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Getting Strategic About HIPAA and HITECH Compliance:

How to Stand on Solid Ground While Reaching for the Clouds

Introduction

The healthcare industry is awash in data. The average large U.S. health system manages 200 terabytes of data onsite.¹ With data doubling every year, *InContext Magazine* writer Mark Bowen compares its growth to a “tsunami” and projects that the industry accounts for one-third of the total information currently being stored globally.²

In the U.S., every client interaction creates confidential patient health information (PHI) that must be protected and managed closely to meet the U.S. Health Insurance Portability and Accountability Act (HIPAA) of 1996, the Health Information Technology for Economic and Clinical Health Act (HITECH) of 2009, and the Final Ruling to HIPAA/HITECH, issued by the Department of Health and Human Services (HHS) in 2013.

This white paper examines how U.S. healthcare organizations are currently leveraging cloud solutions to build compliant HIPAA and HITECH applications. It argues that these groups need to push forward with these strategic IT deployments to meet regulatory requirements and achieve critical business objectives. In addition, it analyzes how leading providers of managed cloud services can help industry executives address these needs.

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¹ Jennifer Bresnick, “HIMSS: Only Half of Hospitals Have Data Archiving Strategies,” *EHR Intelligence*, March 11, 2014.

² Mark Bowen, “Riding the Healthcare Data Tsunami,” *InContext Magazine*, April 9, 2014.

For the modern healthcare executive, it can seem that regulatory requirements are all stick, no carrot.

U.S. healthcare organizations know that they need to leverage big data to improve the quality of patient care and reduce costs, but most are still ensnared in a tangled web of regulations, legacy systems and stovepiped data. In addition, they often lack the controls to ensure that PHI is fully protected at all times. PHI is used by a variety of care providers and employees across devices; travels across enterprise, partner and IT provider networks; and is stored on servers, computers, drives and more. Employee mobile device use is especially worrisome as it increases the number of network-enabled devices that must be managed tightly to avoid cyber attack, theft or loss.

In a recent HIMSS survey, 83% of healthcare groups indicated that they are currently leveraging cloud services. Of the 150 executives who responded to the survey, three out of four said that they are tapping hybrid and private cloud services for administrative and IT functions, while one in two said they use it for clinical applications and data and external data sharing.³

It's time for more healthcare groups to move electronic health record (EHR) systems and other business-critical applications online. Improving access to – and leverage over – patient data and systems is essential to transforming the modern healthcare organization into a fleet, agile business that capitalizes on compliance requirements for strategic advantage.

While healthcare used to be a paper-based business, today it's increasingly electronic. To meet meaningful use mandates and avoid the specter of reduced Medicare payments beginning in 2015, many large healthcare groups, or covered entities (CEs), have already digitized their records. Ninety-three percent of hospitals had implemented EHR systems by late 2013.⁴ Physician practices, which have less complex technology and operational processes, as well as smaller IT budgets, have been slower to follow; just half were using EHR software by the end of 2013.

Saying goodbye to the proprietary EHR platform buy.

Unfortunately, many early adopters are saddled with legacy infrastructures that have price tags of up to \$50 million and aren't in the cloud. These systems don't provide healthcare entities with the flexibility, agility and integration they need. This message is echoed by physician practices. Despite spending \$100,000 to \$200,000 on their EHR systems, three out of four physician practices surveyed by MPI Group and Medical Economics say that it hasn't been worth it, and they wouldn't purchase their systems again due to their poor usability, high cost and the time required to enter data, among other factors. In fact, one in three respondents doesn't think their existing EHR system will be viable in five years.⁵

Healthcare executives and IT leaders are now faced with a difficult decision: spend millions integrating soon-to-be-outmoded systems across departments, organizations and networks; implement a new best-of-breed system and push for partners to standardize on the same platform; or begin moving EHRs and other applications to the cloud.

³ 2014 HIMSS Analytics Cloud Survey, HIMSS Analytics, June 2014, 8, 10.

⁴ Alison Diana, "EHR Swaps Coming for Many Healthcare Organizations," *InformationWeek*, May 8, 2014.

⁵ Daniel R. Verdon, "Physician Outcry on HER Functionality, Cost Will Shake the Health Information Technology Sector," *Medical Economics*, February 10, 2014.

Consumer healthcare services are also moving online with an increasing sense of urgency. Ultimately, the great hope for any kind of real healthcare data interoperability could well be the cloud where it's the most efficient (both electronically and financially) to aggregate, store, manage and then access data – of any kind (including personal health) at scale.

—Dan Munro,
"HIPAA Support Widens in
Cloud Vendor Community,"
Forbes

Using compliance to accelerate enterprise change.

So what's the new thinking on compliance? While meeting regulatory requirements is a costly proposition, it also helps healthcare entities move to a predictive, preventive style of delivering medical care. What's key to making this happen: Healthcare groups must leverage cloud services to enable sophisticated cross-organization analytics, facilitate the real-time decision making that's required in healthcare environments and provide agility and speed-to-market for new service launches.

In this new model, healthcare organizations and networks will anticipate – rather than respond to – human behavior and patient needs on both an individual and aggregate level. By doing so, these groups will help patients manage their health more successfully and prevent expensive emergency treatments. This will be important not only for healthy patient populations, but also for high-risk individuals. With Medicare, just 10% of beneficiaries are responsible for 70% of the program's total costs.⁶

As more healthcare groups join affordable care organizations, it will become imperative for these entities to refine their big data analytics capabilities. By identifying new trends, these groups can develop immediate strategies to motivate desired patient actions and cost-effectively treat extreme service users. They'll also be able to share Medicare savings with the federal government, gaining an important monetary incentive for evolving their care decision-making and practices.

Use managed server hosting to drive enterprise performance up to the clouds.

Industry pundits are predicting physician practices will lead the charge to the cloud. If they can't be first movers, hospitals and managed care networks should be fast followers and rapidly deploy EHR systems and other business applications in the cloud. By implementing these business-critical, data-intensive online platforms, all healthcare organizations have the opportunity to set a new standard: not just for improved patient outcomes, but also for healthier margins.

So what should CEs look for in their managed server hosting providers?

Compliance Benefits

- **Business associate agreements:** Cloud providers should sign business associate agreements (BAAs), guaranteeing that they will stand behind their compliance promises, and putting in place the policies, procedures and controls that protect PHI as it is stored in data centers and transported across encrypted networks.
- **Risk assessment:** Legal actions by the Department of Health and Human Services have demonstrated that the first item data breach investigators ask for is a risk assessment. A business associate (BA) should deliver a thorough risk analysis that details all of the policies, procedures and controls the partner will use to protect and manage PHI.
- **Auditability:** BAs should conduct both internal and external audits on an ongoing basis to ensure that their cloud services and data center operations are fully compliant with federal requirements such as HIPAA and HITECH. Leading cloud services providers will usually demonstrate compliance across multiple, highly regulated industries and provide third-party attestation that their policies meet these industries' regulatory demands.

⁶"Medical Homes and Cost and Utilization Among High-Risk Patients," *The American Journal of Managed Care*, Managed Markets Networks Website.

The High Costs of Protecting Patient Data

Ensuring Compliance with the Final Rule

\$114M-\$225.4M

Initial compliance costs for all covered entities and their business associates

\$14M Yearly industry compliance costs thereafter

Losing Control of Information

\$7B Estimated total healthcare industry costs to address data breaches

\$2.4M Cost of a major data breach at one organization

Violating Compliance Requirements

Up to \$50K
Cost for a one-time HIPAA violation

Up to \$1.5M
Cost for repeated HIPAA violations of the same type, due to willful neglect

Who Handles Patient Data

150 Individuals who access a single patient's medical records during the course of a typical hospitalization

Harming Patient Trust

60% Estimated percentage of patients who leave a provider after a privacy breach

\$111K Estimated lifetime losses when a patient leaves a provider

1,019 Reported breaches of PHI affecting more than 500 individuals (as of June 2014)

Information sources: 45 CFR Parts 160 and 164: Federal Register, Deloitte Center for Health Solutions, American Health Information Management Association and US Department of Health and Human Services Website.

Compliance Benefits (continued)

- **Security:** Security is hard-wired into industry-compliant cloud deployments. A cloud services provider will provide best-of-breed security solutions from leading providers and critical internal controls to mitigate physical and technology security risks. These measures include, but are not limited to, role-based authentication, encryption of incoming and outgoing data, ongoing system monitoring for unauthorized access or malicious activity and physical security measures to protect hardware. In addition, managed service hosting providers will implement workforce training and oversight to ensure staffers use HIPAA/HITECH-compliant procedures for executing data center responsibilities.

Business Benefits

- **Business growth:** Instant, cost-effective scalability enables healthcare organizations to address volume spikes, add new partners and networks and launch new products and services.
- **Data leverage:** Healthcare organizations can work with their cloud providers to craft data archiving strategies that meet their needs, improving their access to historical information that can be used for in-depth pattern analysis with patient monitoring, research and medical trials.
- **Visibility:** Best-of-breed cloud service providers provide online customer portals with robust self-service functionality and the ability to manage and monitor server network performance in real time.
- **Customizability:** Premier managed server hosting companies offer dedicated, hybrid and cloud server environments and help customers assemble the best technology environments for their specific needs.

Technology Benefits

- **Continuous access:** High availability providers ensure 24 x 7 x 365 access to business-critical applications, processes and data. A good partner will leverage a market-leading platform, such as Microsoft SQL Server 2012, that provides clients with “always on” reliability, business intelligence and access to the best data management tools.
- **Exceptional performance:** Geo-load balancing ensures that high intensity workloads, such as big data analytics and reporting, don’t compromise the performance of routine operations. A cloud service provider should operate multiple data centers in strategically located geographies to help healthcare organizations push their performance to new levels of effectiveness and efficiency.
- **Failover:** Cloud service providers guarantee the continuity of business operations with failover clustering and automatic failover from primary sites to secondary sites. They also enable planned failovers so that customers can schedule system maintenance without compromising business-as-usual activities.
- **Business continuity:** Only two-thirds of organizations have a business continuity plan in place, despite the fact that patient and organizational data is critical to strategic and daily operations. Using cloud services can improve an organization’s business continuity and disaster recovery capabilities, with automatic backups and multi-site replication for easy restoration in the event of a hardware failure or catastrophic incident.

“If they can’t be first movers, hospitals and managed care networks should be fast followers and rapidly deploy EHR systems and other business applications in the cloud.”



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HOSTING healthcare cloud solutions are compliant with HIPAA and HITECH. The company offers 100% audit assurance.

HOSTING takes pride in providing its customers with each of the technology and business benefits mentioned in this white paper. The company also delivers one more: 100% audit assurance, guaranteeing that certain compliance services provided to healthcare customers will be able to pass assessments for several industry-standard security frameworks and regulatory obligations. This assurance gives healthcare executives the peace of mind they need to make the transition to cloud services, trusting partners with their business-critical applications and confidential data.

As one of the world's leading providers of managed cloud, dedicated server and database services, **HOSTING** takes a lifecycle approach to server management. This approach enables enterprise customers to reap exceptional business benefits and ROI from their IT investments.

HOSTING is pleased to team with Microsoft to offer its industry-leading SQL Server 2012 platform to its global enterprise customer base. Together, **HOSTING** and SQL Server 2012 provide healthcare organizations with managed server hosting services that meet compliance requirements, enhance critical business operations and fuel intelligent decision making throughout the enterprise. The **HOSTING** team of managed server and database experts also provides assessments and system design, managed database services and swift and secure migration services.

For companies that want to harness the power of managed cloud services, but don't want to compromise on control or compliance, the choice is clear: Contact **HOSTING** today to learn how you can achieve your strategic business objectives with an industry-trusted server network that keeps your operations on solid ground.

ABOUT HOSTING

HOSTING delivers secure, compliant, always-on cloud solutions that provide customers with the speed, agility and transparency they need to increase their revenues, reduce their expenses and manage their risk.

Headquartered in Denver, Colorado, **HOSTING** owns and operates six geographically-dispersed data centers under an ITIL-based control environment validated for compliance against HIPAA, PCI DSS and SOC (formerly SAS 70) frameworks.

More than 3,000 global organizations entrust **HOSTING** with their business-critical payment card, healthcare and other regulated data.

Our superior infrastructure, expert cloud architects and industry-leading customer satisfaction scores have been recognized by Gartner, Inc., in its 2012, 2013 and 2014 Magic Quadrant for Cloud-Enabled Managed Hosting.

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