Case study—University of Virginia Department of Radiology

Across-the-board improvements for academic practice

The University of Virginia's Department of Radiology provides and manages the medical imaging services for the University of Virginia (UVA) Health System. In total, the department has more than 100 radiology residents, fellows and attending physicians. UVA's physicians process about 435,000 diagnostic procedures and 10,000 VIR procedures every year.

Keeping up with this volume was a challenge for the billing and coding staff in the department, according to Debbie King, UVA's radiology billing manager. All radiology reports were processed on paper and printed, along with patient demographics, at the billing office. Coders had to look up each report by accession number to manually code them. This process limited productivity to an average of 30 reports per hour and resulted in a substantial number of reports being billed without review due to lack of coding resources. UVA's coding backlog averaged a 30 days or more, even with all five coders working 10-15 hours of overtime every month.

UVA's management was also concerned about a high denial rate, reconciliation issues and coding quality, but had limited tools to help. UVA's clear need for improved productivity and collections convinced the department in late 2007 that the time was right to pursue computer-assisted coding (CAC).

The CodeRyte solution

UVA evaluated the field of CAC vendors and ultimately selected CodeRyte because of the company's proven track record with 40 of the nation's academic medical institutions. "We decided to go with CodeRyte based upon their solid history of working with academic radiology departments, combined with their depth of knowledge in radiology coding and their strength of infrastructure," said James Carnes, UVA's chief operating officer. "Their reputation is stellar – all of CodeRyte's current clients with whom we spoke provided glowing references in regard to customer service and assistance with implementation, in addition to the on-going service with day-to-day operations."

CodeRyte is the nation's fastest growing provider of computer-assisted coding solutions for the healthcare industry. Through natural language processing, CodeRyte's engine applies evidence-based criteria to identify correct billing codes from clinical information in radiologists' reports with statistical precision. Context and confidence anchor the technology, which easily navigates subtle language nuances such as negation, context and time references in the medical record.

King's department went live with CodeRyte in April 2008 and continues to find new ways to use the system. CodeRyte integrated with PowerScribe for dictation, and Siemens' RIS and ADT, ensuring UVA's coding team had all necessary information united in one system. Coding results are then sent directly to GE/Flowcast, eliminating the time and errors that occurred with manual data entry.

Quick and sustainable ROI

UVA experienced instantaneous improvements with CodeRyte The paper-based work that used to bog down King's team all but

Key benefits

- Coding productivity improved by more than 30 percent
- Coder overtime eliminated, saving $7,000 per month
- Reduced backlog from more than 30 to 7-14 days with further improvements identified
- Cut denials substantially and improved reconciliation

University of Virginia Department of Radiology

- Manages and provides medical imaging services for the UVA Health System
- More than 100 radiology residents, fellows and attending physicians
- More than 430,000 diagnostic and 10,000 VIR procedures coded and billed annually
- Live on CodeRyte since April 2008

vanished. The backlog that once averaged a month or more dropped to less than 14 days. Coding productivity grew by more than 30 percent and coder overtime was eliminated, saving UVA $7,000 per month. At the same time, UVA was able to carry on with four coders after one left through attrition, bringing the staff down by 20 percent.

CodeRyte improved UVA's timely charge postings, improved days in A/R and moved the organization toward a more paperless environment, King said.

"The primary thing that the CodeRyte technology has done is to help us achieve a higher level of billing quality and compliance than we were able to achieve previously," Carnes said. "We have been able to increase the efficiency of our coding and billing processes, enabling us to keep up with annual 3 percent study volume increases, while actually reducing coding staff by one full-time employee."

UVA's coding quality and consistency has also improved with the technology. A spring 2009 audit gave UVA's coders their highest scores on record, King said.

CodeRyte also offers UVA valuable insight into and control over its processes. CodeRyte can be set up to route particular reports to the most appropriate coder. Real-time dashboards tell King what's happening throughout the department and quickly show individual coders' productivity.

In addition, CodeRyte was able to create specialized workflows and work queues to handle challenging reconciliation issues, for example when patients come into the emergency room unconscious. CodeRyte recognizes this and automatically holds those reports until the necessary demographic information is available.

Correct-To-Bill™ savings

The Correct-To-Bill capability lets UVA send its most accurate reports from CodeRyte's Natural Language Processing engine directly, and confidently, to billing without human review. This process reduces the overall volume for human coders to review and leads to greater productivity and strengthened compliance.

CodeRyte's Correct-To-Bill technology garnered national attention for its precision and innovation. WinterGreen Research singled out CodeRyte as an innovative leader in the computer-assisted coding market and cited the Correct-To-Bill technology as a major reason why.

"With CodeRyte's Correct-to-Bill feature we no longer have to code every radiology report. Today we QA a small sample to support our on-going compliance plan of course, but when we send something Correct-To-Bill, it's correct," King said.

Improved documentation

Inconsistent dictation patterns had previously forced UVA's coders to spend extra time investigating patient records. With the CodeRyte system, UVA can now identify documentation areas in need of improvement. UVA uses this insight to create new templates for reports in the PowerScribe system, which further improves dictation quality and compliance. CodeRyte's auditing tools also help UVA fine-tune its coding through clearly defined and documented coding standards; real-time, prospective audit capabilities; and inter-coder agreement measurements.

"CodeRyte has provided us with a more efficient way to QA our documentation requirements and coding accuracy," King said. "We have more insight into our coding process than ever before. I highly recommend CodeRyte."

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