Secrets of Million Dollar Improvement Projects

When I was just getting started in improvement with TQM and Six Sigma, I had great training, but it took me two years to figure out how to create improvement projects. Eventually, I stumbled on a fool-proof way to save millions of dollars. Six Sigma courses do not teach the secrets of million dollar improvements. Too often they teach tools you don't need to solve problems you don't have.

Secret #1 – Go on a Raw Data Diet

Most data has been over cooked—summarized to the point that you can't find the root cause. If you have data that looks like this, it could be worth $5 million dollars a year.

These are hospital denied charges. The hospital was losing over a million a month in denied insurance claims. They'd tried everything to figure out how to fix it and brought me in. In a couple of days, I was able to analyze their data and pinpoint the source of the problem. In a matter of hours their team figured out the root cause and implemented changes that saved $5 million a year. You can too.

Raw data shows the when, where, what, how, who and how much of each individual defect, mistake or error. From this data you will need Secret #2.

Secret #2 – Excel PivotTables

Every million dollar improvement project I've ever done started with a PivotTable of raw data. The ones that started with summarized data achieved modest, but not million-dollar results. I would take the raw data and play with it in PivotTables. I eventually figured out how pivot the data to find what I needed to build a great improvement project. Here's the data above in a PivotTable:

A	B
Sum of DENIED CHARGES	
ADM DATE	Total
03/26/10	387.48
04/23/10	379.62
03/11/11	6908.98
07/22/11	311.16

This gives us the charges by day that we need to create the next secret.

**Secret #3 – Control Chart of current performance:**

Charges Coded as Denials
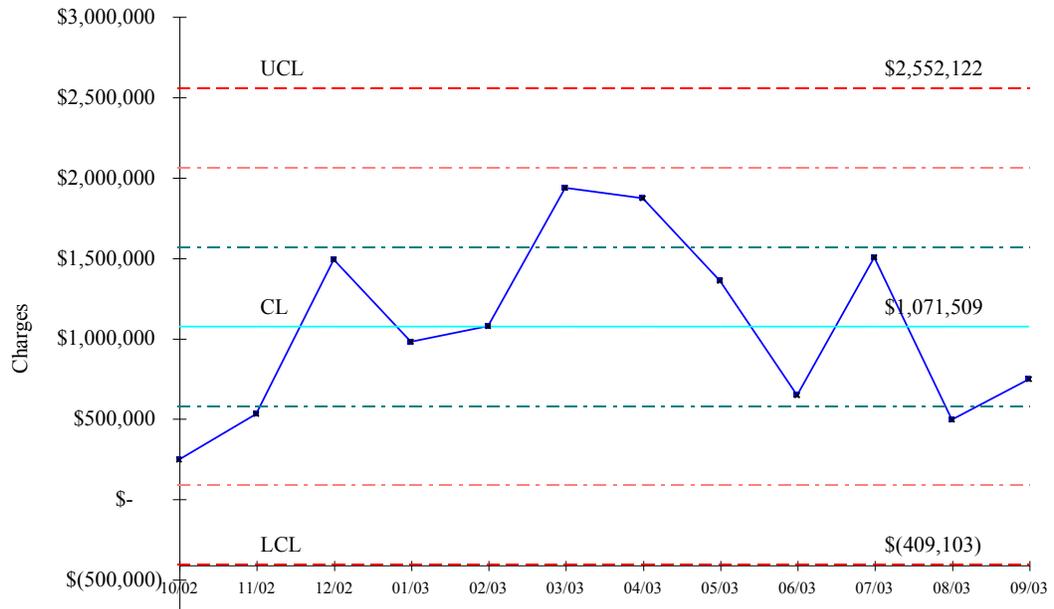
As you can see the average is $1900 per day. Why do you need a control chart? Because when you've made the improvement you will want to be able to *prove* that there was a process change. And you will need a control chart to monitor the ongoing performance and take corrective action if the process starts to drift back to its previous level. To laser-focus analysis you need Secret #4.

Secret #4 – Pareto Charts

A Pareto chart helps pinpoint the problem. You will often need one or more. In this case, I changed the PivotTable to find the best starting point, timely filing. Then I drilled down to find that one insurer was 64% of denials for timely filing. PivotTables and Pareto charts are power tools for pinpointing the source of the problem.
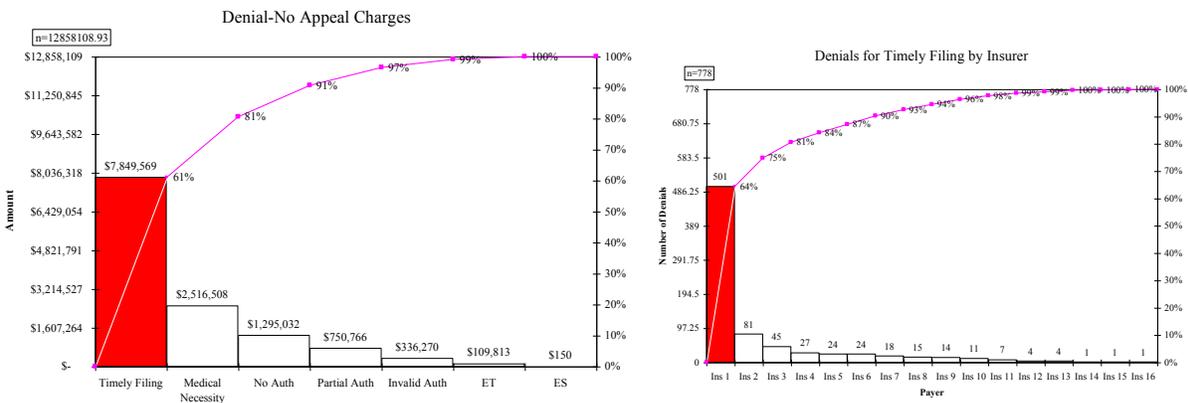
The big bar of the second Pareto chart becomes the head of the next secret.

Secret #5 – Fishbone (Ishikawa) diagrams

I have learned a secret about teams—never form a team until you've done this analysis because you won't have any idea who should be on the team. In this case we needed people on the billing team who were familiar with insurer #1. Starting a team without data analysis is a waste of time.
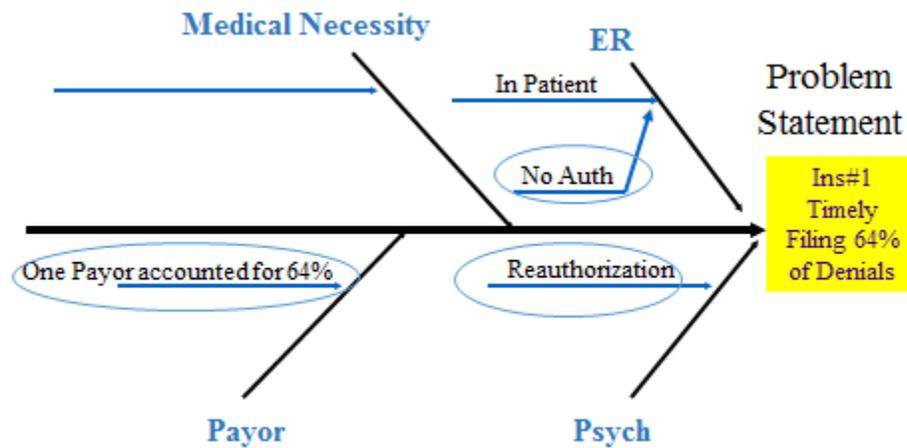
Given this analysis, the team was able to identify the root cause (No Authorization) and how to change their processes to work around the problem until they could resolve the issue with the insurance company. This resulted in a savings of $380,000 per month, almost $5 million a year.

Secret #6 – Show Results with Control Chart
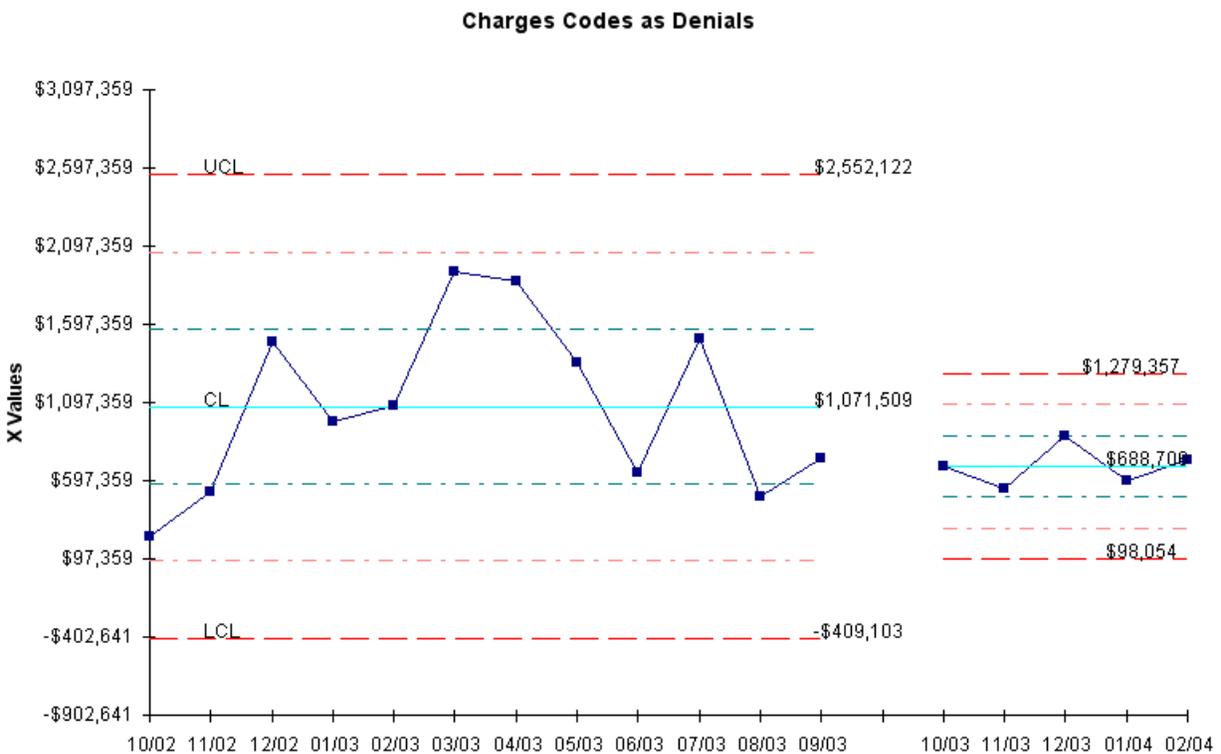
See, I told you we'd need the control chart to show the improvement! In this case we moved the average down and reduced the month-to-month variation. Now we can count on the process delivering better results. No surprises. The team continued to monitor and improve denied charges. We also found ways to eliminate $24 million in rejected claims.

Secret #7 – QI Macros Data Mining Wizard

Once I had the process figured out, I coded it into the QI Macros Data Mining Wizard. In a matter of seconds, the Data Mining Wizard does everything that used to take me days And it will do it for you. All you need is raw data about the when, where, what, how, who and how much of each defect. You can find this data in existing systems—purchasing, billing, invoicing, medical record systems etc.

Just export the raw data into Excel and let the Data Mining Wizard find every possible improvement project in your data. It's that easy.

Where to Use the Data Mining Wizard

This tool will solve the vast majority of problems facing service businesses which represent the vast majority of the U.S. economy. This will also help the service side of manufacturing businesses. I've even used it to pinpoint problems on a metal manufacturing line. I've used it in healthcare, telephony and medical device manufacturing.

It works anywhere there is raw data about defects, mistakes and errors.

Start making breakthrough, million-dollar improvements. You customers will love you for it. Every dollar you save falls to the bottom line, so investors will love you for it as well.

Jay Arthur

P.S. The Data Mining Wizard is just one amazing tool in the QI Macros.
The Control Chart Wizard will pick the right control chart for you.
The Stat Wizard will pick the right statistic.

If you thought these tools were beyond you, I guarantee they are not. You can learn them in minutes and start making improvements immediately.