WHITEPAPER

Securing Unstructured Data and Improving Patient Care

Healthcare organizations are making a big jump in storing and sending their patient records – they're transitioning to the cloud. In addition to improved security and efficiency, utilizing cloud solutions will forge a new future for the healthcare industry – one where data can be leveraged to customize patient care.

At the heart of every healthcare organization lies a vast amount of unstructured data, which is critical for delivering quality patient care. However, the traditional methods of storing and exchanging this data present challenges, including security vulnerabilities, inefficient workflows, and limited accessibility.

This white paper explores how healthcare organizations are making a big leap in storing and sending patient records by transitioning to cloud-based secure document exchange. By utilizing cloud solutions, healthcare providers can improve security, enhance efficiency, and leverage data to customize patient care, ultimately forging a new future for the healthcare industry.

IBM Research estimates that some 1.2 billion clinical documents are produced in the U.S. each year, and about 60% of these contain valuable patient-care information "trapped" in an unstructured format.[1]

The healthcare industry faces unique challenges in securing sensitive patient information. Cyberattacks can disrupt operations, compromise patient data, and result in significant financial losses. The need for robust security measures to safeguard patient records has never been more critical.

An exorbitant amount of unstructured data is found in patient records, clinical notes, discharge summaries, medical forms, authorizations, prescriptions, and test results - presenting a significant vulnerability in terms of security breaches and privacy concerns.

Additionally, the fragmented nature of healthcare data, stored in disparate systems and formats, hampers effective communication and coordination among healthcare providers. Miscommunication and delays can lead to medical errors, jeopardizing patient safety and quality of care. The Joint Commission International emphasizes the importance of clear and accurate communication in healthcare, emphasizing the need for streamlined and secure document exchange and protecting unstructured data.

1 https://researcher.watson.ibm.com/researcher/view_group.php?id=7664

As this data is cumbersome, it often takes clinical care teams too much time to locate and access in the event of a medical emergency. In healthcare, every minute counts, and a hand-written note stored in a patient's medical record could make a difference in saving a life.

Before hospitals and healthcare organizations can store this data electronically and rectify this problem, there has to be a process in place to control who can access it. This is one headache that's getting bigger for healthcare information technology professionals, but it can be solved with a secure data transport solution.

Analysts from Merrill Lynch, Gartner and IBM have come to a general consensus that 80% of all healthcare data is unstructured and clinically relevant. This number is growing and further supports the need for a secure solution to transport this data.[2]

Generally, the current method of transport involves tools such as email, paper, and traditional fax machines, causing chaos for healthcare professionals. These outdated forms of communication can create security vulnerabilities, and even lead to a dreaded data breach.

Healthcare organizations can now solve this problem with cloud-based document exchange solutions.

The Transition to Cloud-Based Secure Document Exchange

Now more than ever, healthcare organizations, insurance providers, and pharmacies must take action and make information security a priority. Without the proper security process and procedures in place, a data breach is bound to happen.

Cloud-based secure document exchange offers numerous benefits for healthcare organizations. By moving away from legacy systems and adopting cloud solutions, providers can take advantage of scalable and flexible infrastructure, reducing the burden of managing and maintaining on-premises servers. Cloud-based solutions also offer enhanced accessibility, allowing authorized users to securely access patient records from any location, fostering collaboration and timely decision-making.

With a reliance on antiquated systems to store and transport patient data – namely paper and email communications – these security risks mount.

A study from the Ponemon Institute revealed that ransomware attacks in particular have a significant impact on patient care, including delays in procedures and tests, an increase in complications from medical procedures, and higher mortality rates.[3]

Healthcare professionals rely on a heavy volume of paper that is not going away, and contains unstructured information that needs to be electronically stored and shared with other systems. The sheer volume of information being transmitted alone increases the chance of a data breach. With most of this data being unstructured, the pressure to put a system in place for secure transmission of this data is mounting.

Cloud-based data transport solutions such as ETHERFAX provide a way to exchange information in a digital world, securely and fully compatible with Electronic Health Records (EHRs). ETHERFAX is subject to regular testing to mitigate any potential security vulnerabilities and allows healthcare organizations to take the next step towards data security by regulating data access.

2 https://www.redbooks.ibm.com/redpapers/pdfs/redp5603.pdf; 3 https://www.censinet.com/wp-content/uploads/2021/09/Ponemon-Research-Report-The-Impact-of-Ransomware-on-Healthcare-During-COVID-19-and-Beyond-sept2021-1.pdf

Enhancing Security and Compliance

Unstructured data is cumbersome, inefficient and hard to reconcile with industry standards like HIPAA that work to prevent data breaches. It needs to be electronic and easily accessible in the form of scans or electronic notes.

Technology such as Electronic Medical Records (EMRs) and the like pose a huge problem – in order to guarantee security, regulations securing data access through a secure network and endpoints must be enforced.

Regulating data access is often difficult for organizations who have concerns regarding cost and interoperability, as well as concerns regarding a possibly cumbersome implementation process that might include re-training staff members, a complex installation process or difficult disposal of old technology in accordance with compliance laws.

Because of this, the industry isn't taking enough proactive actions towards data regulation and unstructured data security.

80% of serious medical errors were the result of miscommunication between caregivers during patient handovers.[4]

Security is a top priority in healthcare, and cloud-based secure document exchange provides robust measures to protect patient data. ETHERFAX, a trusted provider of secure data exchange solutions, offers a reliable, intelligent, software-defined network that maintains the highest level of security. By leveraging ETHERFAX's patented technology and suite of applications, healthcare organizations can integrate cloud-based solutions seamlessly with existing systems, ensuring end-to-end encryption and compliance with regulatory requirements.

Improving Efficiency and Streamlining Workflows

Inefficient document exchange processes can hinder healthcare providers' ability to deliver timely and effective care. Cloud-based solutions enable streamlined workflows by eliminating manual data entry and digitizing document exchange. Through ETHERFAX's cloud-based solutions and AI-powered data-extraction technology, organizations can save time, money, and resources. Automation of document delivery and extraction allows healthcare professionals to focus on patient care rather than administrative tasks.

The transition to cloud-based secure document exchange represents a significant step forward for healthcare organizations. By embracing cloud solutions, healthcare providers can address the challenges of data security, streamline workflows, and harness the power of data to enhance patient care. ETHERFAX, with its trusted, secure, and efficient software-defined network, is at the forefront of this revolution, empowering organizations to securely exchange, extract, and integrate data between systems and applications.

ETHERFAX reduces costs, improves interoperability and provides a seamless transition to the cloud without changing user workflows. ETHERFAX does not require a fax server or additional software, and there is no training necessary.

4 Study conducted by the Joint Commission; https://store.jointcommissioninternational.org/assets/3/7/jci-wp-communicating- clearly-final_(1).pdf

Leveraging the security of fax technology with the scalability, cost-effectiveness and analytical power of the cloud has the potential to turn the healthcare diagnostics process into a patient-specific powerhouse for hospitals and healthcare organizations.

The cloud improves interoperability and communication between physicians as well as boosts diagnostic speeds in life-threatening situations. Yet, cloud providers must first ensure that all data transmitted via the cloud is protected.

ETHERFAX can provide this security for healthcare organizations through an array of secure solutions.

ETHERFAX's Solutions

In order to secure the transmission of unstructured data for the healthcare industry and boost interoperability, organizations need a cloud solution that's cost-effective, scalable and 100 percent guaranteed secure.

Healthcare IT managers should be concerned with public cloud solutions that don't provide a high level of security for patient data subject to government regulations. Simply having an electronic solution in the cloud isn't enough – the security must be guaranteed.

In a Commvault survey of healthcare IT managers in enterprise orgs, 75% of respondents indicated they were concerned about the protected health information (PHI) residing in Bring-Your-Own-Cloud (BYOC) solutions, such as Box or Dropbox.[5]

ETHERFAX can secure unstructured data for healthcare organizations.

Leveraging the cloud, ETHERFAX provides an array of solutions for securely transmitting unstructured data. It enables healthcare organizations, medical groups, insurance companies, and billing operators to securely transmit data and achieve compliance while adhering to government mandated regulations such as HIPAA. ETHERFAX's secure, cloud-based, and encrypted data exchange solutions operate in a HIPAA and SOC 2® compliant environment that is both HITRUST CSF® and PCI DSS certified.

The ETHERFAX Secure Exchange Network (SEN) offers a seamless transition from legacy network solutions such as those that rely on expensive telephony equipment and the PSTN. As a patented Infrastructure-as-a-Service solution, ETHERFAX SEN leverages hybrid-cloud technology to provide 100% secure communications and data protection.

Guaranteed security of unstructured data will do more than just put a healthcare organization's data breach worries to rest. With data finally secure, an individual's health records have the potential to provide a purely customized healthcare experience in the near future.

5 http://webdocs.commvault.com/assets/managing-the-healthcare-information-stream.pdf;
6 https://med.stanford.edu/content/dam/sm/sm-news/documents/MedicineHealthTrendsWhitePaper2017.pdf

Future of Healthcare – Unique Patient Profiles Driven by Network Security

Electronic health and medical records are the future of healthcare, and data mining and big data computing are forging a path for healthcare that includes customized diagnostics.

According to a Stanford Medicine Health Trends Report, health data is allowing doctors to build better patient profiles and predictive models to more effectively anticipate, diagnose and treat disease.[6]

In the near future, healthcare organizations can leverage cloud-based solutions to create a more efficient, secure, and personalized healthcare system, benefiting patients, providers, and the industry as a whole.

For more information, contact a sales team member at 877-384-9866 or SALES@ETHERFAX.NET >

ETHERFAX

Founded in 2009, ETHERFAX® provides an intelligent, software-defined network and suite of applications to facilitate the exchange of business-critical documents and information. ETHERFAX's patented technology is widely utilized across a broad range of industries. Leveraging the cloud, artificial intelligence, and data extraction technologies, ETHERFAX helps organizations save time, money, and resources by automating processes and workflows. ETHERFAX's encrypted data exchange solutions operate in a HIPAA and SOC 2® compliant environment that is both HITRUST CSF® and PCI DSS certified.