

The Challenge

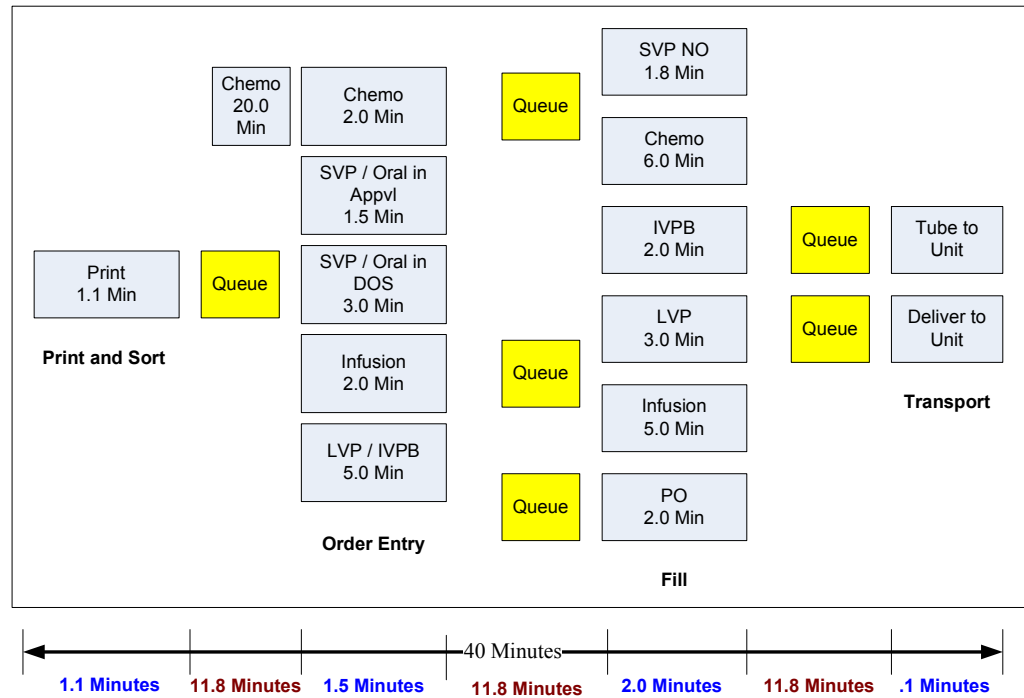
This Rapid Process Improvement (RPI) workshop was focused on the reduction and stabilization of new medication order turnaround time. Like most large hospital systems, the majority of the flow time accumulates in wait/queue, setup and transportation time. During the Assessment and Planning Phase prior to the workshop, it was determined that the value-added time was roughly only 10% of the entire new order process. The challenges were augmented due to telephone interruptions, waiting for physician clarifications, search time for drugs, unnecessary handoffs, reentering of labels due to errors/corrections, and an assortment of other impediments.

Targets

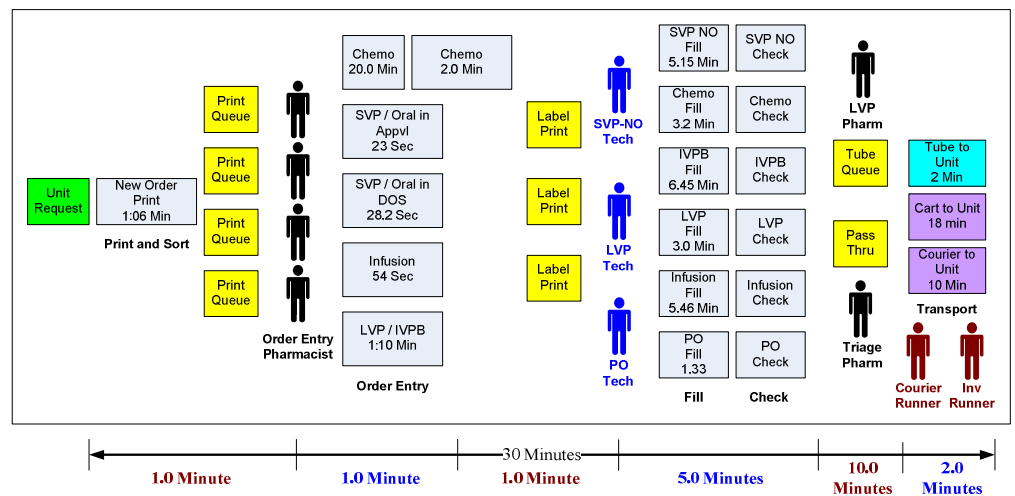
An eleven member Team was charged with the following objectives:

- Create a process that satisfies the demand for new orders with consistent turnaround times of 30 minutes for tubed orders and 60 minutes for runner delivered orders achieved 95% of the time
- Streamline the process and implement improvements that create the ability for pharmacists to participate in morning rounds without additional labor costs
- Develop standard work for all processes in support of new order fulfillment
- Provide the requested medications to the units while minimizing inventory and costs

Before:



After:



Areas of Focus

The Lean Consultant led the Team through the RPI process with the following focal points:

- Single Piece Continuous Flow of Orders-
Minimization of all batching activities
- Pull Process from Order Entry to Delivery- Level loading of work/balanced activities and minimal work in process inventory
- Throughput- Shortest cycle time from physician request to tubing or delivery, minimization of multiple handling and sorting, and reduced checking cycle times
- Standard Work- Standardized and documented work procedures for order entry, fill and check, tubing, delivery, and clear roles and responsibilities
- Visual Controls- Pacing of orders through the processes with visual order status

The scope included the process from the completion of physician order entry to the delivery of medications to the units. These included tubing medications, sending and patch doses.

Workshop Actions

The Team made many changes to the process then completed test runs to assess the effectiveness. Here were the actions taken, in part:

- Clarified roles and responsibilities of Triage Pharmacist, Triage Tech, Order Entry Pharmacist, Runner and other key staff
- Changed process to scan orders immediately before tubing
- Created a Kanban system for inventory management
- Send med before starting next fill to minimize WIP inventory
- Labeled shelves and bins
- Established a hand carry two runner system
- Standardized delivery route for runners
- Posted instructions for using Meditrax

Outcomes

The Team performed brilliantly in achieving the RPI objectives. The outcomes were astounding:

- Medication deliveries to the units are better and have had a significant impact on care
- A pharmacist is now available to participate on rounds
- Better communication among staff
- Better understanding of capacity constraints
- Improved accuracy through Meditrax operations so that service can be provided with reliability and confidence
- Addressed some of the unnecessary interruptions so that the staff is able to focus on their primary job functions

Results

Metric	Baseline	Target	Result
Turn Around Time – Tubed Orders	52 Min Ave	<30 Min / 95%	<30 Min / 95%
Turn Around Time – Runner Delivered Orders	2:06 Min Ave	<60 Min / 95%	<60 Min / 95%
Cycle Time Reduction – Order Entry	20 Min Ave		10 Min
Cycle Time Reduction – New Order Fill / Check	32 Min Ave		18 Min
Cycle Time Reduction – New Order Tubing	2+ Min Ave		2 Min
Cycle Time Reduction – New Order Delivery	1:34 Min Ave		32 Min

As a result of the workshop successes, there is the possibility for consistent standard staffing for the system specifically due to a reduction in interruptions, efficient order entry and minimal queues and cycle times. What a worthy goal!