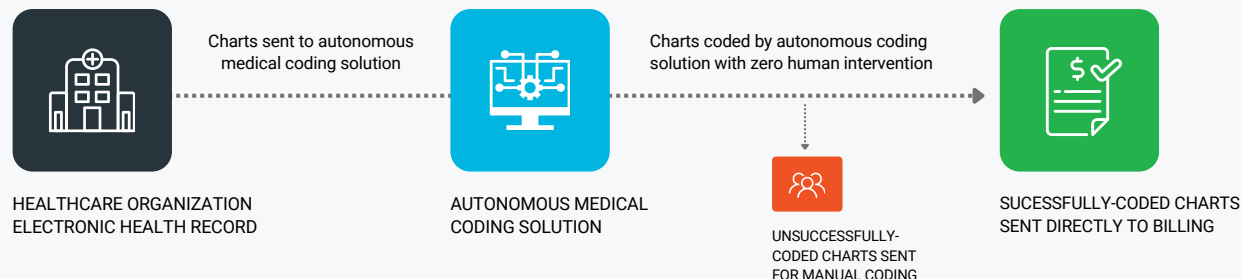**nym**

AN INTRODUCTORY GUIDE TO AUTONOMOUS MEDICAL CODING

Why was autonomous medical coding developed?

The medical coding process has changed very little since its inception over 50 years ago, with many healthcare providers relying almost exclusively on certified medical coders to manually review and assign codes to patient encounters. While encoders and computer-assisted coding (CAC) solutions have emerged to support medical coders, a manual approach to medical coding has become increasingly unsustainable within the past few years as the industry faces a shortage of medical coders and increasingly complex payer coding guidelines and policies.

These industry challenges are driving increased delayed payment cycles, compliance concerns, and other issues that ultimately threaten the financial and operational performance of health systems, hospitals, provider groups, and other healthcare organizations. Add in the fact that healthcare organizations continue to operate on razor-thin margins, it's no surprise that coding and revenue cycle leaders are in need of a next-generation medical coding solution. Enter autonomous medical coding.

High-level coding workflow with autonomous medical coding:

Charts sent to autonomous medical coding solution

Charts coded by autonomous coding solution with zero human intervention

HEALTHCARE ORGANIZATION ELECTRONIC HEALTH RECORD

AUTONOMOUS MEDICAL CODING SOLUTION

UNSUCCESSFULLY-CODED CHARTS SENT FOR MANUAL CODING

SUCESSFULLY-CODED CHARTS SENT DIRECTLY TO BILLING

GUIDE HIGHLIGHTS

Why was autonomous medical coding developed?
Autonomous medical coding technology was developed to address the shortage of qualified medical coders, increasingly complex payer coding guidelines and policies, and razor-thin operating margins faced by provider organizations in today's healthcare landscape.

What is autonomous medical coding? How does it work?
Leveraging the latest advancements in natural language processing, machine learning, deep learning, and other subfields of AI, autonomous medical coding solutions instantly translate the information in patient records into medical codes with zero human intervention and unprecedented accuracy.

What is the current state of autonomous medical coding?
Autonomous medical coding has been well-received by healthcare organizations, and adoption of the technology continues to increase year over year. While the capabilities of autonomous coding solutions vary, the following specialty areas are supported by at least one vendor: emergency medicine, ancillary services (e.g. radiology) urgent care, outpatient surgery, outpatient visits, and inpatient.

What's next for autonomous medical coding?
Previously a nascent technology, autonomous medical coding is now recognized as a more established solution with proven value. Moving forward, autonomous medical coding vendors will look to expand into additional specialty areas so that more and more healthcare organizations can experience the benefits of this industry-changing technology.

WHITEPAPER DOWNLOAD
Learn about Nym's autonomous medical coding technology

What is autonomous medical coding? How does it work?

Autonomous medical coding solutions leverage advanced technology to fully automate the coding process. These solutions run in the background, taking a first pass at coding all patient encounters and sending all successfully coded charts to billing with zero human intervention. This is a significant improvement upon other solutions like CAC, which require medical coders to validate the coding output before an encounter can be sent to billing.

While the technology powering autonomous medical coding solutions varies by vendor, most solutions leverage multiple subfields of AI, such as natural language processing, machine learning, and deep learning. These technologies enable autonomous coding solutions to accurately interpret the clinical information in patient medical records and translate that information into appropriate medical codes.

What is the current state of autonomous medical coding?

Like most healthcare technology solutions, autonomous medical coding was first developed to support a select few specialty areas. However, the capabilities of autonomous medical coding solutions have increased significantly over the past few years. While the capabilities vary depending on the autonomous coding vendor, it is safe to say that as of mid-2024, the following specialty areas are currently supported by at least one autonomous medical coding vendor:

- Emergency Medicine
- Urgent Care
- Outpatient Surgery, including Ambulatory Surgery Centers (ASCs) and Operating Room (OR) procedures

- Ancillary Services (Radiology, Lab and Pathology
- Inpatient
- Outpatient Visits, including various subspecialties (Primary Care, Cardiology, etc.)

What's next for autonomous medical coding?

Autonomous medical coding has been very well-received by health systems, hospitals, and other healthcare organizations, and interest continues to increase. According to a survey by the Healthcare Financial Management Association, 60 percent of healthcare organizations either use autonomous coding or plan to, with half of the respondents who plan to incorporate the technology intending to adopt a solution within six to 12 months.

Moving forward, autonomous medical coding vendors will look to expand into additional specialty areas so that more and more healthcare organizations can experience the countless financial and operational benefits of this industry-changing technology.

KEY BENEFITS

Financial Benefits:

Reduces Coding-Related Costs
By fully automating coding for a significant volume of encounters, autonomous medical coding solutions reduce full-time employee (FTE) costs and other labor-related coding costs.

Accelerates Payment Cycles
Autonomous medical coding solutions code patient encounters in seconds, decreasing the risk of high DNFC volume and coding backlogs. Down the line, this translates to decreased days in accounts receivable.

Ensures Accurate Medical Coding
Autonomous medical coding solutions are constantly updated to align with the latest coding guidelines, ensuring that providers are appropriately reimbursed for their services while simultaneously reducing the risk of inaccurate coding the associated compliance concerns and revenue loss.

Operational Benefits:

Reduces Administrative Burden
By fully automating coding for a significant volume of patient encounters, autonomous medical coding solutions reduce the administrative burdens for medical coding teams. This translates to a reduced risk of burnout, improved work-life balance, and in many cases, opportunities for medical coders to take on more complex roles.

Enables Seamless Scalability
Because autonomous medical coding solutions do not require any human intervention for encounters they successfully code, they can easily support significant increases in patient volume driven by seasonal increases and/or company expansion initiatives.

CASE STUDY DOWNLOAD
Transforming Medical Coding at Inova