The recent construction and completion of the Susquehanna Tower at the Williamsport Regional Medical Center (WRMC) compounded with the removal of the inventory warehouse at WRMC has added significant demands and costs to the Susquehanna Health supply chain. The supplies transported to Labor and Delivery, The Joint Center and Progressive Care, the Orthopedic and Spine, and the Intensive Care Unit departments have been chosen for improvement evaluation.

These high priority supply areas must meet strict “Par” levels of stocked supplies on a daily and sometimes even hourly basis. The par levels of the focus departments are currently inadequate, and item shortages are still occurring, costing the system inventory control technician’s (ICT) time and potentially endangering someone’s life. On top of this, some items are ordered multiple times a day, adding unnecessary time and space to deliveries and the ICT work schedule. One way to relieve the shortages and over ordering is through the use of an Economic Order Quantity (EOQ). EOQ is a strategy to order a larger number of items at a time to reduce the number of times they ordered and to hold a greater stock of that item. Utilizing an item usage report for the past year, any item ordered more than once a week was considered a high priority item. See Table 2 a list high priority items by department. It is recommended that these items have their respective EOQ values used when ordering to reduce the frequency of shortages, reduce delivery sizes, and increase ICT productivity. This process should begin in the ICU, since it currently has the highest amount of high priority items.

A list of never issued items was also generated from the item usage data. These items should be evaluated by material management and Nursing staff to determine what items are necessary and which items can be removed from departments are at least have their inventories reduced. It is recommended that this analysis begin with the PCC, since it currently has about four times the amount of never issued items as the next highest department. The current inventory control system for Susquehanna Health is the software Lawson, which has been utilized by the material managers and inventory technicians successfully for some time now. It is used to keep track of items in the system and place orders for materials needed within the nursing supply units. The system in place at our first site visit required manual entry of item numbers by both the ICTs at WRMC and Warehouse Supervisor at DPH. Over the course of this project the position of Warehouse Manager at DPH was simplified and an automatic item ticket is printed instead, removing the potential error generating step of manually reentering the item number.

In turn, it would be equally advantageous to the system if the entries made by the ICT’s on the handhelds could be done without the need of manually entering numbers. There is more room for improvement regarding the handhelds, including the rare connection of the current handhelds to the Hospital’s wireless, the handheld interface (stylus touch screen and small buttons), and the input of item numbers. The handheld problems can all be met through the implementation of iPADs, a barcode system, and a simple reorganization of Lawson. With an easy to use Lawson app, as well as blue tooth scanner and other barcode scanning capabilities, the ICTs would no longer need to manually enter information. Also, the wireless connectivity problem is solved through the use of the iPAD’s wireless connectivity. Finally, a reorganization of the items in Lawson to follow an intuitive order, left to right, up to down along the shelves of items, the time needed to order items is again reduced.