Instrument Processing Service Management

SynergyTrak Case Study
Sterile processing departments work hard to get the right instrument to the right place at the right time. With the Operating Room (OR) managing constantly changing patient requirements and pressures on key surgical instrument inventory, the Sterile Processing Department (SPD) is often under increasing pressure to reduce instrument turnaround times and respond to expedite requests. Redbridge Havering Barking NHS Hospital group UK, have used SynergyTrak service management features to successfully reduce average instrument processing turnaround time. This improved inventory utilization allowed the Sterile Processing Department to meet the service level targets agreed with the Operating Room.

Problem
Without real-time prioritization of trays, Operating Room nurses may realize that required instrument trays are not available when needed. Change in surgical instrument demand is inevitable with the complex pressures that exist in patient surgery operations. With a focus on just expediting the most urgent trays, Sterile Processing Department resources are not being used effectively and other trays, that still need to be processed, are left until they become urgent as well.

Impact of Poor Demand Management
As a result of reduced surgical trays availability, surgical procedures may be cancelled or multiple other trays may be used to provide the right instrumentation. When other trays are used or consolidated to form the correct instrumentation for a procedure, this just increases the workload of the Sterile Processing Department, compounding the problem further. More management time is spent focusing on the expedited trays which contribute to backlog expansion, while requiring additional resources and overtime in order to deliver accurate and sterile instruments the next day. As a consequence, the Sterile Processing Department management team cannot focus on delivering operational improvements.

The Reward of Implementing a Service Management System
Being able to automatically prioritize the work coming into the Sterile Processing Department would allow managers to focus their time on higher value work instead of addressing ongoing issues throughout the day. Having just non-expedited and expedited service levels is not enough. Flexible services levels based on the type and availability of inventory in circulation would allow for better and more targeted prioritization of work. Close collaboration with the Operating Room to identify what sets are required at all times free time for everyone while driving cost decrease and quality improvement. The Sterile Processing Department team can plan more effectively and identify inventory issues that are requiring immediate use sterilization or expedite requests.

SynergyTrak Service Management
SynergyTrak has comprehensive Service Level Management controls allowing the Sterile Processing Department to manage multiple tailored service levels for different instrumentation and locations. Whether you want instruments to be back for the next session, within 24 hours after receiving it or for a particular procedure date or time, this system will support it. Combined with the option to configure Service Level Management against any type of instrument set, it provides complete flexibility, while allowing you to manage your loaner trays through your peel packs as you originally intended.

SynergyTrak’s Automatic Tray Prioritization Screens are available at every stage of the instrument processing cycle. This empowers all Sterile Processing Department staff to know what the current priority is. The Production Dashboards provide backlog information in real time, by the hour, while allowing the Sterile Processing Department team to respond to changing demand and aid the planning of shift patterns when needed.

SynergyTrak has a proven track record in helping get instruments to the right place at the right time.
Introduction
The following case study outlines the impact of using the tools available in SynergyTrak to improve service levels at Redbridge, Havering and Barking Hospital group UK. It will examine the 4 years subsequent to a SynergyTrak implementation and measure improvements to the average time it took to process a tray and the level of late deliveries.

In 2010 the average monthly volume of trays was 19,805 of which 48.5% were delivered late. Based on this data, an average time taken to process a tray, or the turnaround time was 13.5h. See figure 2. This level of service was not acceptable. With cooperation of the Operating Room, a number of changes were implemented and the impact started to be measured by SynergyTrak.

![Graph showing late delivery percentage, turnaround time, and monthly volume in 2010]

Figure 1 - Redbridge Havering Barking NHS Hospital group UK Introduction
Instrument Processing Service Management Case Study

Overview
The Sterile Processing Department began using SynergyTrak in November 2010. Over the first 6 months, during periods of high volumes of procedures, additional trays were processed by the Sterile Processing Department. The average turnaround time during these high volume periods increased to a maximum of almost 18 hours. See Figure 3.

There were no means of communicating which trays needed to be prioritized, or to be ready for the subsequent day’s procedures. The result of these actions was poor scheduling of the trays that were processed through the Sterile Processing Department. In order to address the prioritization issues, the Operating Room began issuing a list of trays to expedite accurate instrumentation demand for the following day. The Sterile Processing Department implemented the Operating Rooms requirements by using the fast track feature in SynergyTrak.

This process alone was not sufficient to resolve the issues. Peak volumes still resulted in an increased average processing time and more importantly increased late instrument tray deliveries.
Instrument Processing Service Management Case Study

Status Report 1
Analyzing the problem in more detail

Further analysis was done in order to gain a better understanding of the underlying issues. This was completed using the available reporting tools within SynergyTrak. (Figure 4)

During times of high demand volume, there was a large list of high priority trays that needed to be completed for the next day. Not all of these were required by Fast Track service of five (5) hours as originally requested by the Operating Room. The result of having this large list of high priority items was that the other standard time trays were not meeting their expected delivery time, which contributed to increased late deliveries. The cause has been identified to be the increased focus on high priority trays.

Figure 4 - Using SynergyTrak We Analyze Service Level Volumes
Status Report 2
Implementing changes

The solution to this problem was to implement an additional service level. This was configured within SynergyTrak and provided the option to have expedited trays to be returned back in 8 hours, not 5 hours. This alleviated some of the pressure on the Sterile Processing Department and allowed them to prioritize more effectively using the Automatic Tray Prioritization Screens found on every station in SynergyTrak. Having SynergyTrak manage the priority of work allowed for both expedited and standard service trays to be prioritized, alongside each other more accurately, giving a reduction in late deliveries.

After the introduction of the prioritization within SynergyTrak and a focus on providing productivity reports to employees, turnaround times and late deliveries began to decrease.

![Graph showing turnaround times and volume changes over time](image-url)

At times of peak volumes, turnaround times are not as badly affected.

Figure 5 - Implemented Multiple SynergyTrak Service Levels
Conclusion

SynergyTrak provides the ability to configure service levels that suit the needs of the hospital. Combined with automated scheduling of priorities within SynergyTrak, this has had significant impact to late instrument tray deliveries and overall turnaround times. Year after year since implementing the SynergyTrak, late deliveries have been reduced from 48.5% in 2010, to 18.5% in 2011, 7.8% in 2012, and 5.8% in 2013 (Figure 6). This represents an 88% reduction in late deliveries over the four (4) year period. This was achieved by having a better understanding of what the Operating Room’s needed, the ability to schedule the trays in an automated intelligent manner, and a faster throughput through the unit.

Figure 6 - Results