BMGI®
Problem Solved.

CASE STUDY | Health Insurance Plan of New York

How an insurance company reduced claims-processing time with Lean and creative thinking

The Challenge

Lowering process lead time from eight days to about three hours isn't easy. You need to apply Lean thinking to the process — to identify value and eliminate waste. Lean and Six Sigma Black Belt Alex Battaglini knows this, as do many people working at Health Insurance Plan of Greater New York.

Also known as HIP, the organisation is the largest commercial HMO in New York City based on membership, with approximately 1.3 million members. Including subsidiaries, HIP's total network comprises nearly 43,000 doctors and other providers in more than 72,000 locations in New York, Connecticut and Massachusetts.

At one HIP facility, eight employees process more than 10,000 paper-based insurance claims per day. Specifically, the team is responsible for sorting and then scanning the claims into a mainframe engine that processes the claims for payment. Needless to say, the accuracy and speed with which incoming claims can be scanned is critical to the accuracy and speed of the overall claims process.

> "We experienced the actual outcome of Lean, and even the most resistant person on the team became the greatest advocate of what Lean can do on a regular basis."
>
> *— Angi Jennings, Black Belt BayCare Health System*

In the past, incoming claims were transported from the mailroom of one building to the scanning operations in another. HIP decided to co-locate the scanning operation in the same building as the mailroom. After HIP moved its scanning operations from one facility to another, the scanning cycle time skyrocketed from about a day and a half to an average of eight days. The need for a Lean process improvement project became evident.

The Process

"We thought that shortening the mail handoff step would have the same effect on the process But that's not what happened," says Alex Battaglini, who was in charge of the ensuing Lean project. "In fact, the process not only took longer, it took much longer. We knew that we had to move quickly to find a solution."

A little reluctantly, the Lean team, made up of newly hired workers, started Shining, Sorting, Storing, Standardizing and Sustaining — the "5 S's" of Lean. They did this at the department level and at their individual workstations. "The operators were not particularly optimistic about how the Lean tools could help their process," Battaglini admits, "but as we got into it that changed."

The team built a Value Stream Map to see the areas of waste and non-value-added activity in the process. "There's nothing wrong with a straight process map," reminds Battaglini, "but the Value Stream Map gives you so much more information and clues about how to improve."

This is generally how the scanning process worked: massive amounts of mail would come into HIP, and the claims would have to be separated from the rest of the mail and forwarded to the scanning department. Operators then took these paper claim forms and sorted them into 18 claim types, and batched each type for scanning into one of three scanners. "The process was a great candidate for Lean," says Battaglini, "because it was very manual. There's a lot of

HIP®
HEALTH PLAN OF NEW YORK

Summary

Organization
- Health Insurance Plan of Greater New York

Industry
Health Care

Business Problem
- Lengthy cycle time for scanning paper claims

Methodology
- Lean

Solution
- Workload balancing, batch size reduction and system improvements

Benefits/Results
- Cycle time reduction from 8 days to 3 hours

Key Tools Used
- 5S
- Value Stream Map
- Spaghetti Diagram

paper handling, sorting, moving and scanning." Thus, a lot of opportunity for waste — or, as waste is called in Lean, muda. Battaglini had good reason to be concerned because the new operation required so much time. One of the first improvements the team made was to enlist the help of the mailroom, whichhad a great ability to impact the process. Before, mail handlers would send claims to the scanning department in their original envelopes. The scanning "preparers" would then have to open the envelope, flatten out the contents and then sort them for scanning. Since the mailroom personnel were handling the mail anyway, it was more efficient to have employees there open the claims, flatten the contents, and even do an initial sort on the claims before delivering them to the preparers in the scanning department.

The next change came by reducing the number of claim categories from 18 to 10. This reduction was significant because each "batch" of claims has to be scanned into a different pre-set scanner template. In addition, the change reduced set-up time for scanning operators, and it made the job of sorting faster for the preparers. The preparers also had more time due to the opening and flattening tasks now done in the mailroom.

Could the process be further improved? Well, Lean practitioners also try to "level the workload," so that seemed a fitting next step for Battaglini and her team. Using a spaghetti diagram, they all traced their footsteps for a day, just long enough to get the picture of how they utilise time and motion.

What did they find out? "When you trace your footsteps you discover that sometimes you go around in circles," Battaglini explains. "We discovered that the scanning operators were spending too much of their time running around
the office asking preparers if they had any more of 'this type' of claim or 'that type.' They hadtheir template loaded, and before changing over to new settings, they were seeking more throughput by leveling their work."

Battaglini and her team recommended that the preparers pass on smaller batches to make sure that all scanning operators have enough claims to keep them busy scanning. Smaller batches improved the process flow such that scanners could stay at their stations while preparers constantly fed them various coordinated batches of claims. With that, only two major blockades were left standing. One was the excessive amount of time scanned files took to be transmitted and saved on the server. In the old location the system had been much faster because the data did not have to travel through a network to get where it was going. From the new building, files took up to three times longer to transmit and save. HIP's IT staff solved this issue by reconfiguring how the files were transmitted and saved.

The team felt it needed to resolve one other problem. The highest-volume batches couldn't be scanned on different scanners at the same time. Therefore, if there were 100 batches of "professional, single-page claims," they all had to be scanned sequentially on one machine. Of course, this caused average turnaround time to go way up.

The scanning software had been designed this way because the scanners assigned the claim numbers, and a safety measure was needed so that claim numbers would not be duplicated or overwritten.

This handicap was again solved with creative thinking by "the IT guys." Once the last bridge was crossed, the team's quest to "process all the same claims on the same day" could be realised.

The Results

In the end, the front-end claims processing team cut their process lead time down from eight days to three hours. Even when considering the original performance level of 1.5 days, prior to the processing unit's relocation, the results and financial impact have been significant. "At the beginning there were team members saying 'Oh here we go again, trying to make things better,'" remembers Battaglini. "But then, after about the third day of the Kaizen event week, especially after management approved the expense for new 'muda-less' workstations, everything began to change."

HIP employees involved with the project felt empowered when HIP management acted on the Lean team recommendations, which were backed by data. The project demonstrated that a certain change can save a lot of money, even if it costs a little in the short run.

Battaglini adds that the Lean experience for her and her team has created a real consciousness of looking for and getting rid of wasteful operations. "We had seen the Lean concepts in theory at first, but then we experienced the actual outcome of Lean, and even the most resistant person on the team became the greatest advocate of what Lean can do on a regular basis.

BMGI

BMGI enables companies throughout the world to identify and solve their most important business problems, with a strong emphasis on sustainable results. During its long history, BMGI has developed solutions for a broad spectrum of businesses across many industries, driving the success of process-improvement, design and innovation initiatives. Just a few of BMGI's clients are General Dynamics, TNT Express, Avis Budget Group, China Chemical, Graphic Packaging, Siemens, Hitachi and Philips Electronics. For more information, please visit the BMGI website at **www.bmgi.com**