CASE STUDY

Transforming Emergency Department Medical Coding at Inova

Supporting Coders, Reducing Costs, and Improving Revenue Capture with Nym's Autonomous Medical Coding Engine

Inova™
Large Health System

#1
Hospital in the DC metro region

4M+
Annual patient visits

500,000+
Annual emergency department visits

Summary

The Situation

For Inova, the combination of medical coder staffing challenges and increasing emergency department (ED) patient volumes led to reliance on expensive contract coders, overtime (OT) requirements for in-house coders, and delayed payment cycles.

The Solution

Inova deployed Nym's autonomous medical coding engine, and later, Nym's partial coding product, for ED facility coding across multiple hospital EDs and outpatient emergency care centers. Inova now has plans to expand into outpatient surgery and visits.

Impact

- **$1.3M reduction** in annual ED medical coding costs
- **50% decrease** in weekly revenue sitting in ED DNFB
- **10% increase** in average revenue per ED encounter
- **Eliminated mandatory OT** and limited PTO for medical coders

> Nym has completely shifted my perspective on autonomous coding. While I was skeptical at first, Nym has exceeded expectations, not only transforming Inova's coding efficiency and accuracy, but empowering and supporting our medical coders along the way."

Dr. Melissa Koehler
AVP of Health Information Management, Inova

THE SITUATION

Navigating the Pressures of High ED Volumes and Workforce Shortages

Inova is the leading nonprofit healthcare provider in Northern Virginia, serving over four million patients annually across its expansive network of hospitals, specialty practices, and outpatient facilities. Over 500,000 of these visits occur in Inova's emergency departments, including the third-busiest ED in the entire country at Inova Fairfax Hospital.

These high ED volumes, combined with industry-wide medical coder shortages and complex ED coding workflows, forced Inova to rely on expensive contract coders and overtime requirements. Still, the organization found itself facing high Discharged Not Final Billed (DNFB) volumes and coding backlogs.

These challenges led Inova to search for a medical coding solution capable of alleviating administrative burdens for its in-house coding team, eliminating reliance on expensive coding practices, and accelerating payment cycles.

What factors led Inova to explore autonomous coding?

Administrative Burden
Overtime requirements for in-house coders and limited PTO led to a work-life imbalance

Expensive Medical Coding Practices
Reliance on expensive contract coders and overtime requirements for in-house coders drove up coding costs

Delayed Payment Cycles
Unable to keep up with high ED volumes, Inova experienced high DNFB volumes and coding backlogs that ultimately delayed cash flow

THE SOLUTION

Implementing Nym's Autonomous Medical Coding Engine for ED Facility Coding

After assessing several medical coding solutions, Inova selected Nym as its preferred partner and deployed Nym's autonomous medical coding engine for ED facility coding.

Emergency Medicine

- Autonomous coding and partial coding (facility only)
- Deployed at 5 hospitals and several outpatient emergency care centers

Powered by innovative clinical language understanding (CLU) technology and rules-based medical coding ontologies, Nym's engine translates provider notes within patient charts into medical codes in seconds with over 95% accuracy and no human intervention.

THE IMPACT

Delivering True Operational and Financial ROI

Since implementing Nym's autonomous medical coding engine, Inova has experienced significant improvements across multiple facets of its medical coding operations and revenue cycle performance. From better work-life balance for its in-house coding team to significant reductions in coding costs, Nym has delivered true operational and financial ROI and transformed medical coding for Inova moving forward.

$1.3M reduction in annual ED medical coding costs

- Inova has achieved significant cost savings by removing OT requirements for in-house coders and eliminating the need for expensive contract coders
- Inova achieved additional cost savings by implementing Nym's partial coding product

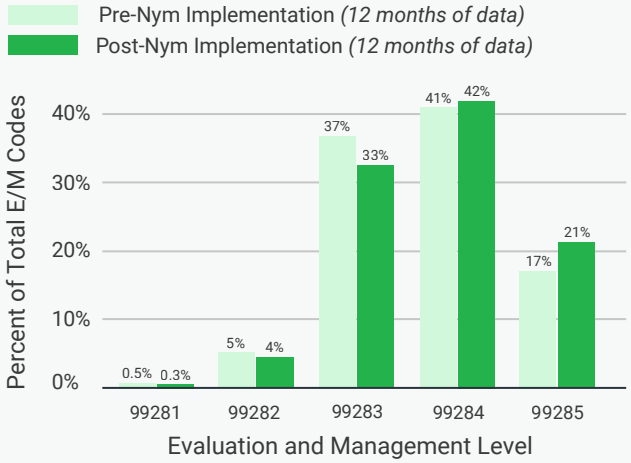
50% decrease in weekly revenue sitting in ED DNFB

- Inova reduced its ED coding backlog by 48% almost immediately after implementing Nym's engine, enabling its coders and Nym's engine to focus on current encounters
- Inova decreased the weekly delayed revenue associated with ED DNFB volumes by an average of 50%, thereby accelerating payment cycles

10% increase in average revenue per ED encounter

- While not a main goal of implementing autonomous coding, Inova's average revenue per ED encounter has increased by over 10% since going live with Nym. This increase is attributed to Nym's engine capturing more bedside procedures, capturing more Evaluation and Management (E/M) level 4's and 5's (see Figure 1), and being more consistent with injections and infusions coding and charge capture.

Figure 1: Inova's ED E/M Level Distribution Pre-Nym Implementation vs Post-Nym Implementation



Eliminated mandatory OT and limited PTO for medical coders

- Inova has removed all OT requirements and no longer has to limit PTO for its in-house coders, significantly improving work-life balance
- Inova no longer relies on any contract coders and has not re-engaged with contract coders since implementing Nym's engine
- Inova promoted four ED coders to higher complexity areas shortly after going live with Nym

LOOKING FORWARD

Expansion into New Specialty Areas

Inova's implementation of Nym's autonomous medical coding engine has directly addressed their core objectives of eliminating administrative burdens, reducing coding costs, and accelerating payment cycles. The $1.3M in annual savings, combined with the elimination of mandatory overtime and contract coder dependencies, demonstrates how autonomous coding technology can transform emergency department operations at scale across over 500,000 annual ED visits. The measurable improvements, including a 50% decrease in weekly revenue sitting in DNFB and a 10% increase in average charges per ED encounter, showcase the comprehensive impact beyond simple cost reduction while the promotion of four ED coders is a prime example of how autonomous medical coding can support job satisfaction and career growth opportunities for medical coders and other health information management professionals.

Building on this ED-focused success, Inova plans to expand autonomous coding to additional specialty areas including outpatient visits and outpatient surgery. This strategic expansion has further cemented Inova's position as a leader in healthcare innovation within Northern Virginia and beyond, serving as a proven model for how large health systems can successfully leverage advanced technology to address persistent medical coding challenges across multiple service lines.

Interested in learning more about how Nym's autonomous medical coding engine can drive value for your organization? Get in touch with a member of our team!

Schedule a Demo

ABOUT NYM

Nym is reducing the costly administrative burden faced by healthcare providers across the US by automating the medical coding process. Bringing together an interdisciplinary team of physicians, computational linguists, engineers, medical coders and more, Nym has completely transformed how medical coding technology is designed and developed so that it truly works for healthcare. Our innovative Clinical Language Understanding (CLU) technology powers Nym's autonomous medical coding engine, enabling it to translate provider notes within patient charts into billing codes in seconds and with zero human intervention.

Today, Nym's autonomous medical coding engine is powering automation in revenue cycle management and bringing accuracy and speed to medical billing, processing over 6 million charts annually in more than 300 healthcare facilities across the US.