

White Paper

## **From Denials to Dollars:** Achieve 95% Coding Accuracy in 6-12 Months with Autonomous Coding





## **Executive Summary**

Imagine if your coding team never slept, never missed a detail, and got smarter with every chart it touched. That's not a future fantasy—it's here now. And it's reshaping the way healthcare organizations handle one of their most critical functions: medical coding.

If you're reading this, you're probably feeling the pressure. Coding backlogs that never shrink. Denials piling up. Coders stretched thin. Maybe you've thought, "We can't keep scaling like this." You're not wrong. And you're definitely not alone.

That's exactly why autonomous coding has captured so much attention lately. It's not just about speed. It's about resilience. About lifting the burden off your teams without sacrificing accuracy. About keeping up with the pace of healthcare, even when your staff can't work 24/7.

This white paper breaks down what autonomous coding really is: how it works, how it differs from old-school rule-based automation, and why it's more than just a fancy add-on. It walks you through the benefits, from improved accuracy and faster turnaround times to smarter resource allocation and real, bottom-line savings. You'll also get an overview of the implementation process, practical considerations to keep in mind, and a look at the remarkable results others have already achieved using GeBBS' autonomous coding engine (ACE)—including 95% coding accuracy within 6-12 months of deployment.

But this isn't just about tech. It's about answering a bigger question: How do we build healthcare systems that can adapt, grow, and perform under pressure? Autonomous coding is one of the clearest answers we've got.

If you're ready to move past the bottlenecks and start building a more scalable, efficient revenue cycle, this white paper is your next step.

What Is Autonomous Coding, and How Does It Differ from Rule-Based Automation?



At its core, autonomous coding is the use of advanced technologies—AI, machine learning, and natural language processing (NLP)—to assign medical codes automatically. No templates. No rigid if-then rules. Instead, these systems digest vast amounts of clinical documentation and apply logic that mimics human reasoning, only faster and more consistently.

To understand what makes autonomous coding revolutionary, it helps to know what came before it. Rule-based systems, which became common in the 2000s, were a step up from purely manual coding. They worked off static logic: if the chart says X, apply code Y. Think of them like basic tax software. They walk you through a series of questions and apply predefined rules to generate results. If your situation is simple, they work. But throw in an unusual case (an unclear diagnosis, overlapping symptoms, vague documentation) and things get messy fast. These systems can't interpret nuance or validate meaning beyond the literal text. They don't think. They just follow the script.

Autonomous coding, on the other hand, is more like working with a seasoned CPA. It sees the bigger picture. It catches what's implied but not said outright while considering the full context—cross-checking documentation, lab results, and medications to make sure the coding is accurate and supported. It won't jump to conclusions just because a single keyword word appears. It looks at how everything fits together.

Perhaps most importantly, it learns. As more charts are processed and reviewed, the system sharpens its logic. It doesn't need to be rewritten from scratch every time something changes. It adapts. The result? Systems that don't just work. They evolve.



## How Autonomous Coding Works

At the heart of autonomous coding is a three-part engine: advanced algorithms, NLP, and machine learning. Let's break that down.

First, algorithms analyze clinical data and identify relevant medical concepts from documentation. They can distinguish between incidental findings and primary diagnoses. For example, a note might mention "elevated glucose" in passing. While a rule-based system might misfire and assign a diabetes code, an



autonomous system looks for corroborating evidence (medications, lab trends, physician intent) before assigning a code. In other words, it assesses the full picture.

Next comes natural language processing. This is what allows the system to understand clinical language the way a seasoned coder does. It parses physician notes that are messy, shorthand-filled, and full of ambiguity—turning unstructured text into actionable data. It knows the difference between "ruled out pneumonia" and "suspected pneumonia," and it doesn't assign a code for a condition that wasn't confirmed.

Finally, machine learning is what gives autonomous coding its edge. With every chart processed and every correction made by a human reviewer, the system learns. It begins to see patterns. It anticipates unusual scenarios. It closes gaps over time. The more data it's fed, the better it gets.

All of this runs on a foundation of integrated data sources: clinical notes, lab results, imaging, billing histories. The system isn't just looking at a single document. It's connecting the dots across the patient record to assign codes that are not only accurate but defensible.

This kind of intelligence doesn't just reduce errors. It builds trust. Because when the coding is clean, the claims flow faster. Denials drop. And the entire revenue cycle starts to breathe a little easier.



## The Benefits of Autonomous Coding

Autonomous coding doesn't just streamline operations. It reshapes them. At first glance, the benefit seems obvious: fewer hours spent on manual coding. But that's just the tip of the iceberg. The real value lies in the system's ability to drive smarter decisions and build capacity without burning out your team.

When implemented well, it transforms both operations and outcomes—quietly working behind the scenes to keep everything moving.

Let's break down what that actually looks like in practice.

#### **Increased Efficiency**

Manual coding eats up time. Autonomous coding gives it back. By accelerating chart reviews and automating code assignment, it slashes turnaround time across the board. Charts that once took days or weeks can now be processed in hours. That speed translates to faster claims, fewer bottlenecks, and less chasing down the same documentation again and again. And because automation handles the bulk of routine cases, coders can shift their focus to the complex cases and audits, where their judgment adds the most value.

#### **Improved Accuracy**

Even top coders miss things, especially under pressure. Fatigue, inconsistencies in documentation, and interpretation errors all take their toll. Autonomous coding acts as a second set of eyes, applying the same standards to every chart, every time. It catches the codes that might've been skipped. It flags inconsistencies that could lead to denials. And because its algorithms learn from past feedback, it gets smarter with every review. Over time, this leads to cleaner claims, fewer rework loops, and better compliance with regulatory requirements.

### **Scalability**

Healthcare demand doesn't move in a straight line. One quarter might feel steady, the next chaotic. Autonomous coding helps you scale without the scramble. Whether you're onboarding new facilities or dealing with seasonal surges, the system can absorb growing chart volume and increasing amounts of clinical data without adding headcount. It runs 24/7, processes charts in parallel, and keeps throughput steady—even when your team's stretched thin.

#### Higher Quality Care and Less Burnout

In most healthcare settings, clinical and coding teams are already running at full tilt. Autonomous coding doesn't replace them. It relieves them. It reduces administrative burden and removes the low-value tasks that clog up their time, giving physicians more space to focus on care, and coders more room to solve complex documentation puzzles. And when paired with CDI initiatives, autonomous coding systems help surface gaps in care, missed diagnoses, or unresolved conditions. The result? A fuller, more accurate clinical picture and the opportunity for more proactive patient care.

#### **Cost Reduction**

The savings aren't just theoretical. By automating repetitive, labor-intensive coding tasks, organizations reduce their reliance on contract coders, limit rework, and speed up reimbursement. That's money saved on both the front and back end. And when paired with offshore support that uses autonomous coding—like GeBBS offers—those cost efficiencies multiply without compromising accuracy or compliance. It's a leaner, smarter way to code at scale.

## **Key Considerations for Adoption**

While it's easy to get excited about the benefits above, autonomous coding adoption still requires foresight. Here are four key considerations every healthcare leader should keep in mind when evaluating this revolutionary technology:

- Implementation Costs: The upfront investment includes not just the autonomous coding platform, but also the people and processes that make it work: system configuration, workflow alignment, integration support, and early-phase coder review. For some organizations, the initial cost may seem daunting. That said, the long-term ROI offsets these upfront expenses, typically within the first six months.
- Change Management, Learning Curve, and Performance Monitoring: Introducing any new technology requires careful change management. Staff must be trained. Roles may shift. Resistance is common. Organizations that succeed with autonomous coding do so by engaging stakeholders early, providing ongoing education, conducting regular audits, and incorporating structured review cycles with measurable KPIs—all while reinforcing that the technology is a support system, not a replacement.
- Limited Contextual Understanding: Despite the sophistication of today's AI, there are still clinical nuances it may miss. A subtle change in phrasing, a missing lab result, or an undocumented assumption might require a human touch. That's why most autonomous coding systems are deployed in tandem with human coders so that unusual and complex cases are reviewed with expert care.
- Data Privacy Risks: Handling protected health information (PHI) always carries a level of risk. Autonomous coding systems must be fully compliant with HIPAA and other regulatory standards. GeBBS addresses this with HITRUST certified technologies, encrypted U.S. based data storage, and secure interfaces for all data exchanges.



While the above considerations are real, they're not so much roadblocks as they are guideposts. With the right partner and a strategic rollout, autonomous coding can deliver lasting improvements without disrupting your existing ecosystem.

## **4-Phase Process to Implement Autonomous Coding**



Autonomous coding isn't a plug-and-play solution—it's a strategic transformation. And like any major system upgrade, success often comes down to the rollout. With the right structure and internal alignment, organizations can move from planning to value in as little as five to six months.

GeBBS recommends a four-phase implementation model that brings people, process, and technology into sync from day one.

#### **Phase 1: Feasibility Study and Stakeholder Alignment**

Before anything is deployed, the organization needs clarity: what's working, what's not, and where autonomous coding fits into the bigger picture. This phase is about scoping the project, setting expectations, and bringing key players to the table: clinical leaders, coders, compliance, IT, and executive sponsors.

Here's where the groundwork gets laid. With the help of a vendor, teams define success metrics, outline workflows, identify integration needs, and agree on timelines. Without this step, even the best tech can fall flat.



### **Phase 2: System Selection and Vendor Partnerships**

Once the groundwork is in place, it's time to choose a partner. This isn't just about picking a coding engine—it's about choosing a team that will guide you through configuration, onboarding, and support. The right vendor brings both the platform and the playbook.

At this stage, GeBBS configures its autonomous coding engine (ACE) based on client workflows, specialties, and existing systems. Whether the data exchange happens through APIs, HL7, FHIR, CSVs, or text file formats, the system is customized to fit, not forced into a mold.

#### Phase 3: Pilot Testing and Validation

For organizations with multiple facilities or specialties, going live everywhere at once isn't just risky. It's unnecessary. That's why most implementations begin with a pilot.

Typically, GeBBS works with one facility or specialty group to test the system in a controlled environment. During this phase, every chart is reviewed by certified coders. This not only ensures coding accuracy from the start, but also generates the high-quality training data needed to retrain the AI model effectively. After all, even the smartest algorithm can't assign the right code if the documentation it's fed is inconsistent, inaccurate, or incomplete. That's why early human oversight is critical. It helps the system learn from clean, reliable inputs.

### Phase 4: Full-Scale Deployment and Optimization

Once the system proves itself in a live setting, it's time to expand. At this point, ACE is calibrated to the organization's documentation style, coding preferences, and compliance needs. The technology is sound—but ongoing optimization still matters.

As the platform continues to learn, teams can dial in even more efficiency. GeBBS supports continuous improvement through routine audits, coder feedback, and system performance reviews. This isn't just a launch. It's a long-term collaboration.

## Setting the Stage for Success with Workflow Alignment and Training

One of the biggest success factors in any autonomous coding rollout is alignment with existing workflows. As mentioned, a good vendor shouldn't just drop in the technology and walk away. Their teams should collaborate with clinical and administrative leaders to ensure autonomous coding technology fits naturally into the EHR, billing platforms, and other systems. That collaboration should include:



- Role-based access to the platform
- Feedback loops for corrections and re-coding
- Dashboards that provide visibility across all coding operations

And because adoption isn't just about tools—it's about trust—a good vendor will include ongoing training and support as part of the package, helping teams get comfortable, confident, and fluent with the platform.

# The GeBBS Difference: Your Comprehensive Coding Solution



Plenty of vendors offer coding automation. GeBBS delivers something more: a comprehensive solution that combines people, process, and technology into one seamless system.

Our approach starts with a proven autonomous coding platform but extends far beyond the code. As mentioned, GeBBS provides certified coders to support the engine during rollout. We also provide a rules engine integrated with CDI insights and a

workflow portal that gives clients full visibility into productivity, turnaround times, and coding accuracy.

Most importantly, GeBBS doesn't leave learning to chance. As mentioned, every chart is reviewed during early deployment. That data is then used to retrain the AI engine, making the system smarter, faster, and more accurate with each pass. It's a closed loop of improvement—guided by human intelligence and backed by real-world experience.

The result? Faster go-lives, higher coding accuracy, and a system that adapts to each organization's unique DNA.



## How GeBBS' Autonomous Coding Transforms Charts to Checks

GeBBS' autonomous coding clients consistently report measurable outcomes after implementation. In multispecialty environments, efficiency gains range from 35% to 50% depending on the specialty. Radiology, in particular, has seen high-volume success, with some facilities processing over 400,000 charts per month using autonomous coding.

What's more, GeBBS' clients have reported a 71% increase in overall captured risk score contribution after transitioning from manual coding to ACE. In some cases, organizations have achieved up to a 10:1 return on investment, driven by faster processing times, cleaner claims, and reduced administrative workload.

Because GeBBS' certified team of coders review every single chart in the early phases of implementation, organizations typically achieve 95% or higher coding accuracy in their first year—and sometimes as soon as within 6 months.

And while results don't happen on day one, most clients begin to see modest gains within the first few months, significant ROI 6-12 months in, and long-term improvement that compounds over time.

## Go from Overwhelmed to Optimized with Autonomous Coding

Organizations that rely heavily on manual coding or traditional rule-based systems are at a severe disadvantage. How could they not be? The drowning in charts, chasing documentation, and second-guessing denials. The late nights and gnawing sense that your team's doing everything they can, and it's still not enough.

But imagine this instead.

Your coders log in and focus on the complex cases—the ones that actually require their expertise. The routine charts? Already processed overnight by a system that never sleeps, resulting in fewer delays and faster payments. And it doesn't stop there.

Your CDI team flags fewer gaps because autonomous coding is already cross-checking labs, notes, and meds to fill in the blanks. Your revenue cycle breathes easier. And your leadership team finally sees more complete and timely reports.



There's no scramble when volume spikes. No panic when staff call in sick. The system scales with you while absorbing the workload.

That's what transformation looks like. Not just faster coding, but a foundation for healthier margins and stronger care delivery. Autonomous coding isn't about replacing people. It's about giving them back the bandwidth to lead, improve, and care.

If you're ready to stop firefighting and start building something resilient, now's the time to make your move.

At GeBBS, our <u>autonomous coding solution</u> isn't just fast—it's built for precision. Powered by AI, NLP, and machine learning, it delivers fully autonomous coding with accuracy that rivals seasoned professionals. It integrates with your EHR, adapts to your workflows, and continuously improves through feedback loops and coder oversight. Backed by GeBBS' clinical and technical teams, our autonomous coding engine gives you a scalable, compliant coding solution that reduces costs, improves turnaround, and accelerates reimbursement. Ready to see what autonomous coding can really do? <u>Contact us today</u>.

