

The future of fax technology in healthcare is evolving toward becoming a secure data layer in the analytics pipeline, offering new efficiency and compliance benefits through API to API integration.

# The Future of Faxing: The Evolution of Fax Technology in Modern Healthcare

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## Introduction

Despite the increasing popularity of digital solutions, fax technology continues to play a crucial role in healthcare communication. Its secure connection and ability to offer indisputable proof of call occurrence make it a reliable option for transmitting sensitive information. Fax has evolved into an API-to-API transmission system, further cementing its relevance in the industry, and regulations that mandate secure data transmission have contributed to its continued use. Furthermore, many healthcare professionals hesitate to change their existing workflows, including faxing as a core component. These factors combined ensure that fax technology remains a mainstay in the healthcare sector.

## The Challenge of Unstructured Data

Managing unstructured data in healthcare is a significant challenge. Protected health information, such as that contained in medical records and handwritten notes, cannot be easily organized into traditional databases, posing a risk of misinterpretation or mishandling due to its sensitive nature. Conventional forms of data communication through emails and storage solutions may not provide the security and traceability required to safeguard such data. Fax technology, especially in its API-to-API form, effectively addresses the problem of securely transmitting data. Its structured data exchange process ensures that information remains secure and unaltered during transmission. In addition, it provides an extra layer of security and traceability, often absent in other digital solutions. Fax technology can also function as a verification layer, adding extra security and traceability to the data transmission.

## AT A GLANCE

### WHAT'S IMPORTANT

- » Fax technology has an enduring role in healthcare, transitioning from legacy systems to API-to-API transmissions.
- » The benefits of fax technology include automation, cost reduction, streamlined sharing, improved productivity, and compliance.
- » Cloud-based API-to-API faxing modernizes technology; redefines fax as a secure, scalable, and efficient data transport layer; and empowers integrating fax in the analytics pipeline.

### KEY TAKEAWAYS

- » Fax challenges conventional perception but can offer benefits in healthcare.
- » Balancing benefits and challenges while effectively integrating fax is crucial for modern healthcare strategies.

### *The Modern Fax Solution — API to API in the Cloud*

It is essential to understand that the shift of fax technology to the cloud is not a move away from its fundamental capabilities. On the contrary, it is an improvement that makes faxing even more efficient. In modern times, fax has evolved into an efficient API-to-API communication system. This transformation ensures that fax technology is not simply a relic of the past trying to remain relevant but a dynamic system that meets the requirements of modern healthcare IT. This API-to-API system facilitates a seamless, secure data transmission layer in the cloud. The cloud serves not as a fax but as a highly secure, scalable, and efficient data transport layer. This transformation underlines the necessity for healthcare analysts and data managers to shift their focus back to fax technology, particularly in its cloud-based, API-to-API incarnation. When it moves from API to API, the data retains its integrity and is fortified with an extra layer of security, making it more meaningful and trustworthy.

### *Fax as a Layer in the Data Analytics Pipeline*

It would be a disservice to confine fax technology to the role of a mere data transmitter. In a progressively data-driven healthcare environment, fax serves a more complex function as a critical layer in the data analytics pipeline. By incorporating fax in this pipeline, data moves securely and becomes part of a larger analytical framework. This could provide invaluable insights for healthcare providers, from predictive analytics for patient outcomes to resource allocation strategies. API-to-API faxing is a reliable and sturdy component of the data analytics pipeline, providing a similar level of security and traceability as traditional faxing. However, it is more flexible and agile, making it a valuable addition to an organization's analytics framework. Incorporating fax technology into the analytics system can enhance its security, accuracy, and insights considerably.

## **Benefits**

Fax has transformed from a traditional communication method to a modern API-to-API system that provides several benefits if implemented and utilized effectively. These benefits range from cost savings to increased operational efficiencies. In addition, fax's compatibility with cloud technology offers an extra layer of advantages, making fax a crucial tool for modern healthcare communication and data management. Following is a comprehensive list of benefits that healthcare organizations can gain:

- » **Cost reduction:** Traditional fax (fax machines and multifunction printers) come with several expenses, such as purchasing and maintaining the hardware and buying paper. However, by using API-to-API faxing, the entire process is digitized, eliminating these costs. In addition, the cloud-based system allows for a scalable model that enables organizations to only pay for the needed services, ultimately leading to cost optimization.
- » **Streamlined information sharing:** The API-to-API framework enables secure data transmission between healthcare systems, facilitates real-time patient information sharing, and enhances collaborative care and decision making.
- » **Reduced errors:** With API-to-API transmission, the sending and receiving processes are automated, reducing errors and increasing data integrity. This automation ensures that sensitive data is transmitted accurately and securely.

- » **Regulatory compliance:** Compliance with regulations such as HIPAA is critical in the United States, given the sensitive nature of healthcare data. API-to-API faxing ensures secure and traceable data transmission, making it easier for organizations to comply with regulatory guidelines regarding patient information.
- » **Process improvement:** API-to-API faxing comes with automation and integration features that enable healthcare organizations to optimize their workflows for increased efficiency. By integrating fax technology into their electronic health records systems or other platforms, healthcare providers can enhance the reliability and speed of critical processes such as prescription management, referrals, and billing.
- » **Scalability and reliability:** Cloud-based fax solutions are highly scalable, allowing healthcare organizations to adjust their faxing requirements as they grow. Furthermore, the cloud infrastructure ensures enhanced reliability by ensuring that fax services remain unaffected by local outages, minimizing downtime. This makes cloud-based fax solutions a reliable and efficient choice for healthcare providers.
- » **Reduced IT burden:** Shifting fax services to the cloud reduces IT maintenance burden and frees up data analytics and cybersecurity resources.

## Considerations

Fax technology integrated with APIs offers numerous benefits for modern healthcare organizations. However, it is crucial to consider certain aspects to ensure secure and practical usage. A balanced approach to implementing and maintaining fax technology is critical to successfully navigating the challenges and advantages it presents in healthcare. By carefully weighing certain factors, healthcare organizations can implement a fax technology solution that is both effective and secure. Although challenges exist, careful planning and focusing on technology modernization and cybersecurity can mitigate most risks, making fax a reliable component for communication and data management. By taking the following actionable steps, organizations can navigate the challenges and fully leverage the advantages of fax technology:

- » **Conduct cost-benefit analysis:** Perform a cost-benefit analysis to evaluate the potential savings of upgrading to a modern fax system, including automation, error reduction, and compliance, against the initial investment.
- » **Plan implementation strategically:** Involve all stakeholders and opt for a phased roll-out approach. Sufficient time should be allocated for testing and troubleshooting to ensure a smooth transition.
- » **Upgrade the technology:** Upgrade to modern, cloud-based fax solutions for enhanced security, improved functionality, and better integration via an API-to-API system, integrating fax to boost productivity.
- » **Implement automation:** Optimize workflow efficiency and accuracy by investing in fax solutions with intelligent document processing, batch sending, and EHR integration. Consider adopting technologies like OCR and machine learning to automate manual tasks, reducing labor costs and eliminating bottlenecks.
- » **Ensure regulatory compliance:** Select a fax solution that complies with healthcare regulations like HIPAA and offers encryption and secure transmission to protect patient data.
- » **Prioritize privacy:** Find fax solutions that provide robust encryption protocols and secure channels for transmitting patient data to minimize unauthorized access.

- » **Fortify cybersecurity measures:** Implement comprehensive cybersecurity measures, such as multifactor authentication and regular security audits, to protect your fax technology against potential cyberthreats.
- » **Address staffing and skills gaps:** Conduct regular training and consider hiring or contracting specialists proficient in modern fax technology and cybersecurity to ensure effective management and maintenance.

## Trends

- » **Move to the cloud:** Healthcare IT buyers should take note of the increasing trend toward cloud computing. Moving to cloud infrastructure offers better data accessibility, scalability, and cost-effectiveness. However, it is vital to assess the security features and compliance of cloud-based solutions with healthcare regulations to guarantee a smooth and secure transition.
- » **AI everywhere:** AI is rapidly gaining importance in healthcare IT due to its potential to speed up business transformation. One subfield of AI, generative AI, allows for the autonomous creation of new content, including medical records. However, it is crucial to take note of the ethical concerns surrounding AI, particularly regarding data privacy, algorithmic bias, and its explainability, before implementing it.
- » **Drive to automate:** Automation in healthcare is on the rise, with AI being just one aspect of it. To improve operations, it is crucial to focus on IT automation, process automation, and value stream automation. However, when investing in automation technologies, it is critical to be mindful of the potential data security and privacy risks, particularly in a healthcare environment.
- » **Cybersecurity and risk:** Cybersecurity has become even more critical with the ongoing digital transformation. Cyberattacks are becoming more sophisticated and often are leveraging the same AI technologies driving the digital transformation. Therefore, it is no longer optional but essential to invest in cyber-resilience strategies, including specialized workforce training. This is necessary to protect both data and systems from potential threats.
- » **Dynamic work and skills:** The COVID-19 pandemic has profoundly impacted how work is done. With the emergence of flexible work arrangements and new technologies, it is essential to ensure that technology investments align with strategic goals. In addition, equipping the workforce with the necessary skills to meet these new demands is crucial.
- » **Shifting regulatory landscape:** Navigating the ever-changing regulations surrounding health IT, particularly AI, can present both obstacles and advantages. Keeping up with these developments can give an organization an edge over competitors, but noncompliance could lead to fines and other penalties. Therefore, taking a proactive approach to comprehending and preparing for these regulations is imperative for long-term success.
- » **Operationalization of environmental, social, and governance (ESG):** The importance of environmental, social, and governance factors in healthcare IT is growing rapidly. Both regulatory mandates and customer demands for sustainability are increasing. To effectively meet these new sustainability standards, it may be wise to consider investing in AI-powered carbon accounting software and other related technologies.

## Conclusion

Fax technology is still crucial and relevant in the modern healthcare landscape. It has evolved into an API-to-API system that is often cloud based, providing various benefits such as cost optimization, enhanced security, reduced errors, and regulatory compliance. Fax technology is not outdated and is vital in data analytics and healthcare operations, providing healthcare providers with valuable insights and operational efficiencies. It is used for secure data transmission and as a robust component in data analytics pipelines. The resilience and adaptability of fax technology make it indispensable in contemporary healthcare IT ecosystems. In healthcare, do not think of fax as outdated but rather as an instrument that must be learned to play a new tune, especially regarding data security, workflow efficiency, and compliance.

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## About the Analyst



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Mutaz Shegawi leads the provider research practice at IDC Health Insights covering topics of most relevance to healthcare provider organizations looking to digitally transform and become more digitally native than their competition. Mutaz advises the executive, clinical, and technical leadership of the world's foremost health information technology supplier and buyer organizations by producing data-driven research and thought leadership insights that help to navigate strategic challenges in health information technology and transform complexity to clarity in decision making that would decrease costs, enhance quality, optimize access, improve patient safety, and champion patient experience.

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