Lean and Six Sigma Combine to Improve Performance for HIM Department

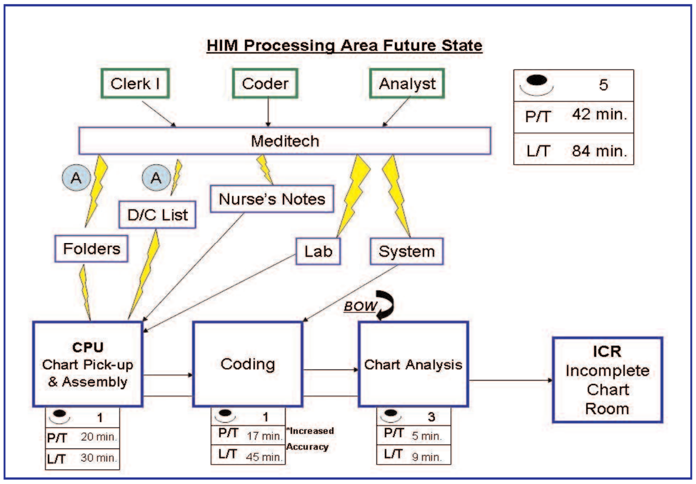
Healthcare Performance Partners

The Problem

The Health Information Management staff at a 230 bed, for-profit hospital was experiencing compliance issues directly impacting physician and patient satisfaction. Space constraints in the department interrupted the flow of work and affected employee morale. Symptomatic issues included loose reports, misfiled reports, missing charts and incomplete charts. Loose reports were measured in inches of paper because the actual number of loose sheets was too time consuming to count. Audits revealed that 75% of all charts in the facility contained at least one misfiled sheet, creating a potential risk to patient safety.

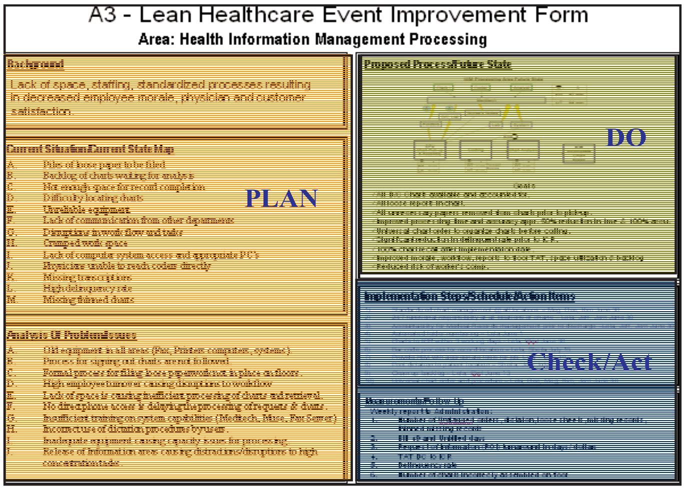
In order to improve the process and workplace organization issues affecting the department's performance, the HIM staff, facilitated by HPP, utilized a variety of methodologies from the Lean Healthcare toolkit. An initial 5S event focused on removing waste from the physical layout and creating visual management systems. Immediate gains were realized in employee morale and the amount of workspace available to the departments. Areas which had previously been cluttered or obstructed with unnecessary materials were now available for use in productive work.

Two one week Kaizen events followed. They focused on understanding the 'process related issues' facing the HIM staff and the application of Lean Healthcare principles to remove sources of waste and improve performance. The Kaizen teams were cross functional, consisting of HIM and nursing resources who were involved in the charting/filing processes. The teams completed Value Stream Mapping exercises of the current state processes to identify opportunities for improvement and used Lean Healthcare tools to create the Future State Value Stream. (shown below)



As part of the Future State, standard methods for the processing and thinning of charts were implemented on the nursing floor and in the HIM department. In order to address the issue of loose reports, a filing system was implemented at each nurse's station to assist in the organization and the timely filing of all loose sheets. Long term improvement efforts such as developing a universal order for medical records were captured as part of the Kaizen event as well and were assigned to project teams for completion.

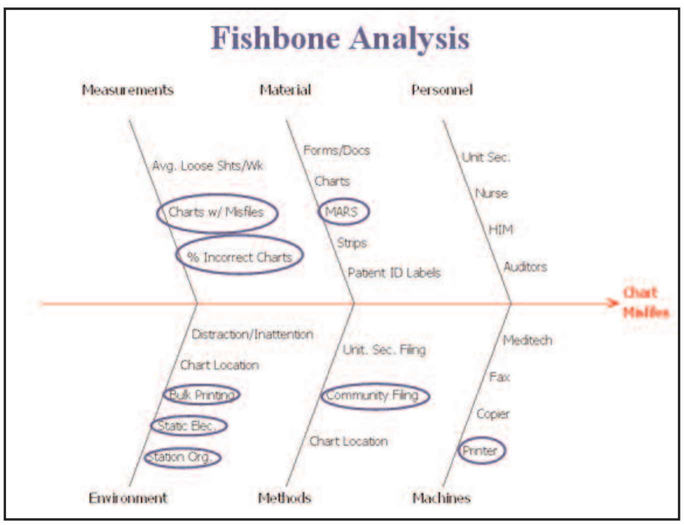
Opportunities were captured via an A3 form which was then used to drive additional improvement. The A3 form is closely linked to the PDCA (Plan, Do, Check, Act) process and assists teams in sustaining improvements made during the event as well as driving future action. The A3 also identifies process measurements for the project and defines project milestones and targets for tracking purposes.



By using Lean Healthcare methodologies to identify sources of waste and remove them from existing processes, the HIM team was able to realize additional performance gains. Loose sheets, which had previously been measured in inches, were now reduced to 44. In addition, the delinquency rate dropped from 41% to 22% over a period of two months.

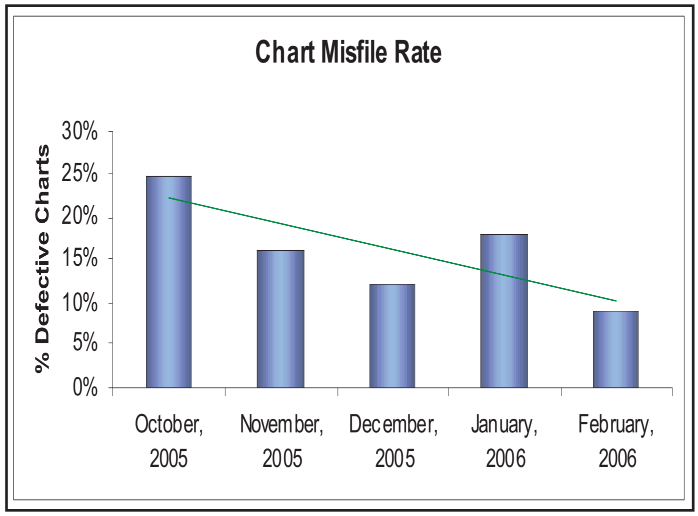
While significant gains were made towards workplace organization and process improvement, the issue of misfiled reports remained unchanged. Because of the high degree of variation inherent in this manual process, the traditional Kaizen approach proved ineffective in reducing the number of misfiled reports. In order to attack the sources of variation and improve process performance, the team looked to the Six Sigma toolkit. While a Lean approach focuses on rapid improvement and removing waste to improve flow, Six Sigma is a data driven methodology that is better suited for long term projects focused on improving process variation. In the case of misfiled reports, a blend of Lean and Six Sigma tools were used to achieve the overall improvement.

An analysis of historical data was conducted to determine any trends or areas that required immediate focus. Errors were reviewed as to the type of report and location where defect occurred. A Pareto (Fishbone) analysis of misfiled reports revealed the primary offenders and Six Sigma process capability tools were used to statistically prove that no single nursing floor was significantly different from the other floors in terms of filing process capability. Based on these results, the team concluded that the process issues related to misfiled reports were facility wide and not limited to a smaller subset of stations.



The use of Six Sigma tools identified the key reports contributing to misfiles and also proved that misfiles were a systemic issue rather than one confined to a specific work area. Given this information, the team used a Fishbone analysis to better understand the critical factors contributing to misfiled reports.

The Lean concept of Poke Yoke (Mistake Proofing) was also applied by the team to brainstorm process improvements and new systems to reduce the number of misfiles. With the improvement plan in place, immediate results were visible. Baseline audits showed that 25% of charts contained at least one misfiled document. Immediately following the application of Lean and Six Sigma techniques audits showed that this measurement had improved to 12% and currently the department is reporting a 9% error rate.



The performance improvements made in this department are only one example of the complementary uses of the Lean and Six Sigma toolkits. While Lean methodology is an excellent front line process improvement tool, more complex projects may require the use of Six Sigma techniques to take a "deep dive" into the contributing factors and improve capability. An approach used by many practitioners is to use Lean tools to remove the waste from the process and then follow with Six Sigma tools to attack sources of variation and further improve the process. While both Six Sigma and Lean are effective "stand alone" process improvement toolkits, properly combining elements of each methodology can yield even greater returns.

To discuss how HPP can assist with your LEAN HEALTHCARE journey or Six Sigma Implementation: Call 615-265-2002
or e-mail: chagood@hpp.bz
www.hpp.bz