Ricoh's Electronic Fax Referral Automation Solution Helps a University Hospital Department Speed Referral Processing and Enable Remote Work

About the Customer

The University Hospital Department offers a full range of brain, spinal cord and peripheral nerve services to ensure the highest quality of care, even for the most urgent and complex cases. Serving patients in a multitude of sites, the department specializes in prevention, diagnosis, treatment, critical care, and rehabilitation for central, peripheral, and autonomic nervous system disorders.

Challenge

- Approximately 10% of patient referrals were delayed, incomplete or missing due to an outdated, fax-based referral process
- Existing workflow required staff to process referrals on-site without any remote work capabilities
- Fax devices shared by multiple departments causing incomplete documents, delayed and missed referrals, and PHI compliance challenges
- Manual, fax/paper-based procedure taking hours to days to process a patient referral and prioritize appointments
- Lack of systematic referral tracking, reporting or PHI/HIPAA compliance auditing capabilities
- Traditional phone line-based fax machines with uptime challenges due to periodic break downs, busy signal, out of toner, etc.—impacting response time to patients and clinical staff

With Ricoh's Electronic Fax Referral Automation Solution, the University Hospital Department's call centers now receive, prioritize and process referrals and associated clinical documents digitally within an hour, versus hours or days.

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Ricoh's Electronic Fax Referral Automation Solution provides bi-directional automatic prioritization and routing of faxes based on keywords and customizable business rules.

"The accountability of the automated referrals solution helps address the subjective world of medicine."

Assistant Professor and Director of Operations

For the first time, the University Hospital Department has a clear understanding of its referral volume and recurring errors/issues related to referring physician practices.

"Comparing our previous referrals process to the new automated electronic fax process is like comparing a flip phone to a smartphone."

Assistant Professor and Director of Operations

Referrals are a significant component of healthcare delivery, particularly in the age 65-plus demographic which is expected to comprise nearly 20% of the U.S. population by 2025. Among this population, studies show one in three people will need two or more referrals to other medical specialties. Yet, the vast majority of healthcare systems have a fax- and paper-based referral process that leads to phone tag between patients and care providers, referrals loss, and delay in getting appointments—all of which impacts patient care and satisfaction. This manual process also prevents physicians from helping more patients and distinguishing their practices from competitors—which can impact financial viability and practice revenue.

Like most other health systems, the University Hospital Department solely depended on a traditional paper-based fax process for handling referrals from in-network and out-of-network providers. The department shared fifteen stand-alone fax machines with other surgical subspecialty departments, resulting in referrals and corresponding clinical documents missing, misplaced or left unattended. Because the legacy fax process was paper-based, faxed referrals were managed on a first-come, first-serve basis rather than by urgency or case complexity. In addition, busy signals, out-of-paper, low toner, jammed devices, or simply unreadable faxes further complicated matters. This legacy referral process missed or delayed, on average, two of every five referrals leading to less-than-optimal patient experience, staff frustration and revenue loss.

For physicians, providing a high-quality consultation during patient visits meant having up-to-date patient charts. To accomplish this, staff would gather a multitude of clinical documents sent via fax and attach them to each referral to assemble a patient chart. Next, in collaboration with the HIM department, staff would scan each paper-based clinical document to complete the electronic patient chart. For incomplete or missing documents, it could take days before the correct information was attached to the patient chart—causing appointment delays and patient dissatisfaction. The entire process could take anywhere from a few hours to a few days.

Adding to the complexity was the sharing of patient records between the various electronic health record (EHR) systems used by the three locations where the University Hospital Department admitted patients. There wasn't clear visibility into referrals because the department didn't have a dashboard to track the status of referrals and actionable insights to improve the process. Auditing and tracking of protected health information (PHI) handling was a very difficult, time consuming and laborious process. Also, dependency on paper-based faxes made remote work impossible and required department staff members to work at the facility.

Results

- Almost no missed referrals since solution implementation
- All referrals processed within desired 1-hour timeframe
- Seamless end-to-end remote workflow enables employees and clinicians to work remotely
- Meets patient expectation of complete information during a visit by including the patient chart for provider review before the appointment
- Dashboard for tracking, reporting and auditing referrals provided insights to improve overall process
- Centralized toll-free number replaced multiple dedicated fax lines
- Return on investment in less than 6 months
- More than 50% reduction in paper and MFP toner expenses

With Ricoh's Electronic Fax Referral Automation Solution, the University Hospital Department call centers now receive and process referrals and associated clinical documents digitally within an hour, versus hours or days. The call center's employees are able to quickly complete the preauthorization process of confirming the referred patient's demographics, validating insurance, attaching MRI and/or lab results and uploading it to the relevant EHR.

The solution was implemented during the COVID-19 pandemic, where employees were already working from home but previously had to come to the hospital to retrieve faxed paper referrals and complete the necessary workflow. Now, they are able to work seamlessly and safely at home with a completely automated and fluid workflow that enables them to process twice as many referrals as before. The dashboard allows the University Hospital Department to track precisely who is handling each referral and what action is taken. In addition, auditing and tracking of protected health information (PHI) handling related to referrals is much easier.

Referrals processed within **1 hour**

Quick **preauthorization** process

Ability to work **seamlessly, safely** at home

With consumerization of healthcare, patients today expect a fast, seamless experience getting an appointment with a physician. The newly automated workflow delivers exactly this, enhancing the patient experience while giving physicians access to all the referral documents right when the patient is in the room—further improving the staff experience and effectiveness of consultation.

For the first time, the University Hospital Department has a clear understanding of its referral volume and recurring errors/issues related to referring physician practices. The department is able to use analytics that can lead to fewer appointment cancellations, reduced labor at nonpeak times, improved referral efficiencies and focused relationship building to support the higher volume referring practices. The department also has a single, centralized phone number for referrals replacing a multitude of fax numbers—to save on telecom expenses. In addition, the University Hospital Department has reduced paper and MFP toner consumption by more than 50 percent.

How We Did It

- Implemented Ricoh's Electronic Fax Referral Automation Solution for patient referrals, with remote working capabilities for employees and clinicians
- Automated referral prioritization and routing for faster appointment scheduling
- Enabled electronic matching of referral with other clinical documents to provide physicians a more accurate and timely patient chart
- Provided interoperability between various EHR systems used by three hospitals where the department admitted patients
- Implemented a dashboard for auditing, tracking, reporting and actionable referral workflow improvement insights

Ricoh's Electronic Fax Referral Automation Solution was created to automate the University Hospital Department's referral process. A single, centralized number for referrals replaced 15 on-site fax machines and associated numbers by leveraging the existing digital faxing infrastructure of the University Hospital Department's sister organization. Powered by HealthWare Systems, the electronic fax workflow provided bi-directional automatic prioritization and routing of faxes based on keywords and customizable business rules. Various technical, workflow and end user features were integrated and implemented to drive faster adoption with minimal training and workflow change. This enabled high priority referrals to be color-coded and routed to a specific queue for quicker response.

To provide interoperability between the different EHR systems used by hospitals where the University Hospital Department's patients are admitted, an HL7 ADT (Admission, Discharge, Transfer) was leveraged to automatically match each patient record and route patient clinical documents received with the fax via the HL7 MDM (Medical Document Management) message interface. The solution also included outbound faxing technology to easily share patient data with referring physicians for appropriate follow-up. A customizable dashboard provided status tracking, reporting and auditing of referral assignments and related PHI.

"The timing was great for remote enablement with COVID-19. The electronic fax automation solution couldn't have come at a better time."

Clinical Systems/IST Analyst

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