

Building trust and confidence in autonomous coding with Solventum

The health system

- Leading non-profit health system in the upper Midwest of the United States with locations in South Dakota, Minnesota, Iowa, Nebraska and North Dakota.
- As of 2025, it served over 43,000 inpatient stays, 1.2 million outpatient visits and 2 million clinic visits with over 300 care locations across a 5-state area.

300+
locations
5
states

Technologies in scope:

- [Solventum™ 360 Encompass™ Autonomous Coding System](#)
- [Solventum™ Enterprise Analytics](#)
- Electronic health record (EHR): Meditech Expanse

Service lines in scope:

- Radiology
- Lab/pathology
- Same day surgery
- Diagnostic cardiology



Facilities involved:

- Four prospective payment system (PPS) sites (out of 21 facilities)
- Plan to extend the scope to critical access hospitals (CAH)

Background and challenge

The health system faced increasing patient volumes and a need to optimize its coding operations without expanding its full-time employee (FTE) base. Coders were spending time on repetitive tasks rather than applying their expertise, especially for simpler cases like ancillary services. At the same time, the health system observed that payer reimbursement rates were not keeping pace with inflation and rising operational expenses, adding financial pressure to improve efficiency. The organization sought a solution that could streamline coding, reduce manual effort and maintain accuracy.

Solution : Autonomous coding with Solventum

The health system partnered with Solventum to implement Solventum Autonomous Coding in the outpatient facility space. Solventum Autonomous Coding employs leading class, expert-guided AI technology to read, process, code, and complete up-to-date, qualified visits or professional encounters, ready for the billing process without human intervention. The health system's goal was to leverage technology to bridge the gap between growing volumes and limited staffing resources. The health system also aimed to improve coder workflow and satisfaction, ensuring that staff could focus on higher-value tasks. Importantly, the organization wanted to avoid outsourcing coding, preserving internal expertise and maintaining control over quality.

Implementation process

Technology transition: Experienced a seamless switch from the legacy natural language processing (NLP) to the Solventum™ Catalyst™ AI engine, achieving improved autosuggestion quality with no support tickets post-launch.

Phased rollout: Avoided a big bang approach by conducting weekly testing and review meetings. Built trust by starting small and expanding as confidence grew with consistently accurate coding on claims.

- **Account categories:** Solventum Autonomous Coding is flexible and allows for automation at the account level. The health system embraced this and chose to go live with screening mammograms to start, followed by CTs and MRIs, employing a small group of super users for testing. Other account categories followed.



Prospective audit strategy: Started with 100% audit of qualified charts, then increased automation up to 80% for diagnostic radiology including MRIs, CT/PET and screening mammography. For ultrasounds, the health system set quality assurance (QA) at 75% initially, then increased automation up to 80%. It also incorporated the “AI coder” into quarterly reviews for auditing like any other coder. The result of the audit was compliant coding and 80% full automation (no human review) of qualified visits.



Change management

Super user engagement was crucial to the success of implementing autonomous coding at the health system. The organization developed a comprehensive plan to have super users test different implementation milestones and then promote the system internally to their peers. They also engaged with some early users to address their apprehensions and encouraged them to reconsider their perspectives, resulting in a constructive outcome. To build trust in the system, the health system used super users to test every piece of the IT setup, from the new AI engine to the order interface and charge interface; they were present every step of the way. Super users also performed part-time validation testing which helped reassure staff.

The overall implementation ultimately needed very minimal training in the rollout. Tip sheets and a one-hour training session were sufficient for the staff to know what to expect and how to interact with the new Solventum Autonomous Coding technology.

Results and impact

Workflow integration: Coders experienced minimal disruption; Solventum Autonomous Coding integrated smoothly into existing EHR workflows.

Operational efficiencies: The health system has been able to upskill coders for more complex cases. For example, in radiology, they reported having 5 to 7 coders who are being trained to code for emergency room and other areas where they see an increased volume. In addition, they haven't needed to replace coders who are retiring or leaving.

Automation rates: Since its autonomous coding go-live, the health system has experienced increasing automation rates in ancillary services, with visits qualifying for autonomous coding in the 80-90% range, depending on account category, and 70-80% of those going out to the billing system without any coder review across all four hospitals actively coding autonomously.



Customer report month:

December 2025

Service line:

Radiology

Account categories	% of visits qualified	% of visits automated
Bone density studies	87%	79%
MRI	94%	82%
Diagnostic ultrasound	80%	77%
CT/PET	57%	70%
CTA/MRA	87%	79%
Screening mammography	85%	81%

Accuracy: The health system has seen 95% accuracy for all account categories that are going through autonomous coding. Some account categories have seen as high as 98% accuracy – an outstanding result.

Outcomes: The organization has had no increase in claim edits or denials and their discharged not final billed and discharged not final coded (DNFB/DNFC) metrics have improved as well. They anticipate benefits in more complex radiology services to follow.

Training: Minimal learning curve; staff trained in one-hour sessions.

Lessons learned

- ✓ **Start small:** Begin with limited patient classes and service lines to manage any complexity.
- ✓ **Goal alignment:** Clearly communicating goals across internal and Solventum teams was critical.
- ✓ **Validation:** Thorough testing in a controlled environment ensured a smooth transition and successful go-live.

What's next

EHR transition: The health system is currently undergoing an EHR transition from Meditech to Epic, with projected go-live scheduled for Q2 2026. The organization's goal is to move Solventum Autonomous Coding into the Epic workflow within six months of go-live and continue to go-live with more service lines.

Decrease auditing for additional categories: Given the results, the health system is evaluating lowering prospective audit efforts for those account categories with high capture rates and accuracy, furthering efficiencies.

Expand patient categories and locations: While ancillary services are already enabled, the health system is looking at additional areas of expansion to be enabled after the Epic migration.

"We needed a system that looked at the whole radiology report, not just at the order - this applies to any service that requires interpretation."

- Director of coding services, non-profit health system



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