

To: Healthcare Supply Chain Network

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RE: Supply Chain Department of the Year – HMMS Inventory and Logistics Team

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I am proud to nominate our HMMS Inventory Management and Logistics team for the honour of Supply Chain Department of the Year. I am privileged to work with an amazing group of individuals and excited to share an example of a project that demonstrated the key elements of an exceptional supply chain department.

Before I begin, I would like to provide a bit of background about the HMMS Inventory Management and Logistics team. We have 3 distinct areas of responsibility within the team: Warehousing and Distribution, Hospital Site Logistics and Inventory Management; each area is led by a dynamic and dedicated Coordinator. We have 110 team members in total in 8 unique union and non-union classifications. Our staff are located at a main warehouse as well as 4 hospital sites with 24/7 coverage.

Our team tracks a number of key performance indicators. The following chart will help illustrate the size and scope of the services we provide, and just a few of the indicators that we measure to ensure we are operating as efficiently and productively as possible:

Average Monthly # of Warehouse Pick Lines	120,000
Average Monthly Inventory Lines received	2,500
Average Monthly Non-stock Lines received	11,000
Average Productivity at CDC - (Lines picked per hour)	40
Par Cart Order Efficiency (% orders >half of par)	87%
% of CDC orders that are non-par	5%
Inventory Value	\$4,400,000
No. Active Inventory Items	3400
No. Par Replenishment Carts managed by team	640

Now that you have a sense of who we are, I am pleased to demonstrate why I believe our team deserves the title of Supply Chain Department of the Year.

### **Support Service Worker Enhancement Optimization Project (SSWEOP)**

Last year, our team successfully completed a significant project which ultimately improved patient care and maximized precious healthcare resources. In 2014 London Health Sciences Centre (LHSC) embarked on an ambitious plan to improve patient care which was known as the Support Service Worker Enhancement Optimization Project (SSWEOP). The objective was to replace multi-purpose Support Service Workers (SSW's) with certified Personal Support Workers (PSW's). SSW's were in place

in 52 clinical areas across LHSC and were responsible for a variety of tasks including food tray delivery, linen distribution, minor cleaning, and relocating products from the central HMMS supply cart to multiple locations closer to patient rooms. With the introduction of more clinically focused PSW's, many of these non-clinical tasks needed to be eliminated or redistributed to other departments. Our Inventory and Logistics team stepped up to not only ensure that supply chain functions were taken care of, but at the same time, resources were optimized and overall service levels improved.

An aggressive time line was established for project completion. There were approximately 200 SSW's, of which 120 would receive training and certification as PSW's. Newly trained PSW's were phased-in over 4 cohort periods spanning 16 months. With each cohort, HMMS needed to be ready to meet customers' needs. There was an expectation that the reduction of 80 full time equivalents would be offset through process efficiencies.

In order to achieve success, our team needed to demonstrate customer service, innovation, comprehensive strategic planning, commitment to patient care and teamwork.

### **Customer Service:**

We began our work by gaining a complete understanding of current state and customer expectations. Tours of the areas in scope were completed and process improvement opportunities were identified. Throughout the process, we worked with clinical staff to ensure that the end result met their needs. At first glance, there were many similarities between all 52 clinical areas; however, it was critically important that we recognized and respected their differences. We standardized processes where we could but always kept an open mind to the need for customization when required.

We engaged clinical leaders as well as front line staff to ensure we had all the necessary information and feedback to develop our project plan. Team members listened carefully and encouraged our customers to share questions, ideas or concerns.

Communication was a key success factor and helped to build strong relationships with our project partners. Our team provided regular updates with our customers and remained in close contact with all stakeholders throughout the project. Decisions were always made in a collaborative manner.

### **Innovation:**

The Inventory and Logistics team recognized the challenges facing us early in the project. We needed to maintain or improve the supply chain while reducing the number of FTE required. Innovation and creativity were necessary; we had to develop a new way of doing business.

During the information gathering phase, we learned that SSW's routinely removed items from the centralized supply carts that HMMS staff were responsible for replenishing. In one example, we calculated that approximately 13 hours were spent by SSW's daily in moving product from our supply cart to multiple mobile carts which in turn, were taken throughout the ward to replenish 26 supply cupboards just outside patient rooms. In addition, the HMMS cart was replenished from a stock room located in the basement of the hospital. This stock room was replenished from the HMMS main warehouse. A single product had 5 different "homes" before it reached the patient:

1. Main warehouse

2. Hospital stock room
3. Central supply cart
4. Mobile SSW cart
5. Supply cupboard

This was not unique to a single clinical area. We learned that a primary role of the SSW was to move supplies closer to the patient. HMMS generally replenished a supply cart in a central clean supply room; however, this was not a convenient location for nursing.

Using lean methodology, HMMS recommended a plan that would eliminate the waste associated with multiple stock movements that existed in the current state. We put forward a strategy that would see supplies move directly from the main warehouse to new storage carts that would support the needs of front line nursing. We would eliminate hospital stock rooms for all but a few essential emergency items and we would put stock where nurses needed it the first time. The end result was the creation of “Wing” carts or “End of Bay” carts that are strategically placed to optimize the replenishment process while provide clinical staff with a convenient location to house supplies on the unit. In comparison to previous state of the example given earlier in this section, the revamped supply chain means that stock on the units is now replenished directly from the main warehouse. We replaced 3 mobile carts and 26 supply cabinets with 3 wing carts. This translated to a daily labour savings of approximately 9 hours just on one unit. Similar results were realized throughout LHSC.

#### Supply Service Representative:

As a result of the SSEWOP project, HMMS has created a new position to support the supply chain needs of departments. We learned that some SSW’s looked after non-stock requisitioning and order management for specialty items. This function falls out of scope for our unionized par replenishment staff, but is an important responsibility that needed to be completed by an appropriate resource. HMMS created a Supply Service Representative (SSR) classification to fill the gap by managing supplies that do not exist on HMMS par replenishment carts. Supply Service Representatives report to our Coordinator of Hospital Site Logistics and are generally responsible for multiple departments.

This is currently one of our fastest growing services provided to our customers at LHSC.

### **Comprehensive Strategic Planning**

The work that needed to be completed touched all 3 areas within our team; Supply cart optimization, Warehouse optimization, and Inventory right-sizing.

First, we needed to optimize the supply carts that already existed within the 52 departments. We also needed to create new carts located closer to patients that would support clinical needs and replace the current SSW supply cupboards. Using project management methodology, we developed work package plans and a schedule that aligned with the timelines for the overall SSWEOP project.

#### Cart Optimization:

The Cart Optimization team falls under the responsibility of Arlyn Martin, Coordinator Hospital Site Logistics. Two Cart Optimization Analysts followed as series of steps for each department and included:

1. Information gathering:

- a. Includes site visit to clinical areas, inspection of storage space and existing equipment (carts, bins)
  - b. Generation of supply usage reports (par, non-par, stock, non-stock)
  - c. Seek input from SSW's and HMMS par replenishment staff
  - d. Identify supply chain related tasks performed by SSW's
2. Data analysis and development of recommendations:
    - a. What items to stock on carts, quotas, etc.
    - b. Where carts should be located
    - c. Frequency of replenishment
    - d. Physical modifications required in storage areas (in some cases, we recommended removing sinks, closets and under-utilized equipment)
  3. Departmental review of recommendations and approval:
    - a. This is a line-by-line review. We recognize that reports are "just numbers" and we need to validate our assumptions with our customers.
  4. "5S" supply areas to maximize space:
    - a. Sort, Set in Order, Shine, Standardize and Sustain
    - b. This often meant disposing of or finding homes for things like department Christmas trees and obsolete equipment
  5. Physical build of new or revamped carts:
    - a. Analysts take a standardized approach to building carts to ensure, where possible, consistency across all departments (like items together, heavy products on bottom shelf, most common items are easily accessible.
  6. Departmental review of carts and approval:
    - a. Department leaders and front line staff inspect the cart and approve before implemented
  7. Implement new carts:
    - a. Analysts schedule the most appropriate time to remove old cart(s) and implement new
    - b. Surplus supplies are returned to the main warehouse and the department receives credit where feasible.
  8. Follow up:
    - a. Cart Analysts stay in close contact with the department to "tweak" the carts. A process is in place for proactive cart reviews and for ongoing ad hoc changes

#### Warehouse Optimization:

In order to eliminate hospital stock rooms, the job of picking supply carts needed to move to the main warehouse. This had not occurred due to limited warehouse capacity. It had been less labour intensive for the warehouse to pick a single daily bulk order to replenish the hospital stock room, rather than picking multiple orders for each clinical department. The SSWEOP project presented our team with a challenge of increasing the capacity of our warehouse to support a centralized model.

As with Cart Optimization, we developed work package plans for the Warehouse Optimization team and a schedule that aligned with the timelines for the overall SSWEOP project. Our Coordinator Warehousing and Distribution, Natalie Buragina, led this work stream with the following key elements:

1. Optimizing technology:
  - a. Our existing warehouse management system (WMS) was at end-of-life. Implementation of a new WMS was scheduled for midway through the project
2. Optimizing warehouse storage efficiencies:

- a. Replace 4 aging carousel automated picking units with flow racking
  - b. Classify all inventory items by velocity
  - c. Minimize walking by moving high velocity items to central warehouse locations
3. Measuring warehouse productivity:
- a. Productivity is measured as “lines picked per hour” (LPH). Prior to embarking on SSWEOP, our average approximately 22 LPH.
  - b. In order to create the required capacity, we calculated that we would need to achieve 35 LPH
  - c. By project completion, we reached our target 35 LPH. We have continued to improved and now average approximately 40 LPH

#### Inventory Management:

Our inventory team, currently led by Patrick O’Connor, was instrumental in supporting the Cart Optimization and Warehousing Optimization initiatives.

1. Items added to inventory and unit-of-issue adjusted as identified by Cart Analysts
  - a. Pending alignment with Inventory Policy
2. Replenishment process, unit-of-order quantities and vendor scheduling realigned to better meet the needs of the Warehouse team.
  - a. Full skid lots ordered where feasible
3. Slow moving items eliminated from inventory to free up warehouse space

#### **Commitment to Patient Care:**

Throughout the project, from planning to implementation, our team was committed to providing excellent customer service to those who directly care for our patients. We understand our role is to make sure that clinical staff have the right supplies they need, where they need them. HMMS is a support service and ultimate customer is the patient.

It was our responsibility to minimize disruption on the clinical units during fact gathering and implementation of new storage solutions. We also had to ensure that the needs of all stakeholders were considered, particularly as we looked at space requirements for new supply carts. As in most hospitals, space is a valuable commodity with competing interests.

I am very pleased to say that our team worked extremely hard to meet all project milestones. It was critical that new supply carts and processes were in place in time to for each cohort of new PSW’s to take on their new roles and replace the SSW’s on the unit. Our team put in extra hours when necessary to ensure that there were no disruptions in service and therefore, no impact to patient care.

#### **Teamwork:**

This project required a tremendous amount of teamwork. The HMMS Inventory and Logistics team worked in collaboration with multiple stakeholders including leaders and staff from 52 clinical departments across University and Victoria hospital sites. We also worked closely with other support services departments including Facilities, Information Management, Quality and Performance Management, Project Management, Linens, Dietary, Fire and Security, Union Leaders and Human Resources to accomplish our collective goals. There were also many internal HMMS relationships that

needed to be maintained. Our project team engaged our front line staff at the hospital sites as well as our main warehouse.

There were many interconnecting parts within this project. Teamwork was yet another critical success factor that our team demonstrated daily.

**Summary:**

The SSWEOP project was a success for both LHSC and HMMS. This example is just one of many I could use to demonstrate why I believe that the HMMS Inventory and Logistics represents the qualities that you would expect from a Supply Chain Department of the Year. Our relentless in our pursuit of becoming the best supply chain professionals possible by providing exception customer service.

I am grateful for the opportunity to put our team forward for consideration. I would be happy to provide additional information and answer any questions you may have.

Best regards,

Astrid