How to Improve Payment Integrity with Artificial Intelligence and Machine Learning

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Advances in artificial intelligence (AI) and machine learning (ML) are bolstering payment integrity efforts, bringing greater transparency and control over claims processing, and ensuring more accurate and fair payment outcomes. AI and ML enhance insight and speed up claim reviews, helping identify and prevent fraud, waste, and abuse while lowering costs and improving patient care.

The American Health Information Management Association® hosted a discussion with CERIS and Amazon Web Services (AWS) on the potential of these technologies and how they can be used in tandem with the human touch to transform healthcare claim processes. This discussion also explored keys to successful implementation and how organizations can determine return on investment (ROI).

Leveraging AI and ML to enhance the claims process

AI and ML are having a significant impact on healthcare claims payment adjudication and have the potential to revolutionize processes and improve efficiencies and accuracy. Claims adjudication has historically relied on the manual review of medical coding, treatment plans, billing, and other relevant information, which are time-consuming and error-prone processes ripe for automation.

AI and ML applications can help automate these workflows and streamline the payment process, reducing errors, accelerating payment cycles, and minimizing administrative costs. AI and ML also have the potential to enhance revenue cycle management by analyzing historical data to predict payment patterns, optimize billing strategies, and improve overall financial forecasting. These things can be accomplished by applying AI and ML algorithms to quickly analyze vast amounts of historical data such as medical coding, patient records, and billing history to identify patterns, detect anomalies, and make accurate predictions.

Keys to successful implementation

Successful implementation requires the early identification of all key stakeholders, communication, and education. Getting buy-in from all stakeholders is essential. As with all information technology projects, adopting AI and ML must align with the organization's business strategy.

Data is key. Having sound data governance, management, and architecture is crucial to getting the maximum value from AI and ML. Data governance ensures data integrity, enabling the review of vast amounts of data at high speeds, reducing duplication and expediting claims reviews. There is a steep learning curve, however, and a continued challenge in the industry market to find, recruit, and retain skilled professionals.

Many organizations choose to start off their AI journey with a quick win and create a roadmap to deliver more complex projects over time. To get started, identify a pain point or where staff spend a significant amount of time doing manual processes. A common rule of thumb is to look for AI technologies that can deliver an improvement of at least 20% in the first use case. From there, build a roadmap to implementation in phases, starting with the low-hanging fruit and adding on more complex use cases over time. It's about getting a quick win on the board and building momentum for bigger projects. The biggest downside is the amount of time required for managing the business process change that comes with any significant upgrade to a core business process. This is why it is important to make sure the first win is big enough to justify the time spent managing the change.

KEY FINDINGS

1. **Developing a strong business case** and ensuring AI and ML adoption aligns with organizational goals and objectives is crucial to the overall success of the implementation.

2. **When launching AI and ML within payment integrity,** look for areas where staff spend the most time and experiences the greatest frustrations. Create an implementation roadmap, starting with a quick win and adding more complex solutions over time.

3. **AI and ML technologies can enhance the patient's experience** by reducing denials and streamlining the reimbursement process. comprehensive record location.

Determining ROI for AI- and ML-powered payment integrity

Key metrics include cost per claim, productivity, workflow, and throughput. Establishing a baseline and tracking progress throughout the implementation cycle is important. Being able to scale it throughout the organization requires a long-term commitment and significant investments, including staff training and development and cloud infrastructure costs. These investments can challenge the ROI initially, but that will change over time as workflows and efficiencies improve.

Some aspects of the ROI calculation are relatively easy to compute, including the up-front implementation costs and ongoing costs of the pay for usage AI. Other aspects that are important, but require more time to calculate, include the cost of business process change, the cost savings achieved by improving accuracy and reducing errors, and improvements to labor efficiency. When looking at the implementation expense, make sure to include the costs of skilled developers who are familiar with both the upstream and downstream systems in addition to using the application programming interface (API) that delivers the AI services.

The Impact of AI and ML on Workflow

Automation helps end users make informed business decisions and provides more time for team members to focus on higher-value, more enriching work. It's important to allow the system to address the "low hanging fruit," while the humans focus on the complex and exception work. Implementing these technologies can also breed excitement about new tools and technology.

AI and ML can eliminate much of the drudgery team members experience with their jobs. It eliminates the need to sort through documentation for overlooked or missing information and allows team members to focus on making more difficult judgement calls or working on the most complex cases.

Best Practices for AI and ML in Payment Integrity

Building a strong business case and understanding the ROI is important. What do you want the technology to accomplish, and how will the project save money? What are the key drivers and costs? Next, it's important to bring all the stakeholders on board and get alignment on what key wins will be delivered, and what business process changes will be needed to maximize the integration of AI. During the testing phase, organizations can save time by creating a disconnected intelligent document processing module to test key assumptions within the business case. After the key business case assumptions are validated, it's time for the more intensive steps of connecting the AI technology to the upstream/downstream systems and coordinating the business process change with the other stakeholders.

Implementation time can be dependent on the number of stakeholder meetings that occur early in the process. Again, it's important to communicate effectively with all team members and stakeholders to develop the scope and goals of the

project. Perform a cost analysis, again, so all stakeholders are on the same page, and everyone understands the financial investment and commitment needed to undertake the project. This includes identifying the right use case to start, as well as building proof of concepts to lower risk and improve acceptance rate.

How AI and ML affect the patient experience

Patients benefit from timely, accurate billing as there is less frustration around claims and fewer mistakes. Billing mistakes are time consuming to resolve so avoiding them benefits both patients and the healthcare industry overall.

It is important to note that while AI and ML have brought numerous benefits to healthcare claim payment adjudication, there are still considerations that need to be addressed. Ensuring data privacy and security, addressing bias and fairness concerns, and maintaining transparency in algorithmic decision making are critical factors that need to be carefully considered to maintain public trust and ethical standards. In summary, AI and ML technologies have the potential to transform healthcare payment processes by automating workflows, reducing errors, and improving efficiency. By leveraging these technologies, healthcare organizations can streamline their operations, accelerate reimbursements, and ensure accurate and fair payment outcomes to ultimately provide better patient care.

Expert Panel

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