



## Creating a Lean HME Warehouse Operation

By Chris Calderone

Warehouse and distribution areas are busy hubs of activity in a typical HME operation. People and products seem to be in a perpetual state of motion as orders and items are constantly moving in and out of the work area. In an area where high activity is the norm, opportunities for cost savings and efficiency gains are not too difficult to find.

Despite this high level of activity, the average order tends to move through the warehouse slowly. Throughput can be cumbersome as orders tend to stack up in batches or queues as they await the next processing step. Excessive queuing of orders lengthens processing and cycle times which can contribute to customer dissatisfaction. An uneven workflow can also contribute to warehouse clutter as work-in-progress takes up valuable floor space which can create a confusing and cluttered work area.

There are many problems that can contribute to delays in order processing times. Problems with picking, blocked aisles, equipment availability, packaging, inefficient warehouse layout, and cumbersome pick paths can all create barriers to efficient warehouse and distribution operations.

Implementing lean concepts can help reduce some of these barriers by helping to create a smoother workflow throughout the warehouse. The idea behind a lean warehouse operation is to devise a system that allows for faster, more efficient, and more accurate order fulfillment.

A recent study involving a large HME supplier revealed that their overall order processing cycle time was grossly inefficient. Orders were being worked on less than 40 percent of the time within the total cycle time. Nearly nine percent of the total cycle time was spent on wasteful activities such as removing items from blocked aisles, waiting for a lift truck, searching for products, dealing with backorders, or staff having to deal with interruptions not directly related to picking and shipping. Many orders sat waiting or idle nearly 50 percent of the total cycle time.

Lean applications can help improve cycle time utilization, reduce costs, increase productivity, and increase customer satisfaction. To get to lean, begin with conducting a time study and analysis of the current order fulfillment process. Identify non-value added steps and note the amount of time spent on each of them. Then, assess overall workflow in an attempt to reveal inefficient product pick paths, wasted motion, excessive delays, excessive footsteps, aisle and work area congestion, and equipment availability.

Once you have gained a better understanding of the warehouse order cycle time and the wasted steps have been identified, begin to gradually implement lean concepts.

### Lean Tips for Creating a Smoother, More Efficient Warehouse Flow:

- Create an easy-to-read, visible, consistent, standardized product shelf labeling scheme
- Create a product locator map that indicates aisle number, shelf number, and bin number for every product – make it easier for nearly any employee to quickly locate a product
- Create and display a map of the warehouse that identifies shelves and product groups
- Organize products based on product groups (trach supplies with trach equipment, CPAP supplies with CPAP equipment, etc.)
- Use color-coded bins for specific product groups – e.g., green for oxygen, yellow for diabetic, blue for CPAP, etc.
- Ensure all shelves have locators that are easy to identify (aisle, row, bin number, etc.) consider color-coding labels based on specific product groups
- Create a workflow diagram – as part of the visualization system - that explains how an order flows through the order fulfillment process
- High volume items such as diabetic supplies should be stored near ship-out area
- Error proof the pick process by using a bar coded verification system to help ensure pick accuracy – don't rely on a mass check prior to final ship out
- Use a standard checklist at the shipping station that clearly identifies each step that needs to be carried out in order to process the package for final ship out
- Have a final quality checkpoint established that verifies number of boxes, data field completeness, ship instructions followed, etc. just prior to staging the package for shipper pick-up
- Optimize pick paths –use direct pathways to shipping prep area to minimize footsteps and optimize pick flow as much as possible (large/heavy items towards front of warehouse – use cut-through shortcuts mid way down long aisles)
- Use daily cycle counts to help ensure accuracy of perpetual inventory system and reconcile system count with physical count
- Have a standardized checklist and procedure in place for the timely processing of new products into the warehouse – most high-performing warehouse operations all seem to have highly developed receiving operations

- Implement a daily or even hourly “put-away” process that helps prevent cluttered and blocked aisles from forming
- Implement a “picked-by” identification slip to be placed in each customer’s order – this can help to reduce pick errors by encouraging pickers take more ownership of their work
- Implement performance standards and metrics – number of line items picked per hour, individual pick accuracy expectations, etc.
- Focus on cross-training employees – this can help smooth workflow as a process or a process step is not always tied to a single person – cross training can help create more level workloads which means less time is spent on orders awaiting the next process step

One of the principles behind a lean warehouse operation is increased visualization and organization. Every tool, machine, and product should be in its place, properly labeled and easily identified. When labels and signage are effectively utilized and routine housekeeping is emphasized, it will become much easier to detect abnormal from normal and less time will be wasted searching for items.

Creating a lean warehouse operation is more than just optimizing workflow. Getting to a true lean state begins with a careful analysis of the current order fulfillment process. Understanding cycle time and identifying non-value added activities are important requirements in order to identify lean improvement opportunities.

Implementing lean tools and concepts into warehouse operations has produced impressive results in many different industries. HME providers can enjoy the same benefits by gradually transforming existing operations through the application of lean tools and concepts.

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