



Case Study

Rules Engine Reduces Healthcare Claim Payment Cycle by 67%

Client Profile:

A leading provider of home health management services

Industry:

Healthcare

Results:

- Cut claim payment (revenue) cycle from 6 weeks to 2 weeks
- Reduced time to add new provider by 60 percent
- Doubled claims processing capacity with existing staff
- Shortened time to implement business rule changes
- Improved claims processing accuracy to 97 percent

Technologies:

- Service Oriented Architecture
- Microsoft BizTalk Server ESB
- JBoss Drools Business Logic Integration Platform

A leading home healthcare benefits management company coordinates delivery of post-hospitalization patient care through a nationwide network of service providers. The company administers insurance authorization and claim processing for home healthcare services, including skilled nursing, home infusion therapies and durable medical equipment.

Several factors had contributed to a lengthy claims processing cycle, which caused financial and operational hardships for service providers. A high percentage of claims had to be processed manually. The time-consuming process involved obtaining authorization for patient services, including low-cost home healthcare equipment, and inputting authorization codes into claims forms.

To shorten the claim processing cycle, Chenoa developed a business rules management systems (BRMS) that **automatically generates authorizations for incoming claims submitted electronically**. The rules engine determines if the provider is in-network, if the service is covered, and if authorization is automatically available. The BRMS has successfully increased auto-adjudication by 67 percent, thereby reducing the claim payment cycle from six weeks to two weeks.

Remarking on the accomplishment, the company's chief operating officer said,

"We got better results than we expected. Not only did Chenoa reduce our claims processing time, they increased our auto-adjudication rate to 97%!"

— Chief Operating Officer of a leading provider of home health benefits management services

About Chenoa

Chenoa Information Services, a sustainable IT services and solutions company, delivers strategic software architecture, integration and implementation for organizations worldwide. Our talented technology strategists and technical experts are dedicated to achieving meaningful, measurable results.

Working onsite or offshore, we customize our delivery methods to consistently exceed expectations. Our "**fit for purpose**" philosophy means our software is built with the explicit goal of making clients more efficient, productive and profitable.



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Auto-adjudication precludes additional staffing:

The company had been experiencing a very low percentage of auto-adjudicated claims, which impacted collections, cost of operations, ability to scale and time to market. The goal was to improve the auto-adjudication rate and avoid having to increase the operational headcount. Automating as much of this complex claims administration process as possible decreased processing time and mistakes. The BRMS checks submissions against predefined parameters and electronically processes claims without human intervention. The BRMS that Chenoa implemented **doubled the claims processing capacity with the existing staff.**

Partnering and teamwork lay the foundation for sustainable success:

Chenoa developed the requirements for the BRMS in collaboration with the company's claims processing department to achieve consensus on rules definitions. The rules had to be expressed in enough detail to be unequivocal while remaining comprehensible. Because the rules are separate from the BRMS application code, they can be **maintained more easily, giving the company better control over claim processing and making it more responsive to changes** in the business environment: bringing aboard new providers, reacting to regulatory changes, and doing business in new markets.

For example, the BRMS reduced the time required to add new providers by 60 percent. In addition, the rules engine implementation process produced a claims processing system that is 90 percent more accurate than the previous system.

The BRMS was developed as a web service within a service-oriented architecture (SOA). The separation of business rules from application coding allows the SOA to be scalable. It also permits other applications to use the business rules, making the rules engine "universal" and reducing the total cost of ownership.