

# Get a Cheaper (More Profitable) Hospital in Five Days

A Special Report by Jay Arthur

It should come as no surprise that a *faster, better hospital* will be *cheaper to operate and more profitable*. When you're not dealing with all of the delays in the ED-Admission-Discharge process, fewer patients will be boarded in the ED, reducing diversion and LWOBS. More patients can be seen more quickly, increasing revenue. When you're not dealing with the extra costs of preventable falls, infections and medication errors, it will make the hospital more cost effective and profitable.

## **Faster + Better = Cheaper and More Profitable!**

And there are other opportunities. Most hospitals have too many problems with rejected, appealed and denied claims costing millions! Lean Six Sigma can help reduce billing problems among other operational problems. And the process is simple.

To reduce rejected, appealed and denied claims, use Six Sigma tools to focus the improvement effort.

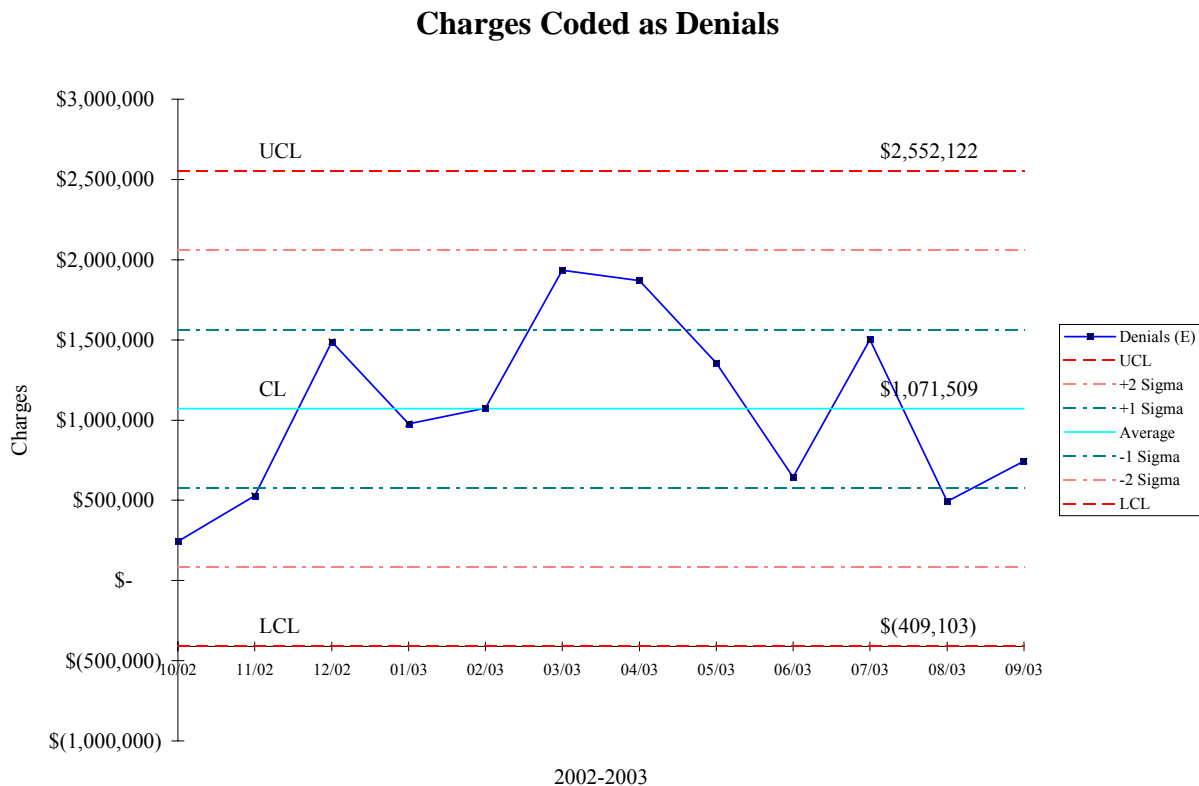
### 1. Analyze Claims using control charts and pareto charts

- Rejected
- Appealed
- Denied

2. Analyze the Root Causes using the “Dirty 30 process”
3. Implement Countermeasures
4. Track Results

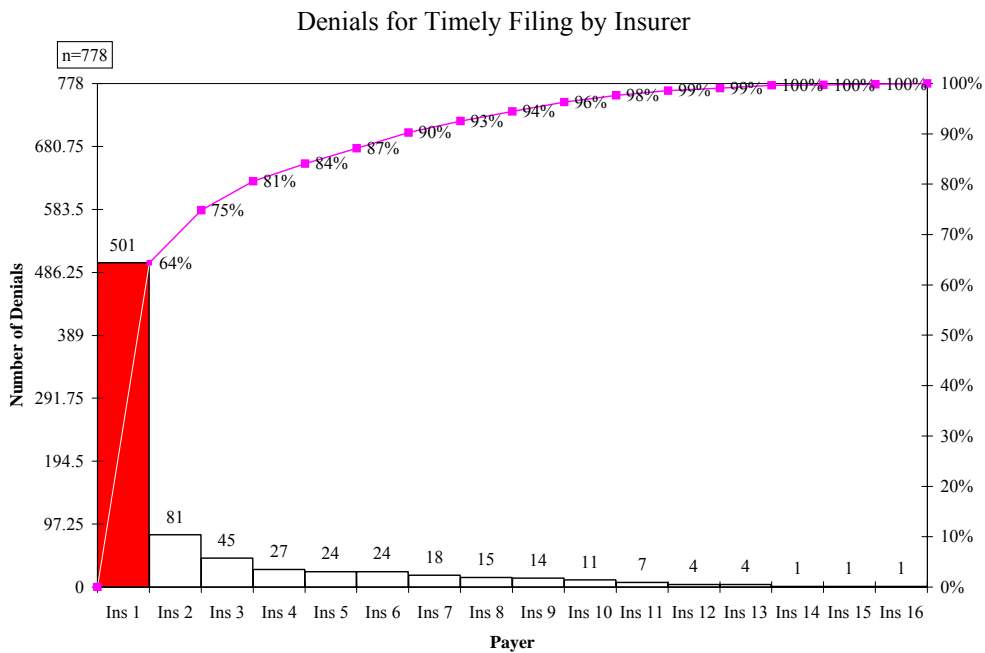
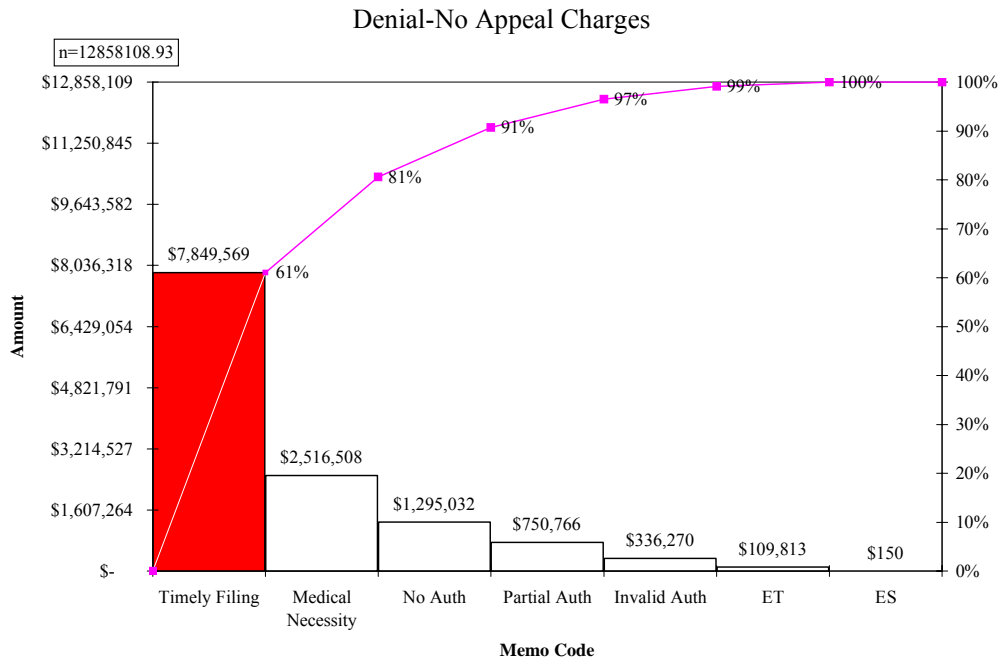
## Reducing Denied Claims In Five Days

Denied claims mean no money for services rendered because the billing process failed in some way. Non-payment drives up the cost of healthcare and pushes many hospitals toward bankruptcy. In this case study, monthly denials were over \$1 million (XmR chart).



# Using Pareto Charts of Denials

Using Excel PivotTables and the QI Macros, it was easy to narrow the focus to a few key areas for improvement: Timely Filing (61%) and one insurer (67% of Timely Filing denials):

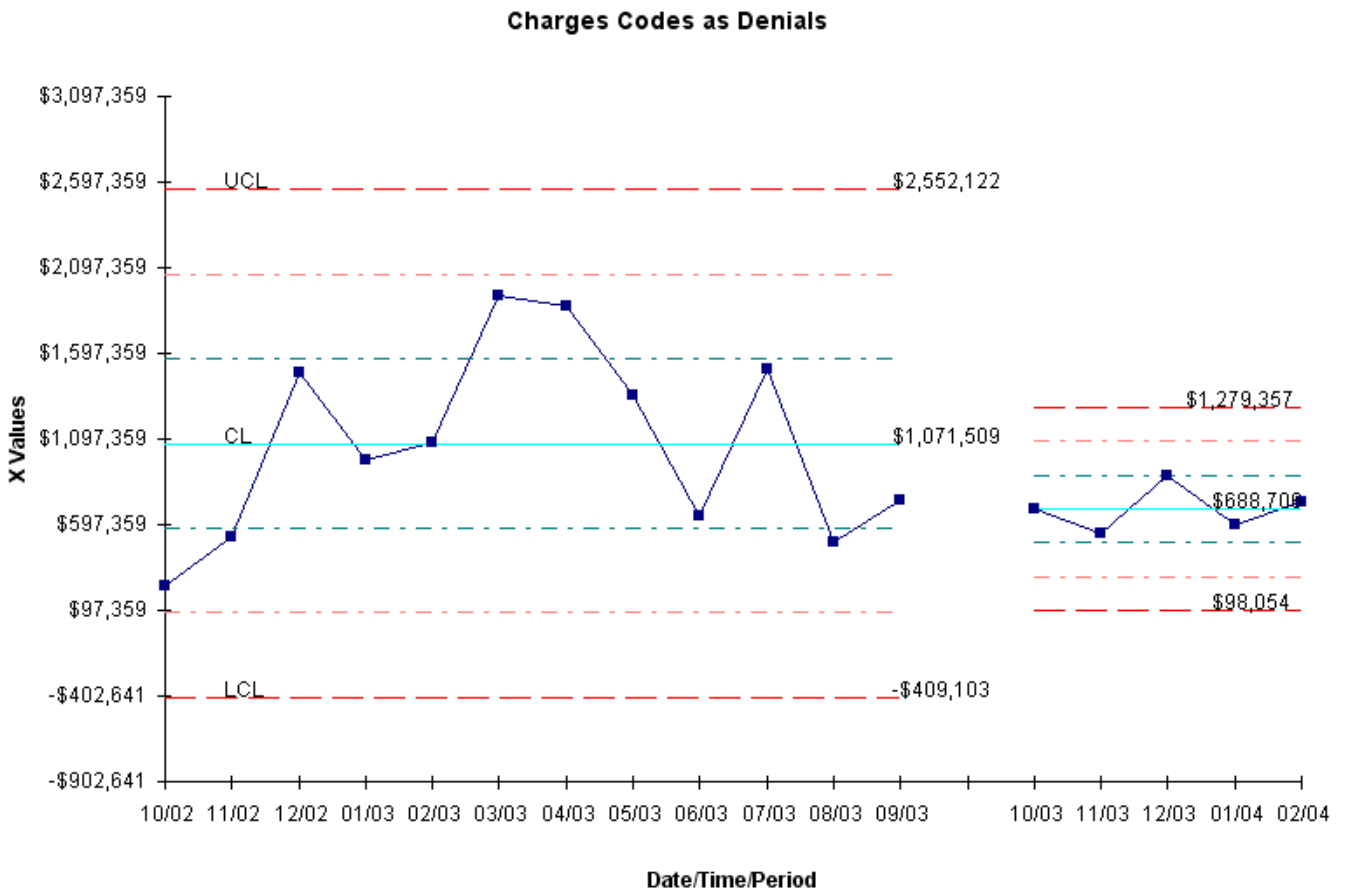


## Analyze Root Causes and Initiate Countermeasures

- In a half-day root cause analysis session, the team identified ways to change the process to work around the denials and change the contract process to 1) reduce delays that contribute to timely filling denials and work with the insurer to resolve excessive denials.

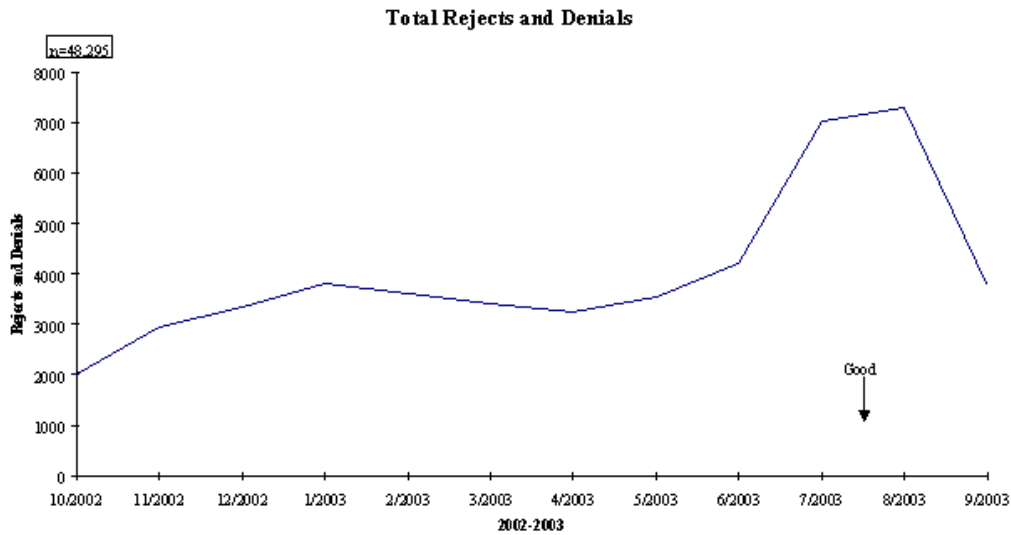
## Verify Results:

After implementing the process changes the following Monday, denied claims fell by \$380,000 per month (\$15 million/year). XmR chart below shows denials before and after improvement.

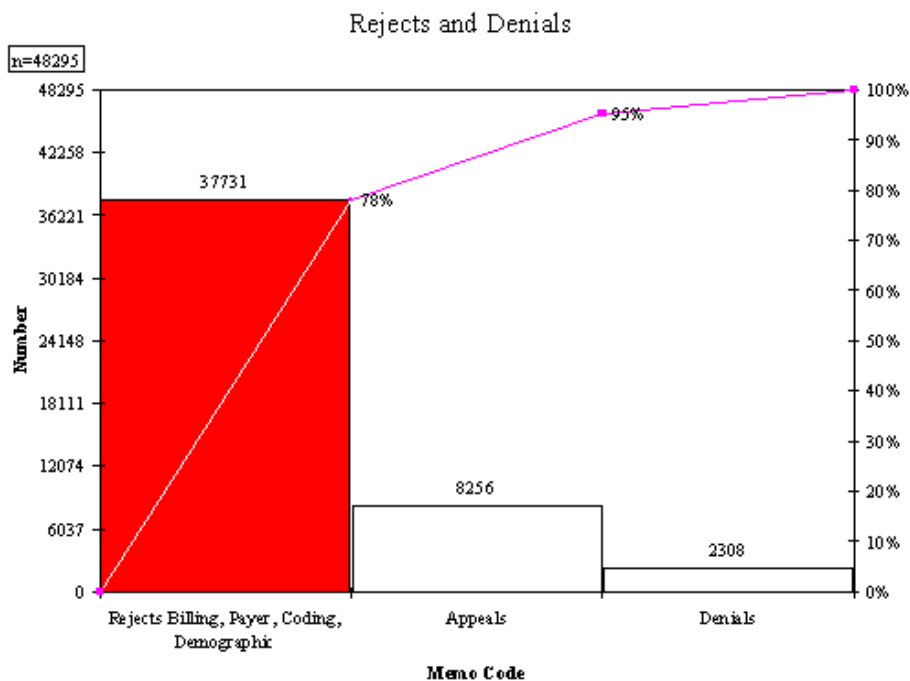


## Reducing Rejected Claims In Five Days

In software we have a saying that “finding a bug in a computer program is like finding a cockroach in your hotel room. You don’t say: Oh, there’s a bug. You say: The place is infested.” The same is true of rejected claims. Start with a line or control chart of rejects:

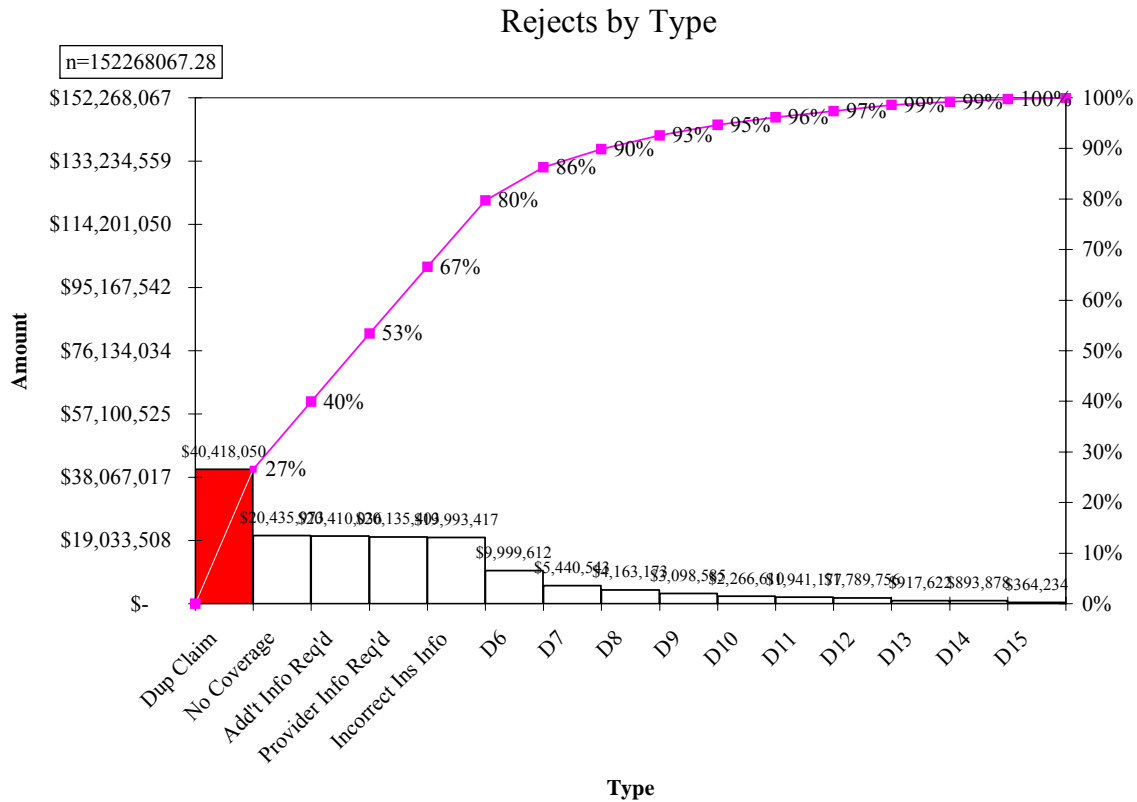


## Use a series of Pareto charts to narrow your focus:



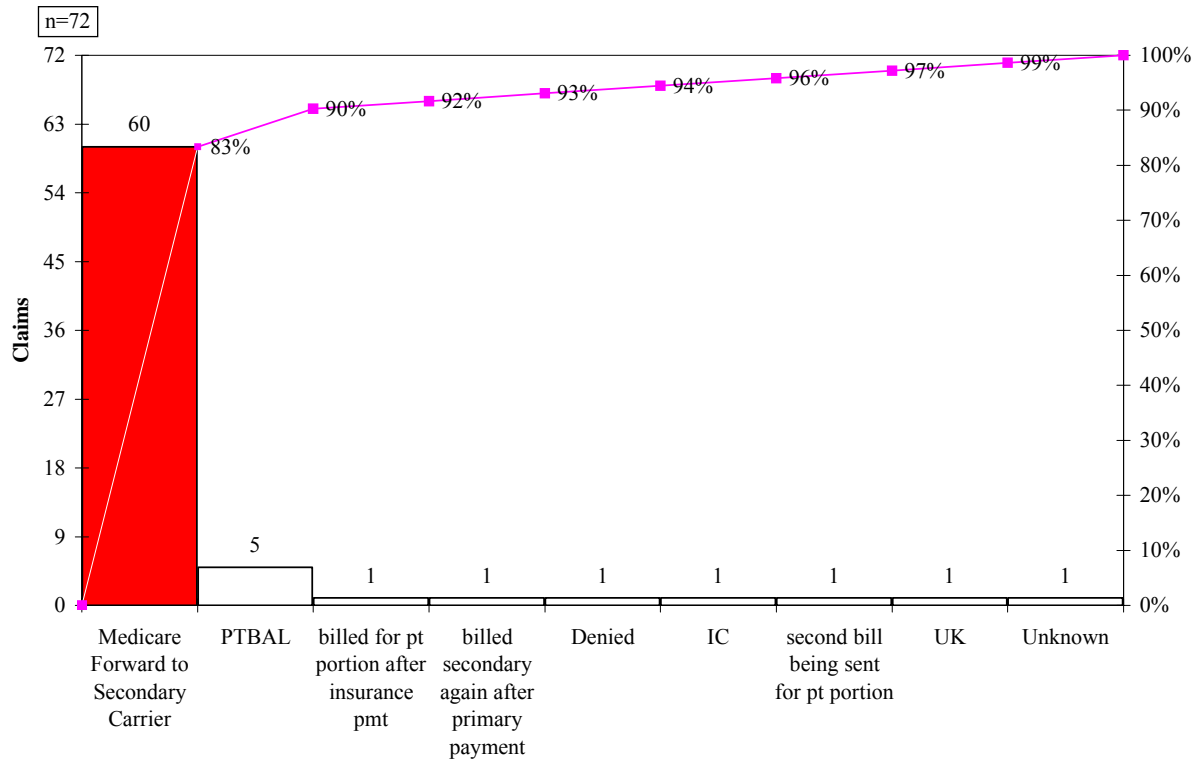
Rejected claims are the frequent type of error; appeals tie up accounts receivable, and denials result in lost revenue. How can we use Lean Six Sigma? Start with rejected claims.

## Categorize Rejected Claims



Duplicate claims accounts for 27% of rejected claims. The next four bars of the pareto chart combined with duplicate claims accounts for 80% of all rejected claims. Each of these five bars of the pareto chart is an improvement story requiring root cause analysis. Let's take duplicate claims down to the next level of pareto chart.

## Duplicate Claims Verification

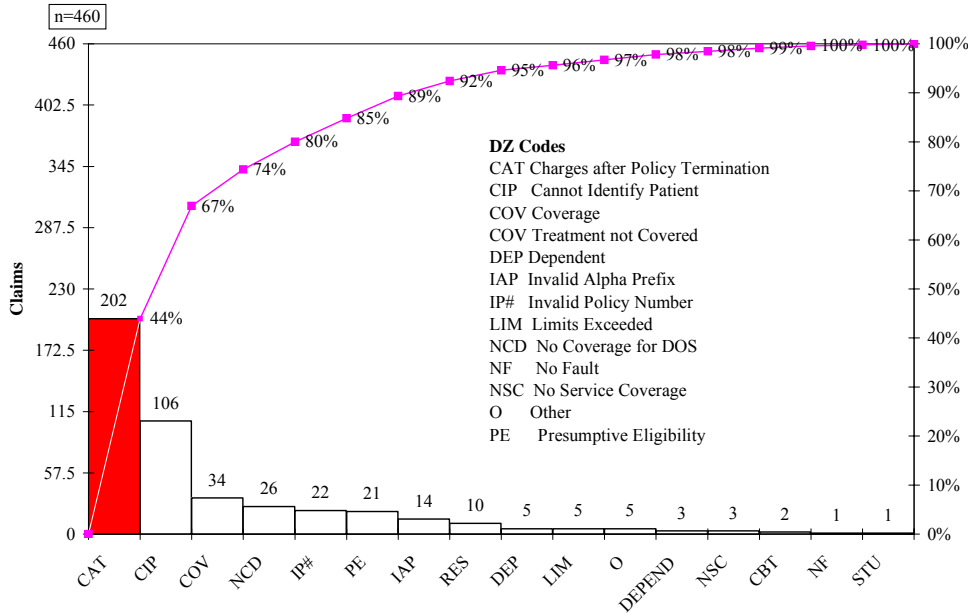


In this example, secondary payments for Medicare patients accounts for 83% of the duplicate claims. The team investigated 72 of these secondary payments and found that they had been paid, but incorrectly coded in accounting. Simple process changes reduced duplicate claims by \$24 million.

## Teams Continued With the Other Four “Big Bars”

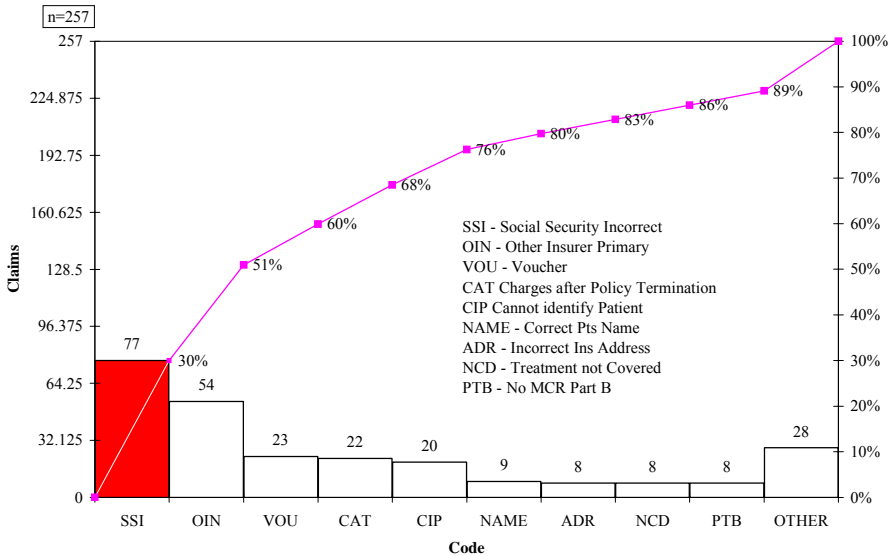
No Coverage turned out to be caused by charges after policy termination (44%).

### No Coverage by Code



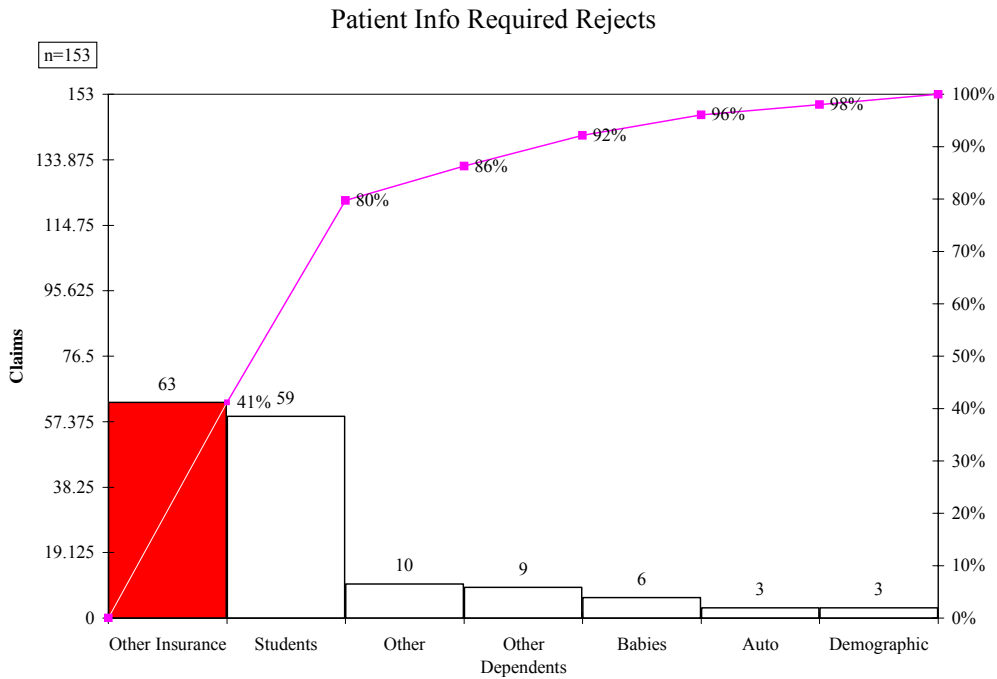
Invalid Insurer info led to SSN incorrect and wrong primary insurer (51%).

### Invalid Insurer Info



Patient Info rejects led to analysis of Other Insurance (41%) and students missing from parent's insurance (39%).





## Results

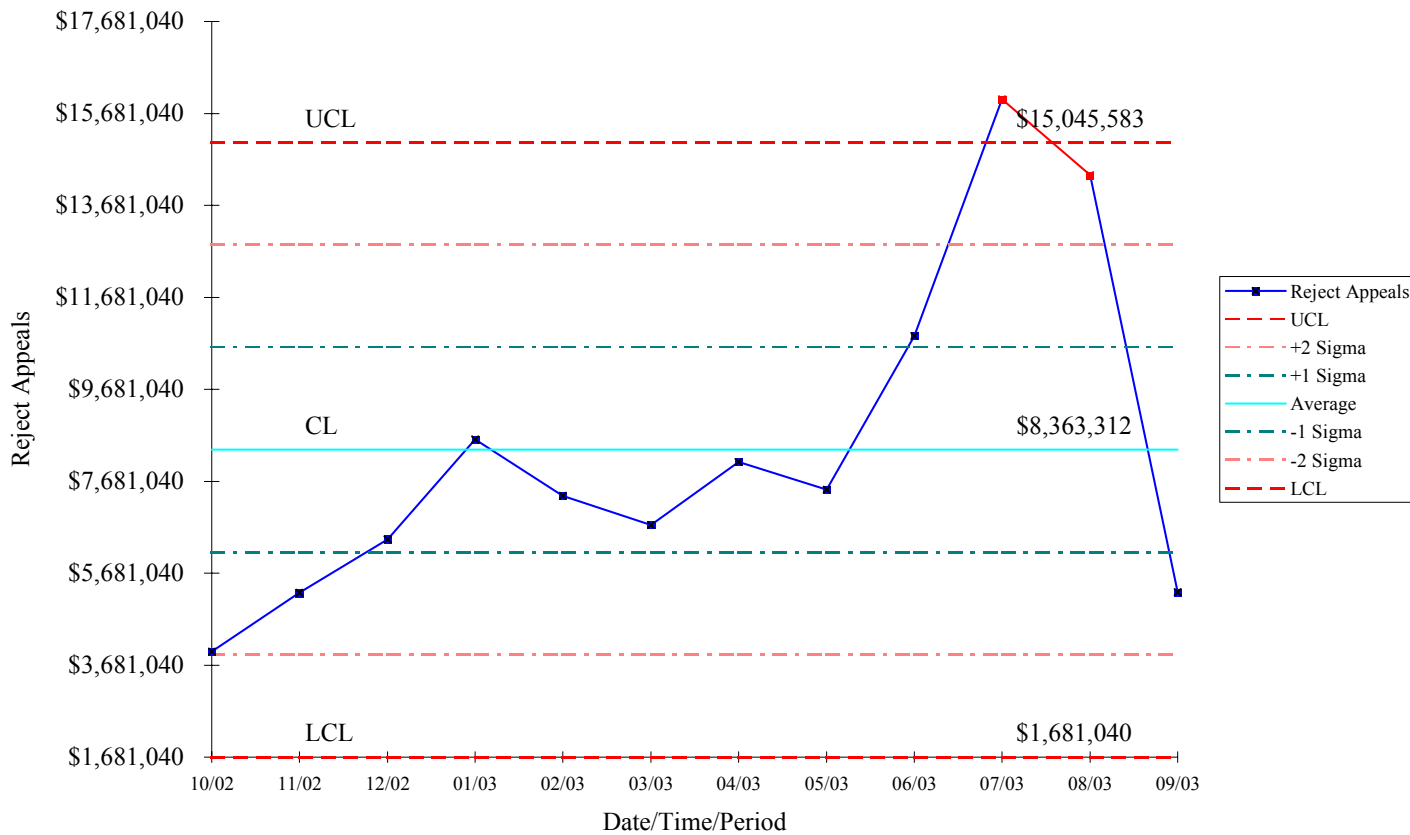
Half-day root cause analysis sessions for each of the “big bars” on these pareto charts and subsequent improvements resulted in dramatic improvement in “first pass yield” of insurance claims.

- 72% reduction in ED billing errors
- 60% reduction in impacted charges

## Reducing Appealed Claims in Five Days

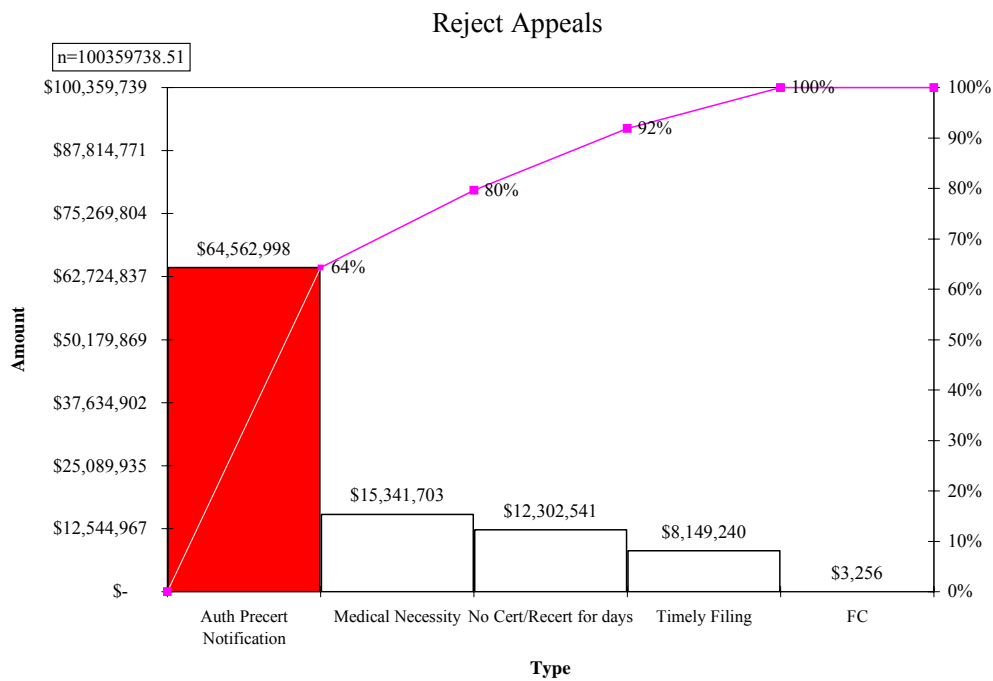
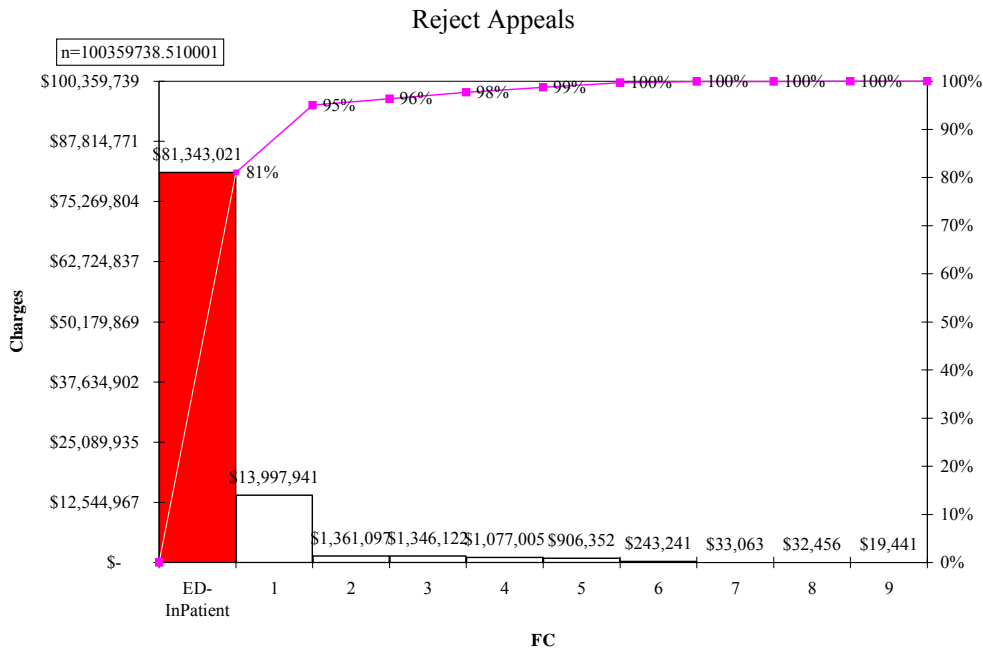
Delayed payments caused by appealed claims can put a hospital in a financial crunch. In 2003, appealed claims spiked due to Medicare Part B changes. The recent healthcare reform legislation and subsequent changes will most likely cause further spikes.

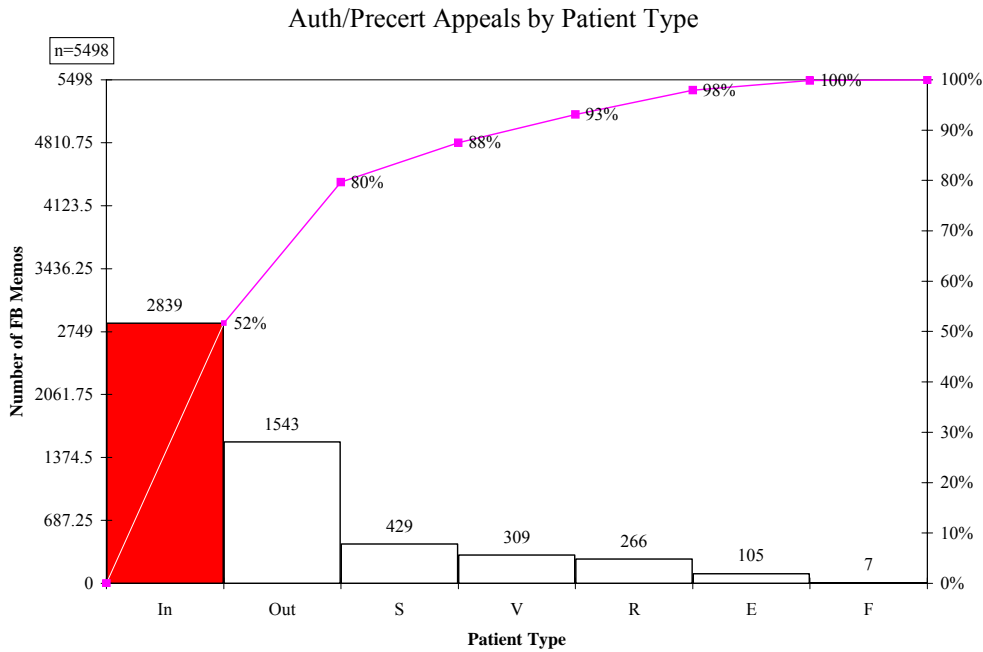
### Reject Appeals Chart



# Use Pareto Charts to Analyze Appealed Claims:

There is a number of ways to analyze appeals data: by patient and appeal type:

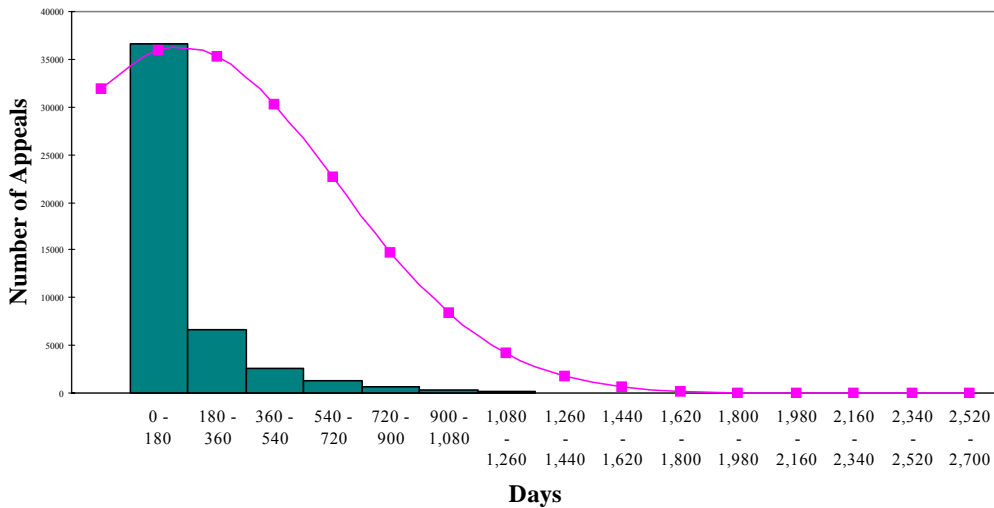




From these pareto charts, authorization and pre-certification of admissions from the ED are the most common and costly appeals. Root cause analysis required team members from the ED and admissions to identify and reduce Auth/Precert appeals.

## Reducing Appealed Claims Cycle Time

### Appeals Delays



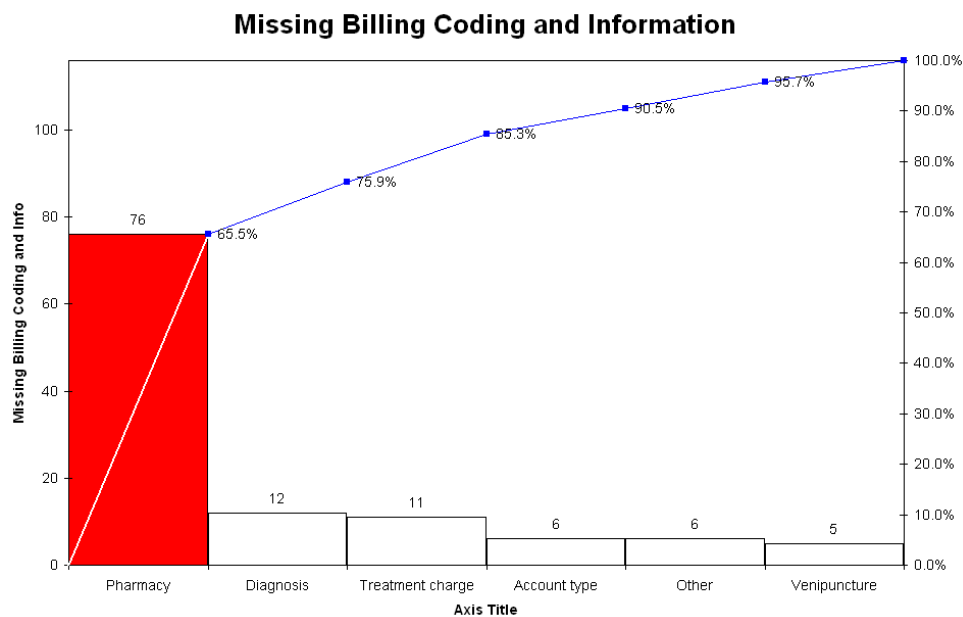
Using the simple tools of Lean (Post-it Notes), it was possible to redesign the appeals process to:

- Reduce touches per account from 21 down to 11
- Minutes per touch (16 minutes)
- 2.97 hours saved per account
- Accelerate payment by 50 days

### Other Examples

In 2002, rural hospital, Thibodaux Regional Medical Center, used Lean Six Sigma to reduced “discharged not final billed” from \$3.3 million to \$600,000. They also reduced net accounts receivable from 73 days to 62 days resulting in an increased cash flow of \$2 million per year. A second wave of projects saved an addition \$489,000 per year in inventory costs.

In 2006, North Shore Long Island Jewish Health System used Six Sigma to reduce oncology billing errors (missing charges) from 50 percent to only 2.5 percent. This resulted in increased revenue of \$4 million per year. They also reduced turnaround time for charge entry from 3.7 to 2.4 days and DOS-to-billing from 13.6 days to 6.8 days. The biggest factor in timely filing of bills: missing information. Biggest culprit, pharmacy:



# How to Get a Cheaper Hospital in Five Days

From working with teams in various industries, I've developed a simple method for achieving breakthrough improvement on transactional processes like billing. I call it *the Dirty Thirty Process*. I used it in the case study presented in this white paper.

## ***The Dirty 30 Process for Better Billing***

The secret is to:

1. Quantify the cost of correcting these rejected, appealed and denied transactions
2. Understand the pareto pattern of rejected, appealed and denied transactions
3. Analyze 30-50 rejected, appealed or denied transactions to determine the root cause
4. Revise the process and system system to prevent the rejected, appealed or denied claim.

*Process:* Typical root cause analysis simply does not work because of the level of detail required to understand each error. Detailed analysis of 30 errors in each of the top error “buckets” (i.e., *The Dirty Thirty*) led to a breakthrough in understanding of how errors occurred and how to prevent them. Simple checksheets allowed the root cause to pop out from analysis of this small sample. As expected, the errors clustered in a few main categories. The Dirty Thirty process has four steps:

1. *Focus:* Determine which rejected, appealed or denied error buckets to analyze first for maximum benefit. (This analysis takes 2 to 3 days.)
2. *Improve:* Use the Dirty Thirty approach to analyze root causes (4 hours per error type—facilitator with team) and determine process and system changes necessary to prevent the problem.
3. *Sustain:* Track the rejected, appealed and denied claims after implementation of the changes.
4. *Honor:* Recognize and reward team members

## ***Insights***

Using the basic tools of Six Sigma, anyone can learn to use what I call *The Dirty Thirty Process* in a day or less to find the root causes of transaction errors. Once a team has found the root causes of these errors, it's just a matter of changing the processes and systems to eliminate these errors.

Hundreds of people spend their lives fixing the fallout from these rejected, appealed and denied claims. And they all think they're doing meaningful work, not just fixing things that shouldn't be wrong to begin with.

## ***Conclusion***

Until you get to where you can prevent errors, every system could benefit from a simple, yet rigorous approach to analyzing and eliminating errors. The Dirty Thirty process is ideal because the data required to implement it is collected by most systems automatically. Then all it takes is 4 to 8 hours of analysis to identify the root cause of each error.

## **Need Guidance?**

The first project may seem scary, but we can facilitate your improvement teams to achieve breakthroughs in patient flow. Once you've learned how, you'll find it easy to continue. Haven't you waited long enough to get a faster hospital in five days or less?

Jay Arthur, the KnowWare Man, works with hospitals that want to get faster, better and cheaper in a matter of days using the proven methods of Lean Six Sigma. Jay is the author of [Lean Six Sigma Demystified](#) and the [QI Macros SPC Software for Excel](#). Jay has worked with healthcare companies to reduce denied claims by \$3 million per year, appealed claim turnaround time and lab turnaround times by 30-70 percent.

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