How a Fortune 100 Health Plan Cut Prior Authorization Processing Time by 55%

with Autonomize AI

Executive Summary

A Fortune 100 health plan dramatically improved its prior authorization operations by implementing Autonomize AI's Prior Authorization Copilot, a purpose-built, healthcare-native AI platform. In under 90 days, the organization reduced processing times by over 55%, accelerated decision turnaround by 49%, and achieved millions in full-time equivalent (FTE) time savings. Utilization Management (UM) nurses now process more than 80,000 prior auth requests daily, with AI extracting unstructured data, generating summaries, and supporting decisions—all while keeping clinical staff in control. The result is a scalable, compliant, and high-performance operation that puts patient and provider experience first.

Challenge

Prior authorization operations had become a major bottleneck. The health plan faced an overwhelming daily volume of requests—spanning inpatient, outpatient, pharmacy, and advanced imaging services. Each request required an average of 35 minutes to review, often involving tedious manual steps such as extracting data from faxes, PDFs, EMRs, and even handwritten notes.

The fragmented nature of data inputs made it difficult for UM nurses to locate relevant information quickly, resulting in delays, documentation errors, and frequent appeals—especially in cases where decisions were denied due to missing information. Simultaneously, increasing regulatory scrutiny demanded accurate, guideline-aligned documentation for every decision. The organization needed a solution that could not only scale operations but also reduce the burden on clinical staff, ensure compliance, and support timely, quality care.

Solution

To tackle these challenges, the health plan turned to Autonomize AI's Prior Authorization Copilot—an advanced AI solution developed specifically for healthcare operations.

> " Autonomize AI is going to be a game changer for Prior Auth and Utilization Management; we can be #1 in the industry with this. This is very strategic for the business.
>
> *-VP Clinical Management, Fortune 100 Health Plan*

> "The Copilot's ability to extract meaning from unstructured clinical documents—across EMRs, faxes, and PDFs—and convert that into actionable insights at scale is truly impressive. It's like unlocking hidden value in every request.
>
> *-VP of Technology Operations, Fortune 100 Health Plan*

Built on the Genesis Platform and powered by Compound AI, the Copilot was engineered by healthcare and AI experts to understand clinical terminology, payer workflows, and regulatory requirements from the ground up.

The Copilot automated data intake by processing a range of unstructured inputs—scanned documents, PDFs, handwritten notes, and EMRs—and extracting the critical information needed to initiate and complete prior authorization cases. It summarized complex medical records into concise clinical narratives, allowing UM nurses to make informed decisions faster. Additionally, it automatically adjudicated requests against multiple sets of clinical criteria (including Carelon, InterQual, and internal guidelines), and generated consistent, audit-ready documentation for every decision.

Seamlessly integrating into the health plan's existing claims and utilization platforms, the Copilot didn't disrupt workflows—it enhanced them. UM nurses retained oversight and clinical judgment, while repetitive and time-consuming tasks were offloaded to AI agents working in the background.

Results

Within weeks of deployment, the health plan realized transformative operational gains.

- Prior auth processing time reduced 55% (35 mins to <15 mins).
- Decision turnaround improved 49% (3.65 days to 1.80 days).
- 76% automation of intake reduced manual entry and improved consistency.
- Saved 18 mins per prior auth, equating to millions in FTE time savings.
- 36,000+ clinical hours recouped monthly for high-value tasks.
- Faster approvals improved provider relations, reducing appeals.

Compliance also improved by 16%, as real-time guideline adjudication and documentation eliminated rework and ensured alignment with evolving regulatory standards. By enabling faster approvals, the organization improved relationships with providers and reduced appeals that previously stemmed from missing or inconsistent information.

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Improvement in Compliance

Autonomize