved Efficiency

A primary benefit of a VNA is found in its potential for improving operational efficiencies. With the EHR-integration capabilities of a vendor neutral archive, “it’s really easy for providers from different departments to transfer and share studies within the community of care,” explained John Hansen, Offering Management Executive for Watson Health Imaging. An image of a patient taken in the Emergency Department, for example, can be uploaded instantly to the health system’s EHR to become a permanent part of that patient’s longitudinal record. This reduces or eliminates the need for re-imaging by specialists, who can refer to the earlier study using an available viewer. “If you’re being reimbursed for an episode of care, it’s important to rein in costs as much as possible,” Hansen noted. “Duplicate imaging can be a big source of waste, so reducing it where you can only makes sense.”

Using a VNA also contains costs by reducing a health system’s data management requirements. Because patient data is consolidated in the central repository and no longer lives on devices scattered across the enterprise, it slashes the cost of IT support and eliminates the need for separate backup and recovery strategies. Storage costs are cut as well since most VNAs include data life-cycle management tools that allow organizations to manage older or outdated data. “Policy-based deletion” tools make it easy for providers to dispose of old images in accordance with their own policies and in compliance with state and federal regulations. “Policy-based conversion” tools allow providers to compress the images they need to retain, saving on expenses associated with storage space.

Securing Patient Data

Another benefit of an enterprise VNA is the security it provides for patient data. A recent survey by the Ponemon Institute found that 90% of healthcare organizations have experienced a data breach in the past two years, and 45% have had more than five data breaches over that same period of time. The cost of a single breach averages close to $2.2 million, Ponemon reports — the cost of data breaches to healthcare organizations overall is approximately $6 billion annually, according to their estimates.

One of the primary reasons a health system is vulnerable to data breaches is that they rely upon numerous vendors to provide not only equipment and software, but security for those solutions as well. Most organizations, Ponemon reports, “are not vigilant in ensuring partners and third parties protect patient information.”

Instead of keeping data on disparate devices, VNAs consolidate data and protect it in one secure system. By centralizing data, health systems no longer have to worry about hackers stealing information from a single vulnerable device. And with a centralized VNA, there are fewer logins and passwords to maintain, limiting the risks posed by employees who fail to follow security best practices.

A VNA’s data life-cycle management tools can also improve the security of a health system by making compliance risk management easier. Whether older data is being deleted or compressed, risk is reduced by minimizing the storage space needed, allowing data to be kept in one secure location rather than dispersed across multiple devices.
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**Improving Patient Care**

A VNA can also have a positive impact on patient care. By giving physicians access to the complete patient record — and not just the image studies produced in their own department or practice — a VNA can help providers make more informed decisions which can result in better treatment.

Furthermore, because VNAs facilitate the transfer of data to any device capable of viewing the patient record, physicians can share images not only with collaborating providers, but also with care teams within and outside of the health system. Collaborating physicians can avoid ordering duplicate studies, so appointments move faster and radiation exposure is reduced. “The path the patient takes through the health system becomes more seamless because the data is more fluid,” explained Hansen. “Every step of the care process becomes a little bit easier because of the visibility a VNA allows.”

**The Watson Health Imaging Difference**

While every VNA offers a level of functionality above and beyond what PACS can provide, Watson Health Imaging’s iConnect® Enterprise Archive* stands out among its peers for several important reasons. Named Best in KLAS in 2016, 2017, and 2018 for VNA/Image Archive, iConnect Enterprise Archive is the centerpiece of Watson Health Imaging’s interoperability solutions suite, recommended by clients for, among other things, its scalability, ease of use, and proven long-term reliability.

A few of the key features that make iConnect Enterprise Archive a logical choice:

- **DICOM migration system:**
  iConnect Enterprise Archive includes a rich set of DIY tools to enable organizations to migrate legacy archive data and accelerate the value of their VNA investment while decommissioning legacy archives. The DICOM migration module allows organizations to cleanse, manage and migrate data efficiently and cost effectively.

- **Image lifecycle management:**
  Image lifecycle management not only helps organizations contain storage costs, but can also help reduce compliance risk. With iConnect
Enterprise Archive, your organization can easily manage imaging content throughout its lifecycle according to your data retention policies. For those seeking to cost-effectively retain content indefinitely, policy-based conversion can be applied to compress images as they age, up to lossy ranges.

**Storage move tool:**
The Storage Move Tool enables organizations to stay current with the latest trends in storage technology while avoiding storage vendor lock-in, a restriction often imposed by PACS vendors.

**Outstanding customer service:**
iConnect Enterprise Archive has a reputation as an “always on, never down, workhorse product that customers can rely on,” according to Hansen. “But when customers do require support, they know that we’re there, and that we’re going to go that extra mile to make sure they get everything they need.”

For healthcare leaders adapting to payment reform and preparing their organizations for further changes ahead, Watson Health Imaging and iConnect Enterprise Archive combine the crucial elements of scalable functionality with DIY flexibility. As a true vendor neutral solution, iConnect Enterprise Archive can help providers control costs and improve efficiencies and patient care — not only today, but for many years to come.

To learn more, visit merge.com/icea.