

A community-based system headquartered in Springfield, Missouri, CoxHealth was established in 1906, and today serves a 24-county service area in southwest Missouri and northwest Arkansas. The system offers a comprehensive array of primary and specialty care through six hospitals and more than 80 clinics including the large Ferrell-Duncan Clinic, a wholly owned subsidiary of CoxHealth with 140 physicians practicing in more than 20 specialties and sub-specialties.

Disparate Systems Create Overhead

Like most healthcare organizations, CoxHealth is continuously seeking to optimize and leverage its existing – and disparate – health information technology investments. When it came to visit coding and billing, the clinic used a Cerner EHR system while the business office relied on an IDX billing system from Athenahealth (formerly GE Healthcare). Challenges with the two systems communicating created a manual back office workflow that involved printing paper superbills for subsequent data entry into IDX. This not only added built-in time and overhead to the billing process, but it also led to high reliance on paper and costs to print, manage, and store.







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"We had a lot of storage space dedicated to paper superbills since we kept records for seven years. On top of that you have the toner cost, the printer wear and tear. It's hard to quantify but I know that the paper cost all along had been significant." Lori Mitchell, Director, Physicians Billing/Financial Services, who has been with CoxHealth for 30 years.

They implemented medaptus' Assign software, which automates the patient rounding/distribution list process to ultimately improve continuity of care and patient safety; improve physician workload and reduce burnout; and help hospitals get real-time insights that help them improve the care they deliver. The end result?

Preserving Provider Workflow

Despite best intentions and advancing EHR technology, it can still be challenging to eliminate paper and manual handoffs from medical billing. This led CoxHealth to originally approach medaptus about how to enable a more efficient billing process given the disparate systems at the front and back ends of its process After reviewing medaptus' platform and capabilities for re-engineering revenue cycle operations with logic and automation, CoxHealth engaged with medaptus for software to automatically review, queue and hold charges generated in its Cerner EHR system prior to insurance billing.

Given physician comfort using Cerner to document charge data, CoxHealth was relieved to learn that medaptus can be installed with no impact to physician workflow. The software can be configured to accept what the physician has already documented in the EHR. Today Cerner transmits coded encounters to medaptus where an embedded compliance engine runs configured rules on the encounter to evaluate appropriateness. And with 100 departments and clinics using medaptus, the ability to configure and flag rules for what best suits the need is important. As an example, CoxHealth has a number of rural health clinics with stringent billing rules for payment depending on the visit type.

Looking at Results

Another educational opportunity at CoxHealth following the 9-month implementation of medaptus was with providers. Habits that had been developed over years with coding and billing that led to errors were previously (and manually) removed by business office staff prior to data entry. This revealed to CoxHealth that they could engage providers to help tighten up or refine their coding decision making process.

"Once we were underway with medaptus, our team started looking at denials to understand if we missed a rule or was it being bypassed. This is a helpful exercise with our team in terms of education as well as establishing accountability. Over time we have seen a decrease in coding scrubs. There are about 120 custom rules in place and we will continue to build as things change."

Throughout this all, quantifiable gains were recorded. Prior to medaptus, there was an allowed two-day grace period between the visit and printing the superbill to work. This process has been eliminated and has helped reduce system-wide charge lag at least 3-4 days, more in some areas. In fact, some clinics are billing same day of service.

"We are spending time looking at trends in charge lag. It is fantastic that we have this level of transparency now. I've had staff say to me, I never want to see paper again. And the fact that with medaptus our team can access the system from any computer is really helpful," explained Mitchell.

Expanding the Roll-Out

After completing the outpatient clinic roll-out of medaptus in late 2019, the system focused its efforts on bringing the platform into its four hospital locations. Like many networks that are comprised of multiple hospitals spanning a wide radius, CoxHealth has struggled to track inpatient care that is reimbursable. Hospital providers are using paper charge tickets to support this process, which is cumbersome to manage, prone to loss, and not at all transparent.

"Having over 600 providers, we have to rely on a system like medaptus to ensure we are not missing revenue."

Hospitalists at CoxHealth will soon be benefitting from another medaptus information technology solution, Assign. This platform automates the complexities of daily physician to patient distribution to improve safety and outcomes. This system will process provider schedules along with admission data to generate patient census lists that support efficient rounding and streamlined patient throughput.

Further, CoxHealth will use generated rounding lists to help reconcile encounters to visits. This provides the tracking mechanism for business offices to ensure complete capture. This is critical to CoxHealth providers since lost charges affect their RVUs, which can lower their reimbursement.



Medaptus creates innovative technology that enable healthcare organizations to focus on patient care. Recognized by KLAS as best-in-class for ten years, medaptus specializes in charge capture, revenue management and reconciliation tools, as well as patient assignment tools for physicians. Their solutions help hospitals and healthcare organizations increase revenue, improve productivity and efficiency, and get real-time insights into the success of their organizations.

Headquartered in Boston, medaptus solutions can be found in hospitals and healthcare settings across the entire country.