CLINICAL SAFETY & EFFECTIVENESS
COHORT # 21 TEAM 7

PRODUCT OPTIMIZATION
TO MINIMIZE RISK AND REDUCE COST

Educating for Quality Improvement & Patient Safety
TEAM 7 MEMBERS

Participants
Nancy Mendicino – MSN, RN, CIC (Infection Preventionist)
Arnal Prasad – BS-HCM, ACHE (Practice Manager – Orthopedics)
Walter Stone – MBA, SPSCM (Senior Project Coordinator/ General Store)
Gina Herevia – MBA-HCM (Team Lead – Medicine Specialty)
Ad Hoc – Gorden Whiting – BA, Organizational Development (Data Analyst – Quality)
Facilitator – Edna Cruz – MS, RN, CPHQ, CPPS
Sponsors – Casey Peterson – MBA (Senior Director – Practice Operations)
            Kenyatta Lee, MD, MHS-CL (Chief Quality Officer)
BACKGROUND

Why is this project important?

• **Literature highlights:**
  • Lean in health care requires people to identify waste in their work. Recognizing that much about their daily tasks is wasteful and does not add value can be difficult for health care professionals. If the supplies were always readily available, the time staff spend hunting for supplies could be devoted to patient care (Womack, 2005).
  • Priority is to develop a model of supply chain management focusing on minimization of waste, assisting in decision making, and contributing to the quality of services and as a consequence the reduction of costs involved in healthcare supply chain (Machado, 2014).
  • Integrating IHI-QI and Lean conceptual foundations has the potential to strengthen both approaches to achieve significant improvements in health care (Scoville, 2014).

• **Our situation:**
  • Supply storage limitations results in storage of supplies in multiple area – more difficult to locate needed supplies
  • Overloaded supply shelves makes it difficult to rotate supplies – expired and damaged supplies identified in many clinics


$1288 wastage found during this project.

With about 30 clinics in our system, we have a potential loss of $12,870 in a 4 week period and $154,560 in a year.
THE PROBLEM

Aim Statement
To increase clinical effectiveness and patient safety in Orthopedics/Podiatry and Medicine Specialty clinics through the reduction of products, elimination of expired supplies, and 10% reduction of the subtotal cost per clinic by December 31, 2017.
# Action Plan

**Aim Statement:** To increase clinical effectiveness and patient safety in Orthopedics/Podiatry and Medicine Specialty clinics through the reduction of products, elimination of expired supplies, and 10% reduction of the subtotal cost per clinic by December 31, 2017.

<table>
<thead>
<tr>
<th>Action Strength</th>
<th>Action Driver (Taken from Flow, Fishbone or Pareto)</th>
<th>Action</th>
<th>Who?</th>
<th>Why? (Choose one)</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>Eliminate # of Flow Steps Back Orders Over-stocked Supply Room</td>
<td>Transfer High Volume Products to General Store</td>
<td>Arnal Prasad Gina Herevia Walter Stone</td>
<td>Redesign the Ordering Process</td>
<td>11/06/17</td>
</tr>
<tr>
<td>Strong</td>
<td>Over-stocked Supply Room Vendor Selection Product Approval Process</td>
<td>Develop Monitoring System for Inventory Management</td>
<td>Arnal Prasad Gina Herevia Walter Stone</td>
<td>Standardize Simplify Reduce Wasted Time</td>
<td>11/06/17</td>
</tr>
</tbody>
</table>
Orthopedics / Podiatry
Orthopedic Clinic
Mean (X) ON HAND COST
Top 5 Products

As PAR levels were established & Expired Products removed, the Average On Hand Cost on the Top 5 Products decreased from $6,771.23 to $1,740.63.

Orthopedic Clinic
Mean (X) Total Cost

$236,012
$77,969
$80,074
$117,150
$35,215
$46,720
Medical Specialties
Mean (X) Chart "ON HAND COST"
Top 10 Products

As PAR levels were established & expired products removed, the "Average On Hand Cost" on the Top 10 Products decreased from $8,802.17 to $6,418.32.

Medical Specialties Clinic
Mean (X) Total Cost

$5,289
$2,242
$736
$770

$1,230
$2,829
# Data Driven PAR Levels

## Orthopedics/Podiatry

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product #</th>
<th>PAR LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandages</td>
<td>16-10334</td>
<td>50\25</td>
</tr>
<tr>
<td>Gloves</td>
<td>14-69746</td>
<td>12\6</td>
</tr>
<tr>
<td>Small</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>XLarge</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Lidocaine</td>
<td>480527</td>
<td>25\15</td>
</tr>
<tr>
<td>skin prep</td>
<td>552039</td>
<td>5\2</td>
</tr>
<tr>
<td>theraband</td>
<td>2036</td>
<td>20\10</td>
</tr>
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</table>

## Medical Specialties

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product #</th>
<th>PAR LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depo-Medrol 80mg/ml</td>
<td>82837</td>
<td>50\25</td>
</tr>
<tr>
<td>DLCO Barriette</td>
<td>3050-1</td>
<td>50\25</td>
</tr>
<tr>
<td>Energix B 20MCG/ml</td>
<td>629870</td>
<td>10\5</td>
</tr>
<tr>
<td>FRC Barriette</td>
<td>3150-1</td>
<td>40\10</td>
</tr>
<tr>
<td>Kenalog 40mg/ml</td>
<td>462514</td>
<td>25\10</td>
</tr>
<tr>
<td>Menactra vaccine</td>
<td>581508</td>
<td>6\3</td>
</tr>
<tr>
<td>Pneumovax 23</td>
<td>330568</td>
<td>6\3</td>
</tr>
<tr>
<td>Prevnar</td>
<td>795986</td>
<td>10\5</td>
</tr>
<tr>
<td>Spirette</td>
<td>2050-1</td>
<td>100\50</td>
</tr>
<tr>
<td>Xopenex vilas</td>
<td>1000423</td>
<td>24\12</td>
</tr>
</tbody>
</table>
RETURN ON INVESTMENT

Hard savings seen during this project

◆ As PAR levels were established and expired products removed, the average on hand costs on the top 5 products in Orthopedics and Podiatry decreased from $6,771.23 to $1,740.63.

◆ As PAR levels were established and expired products removed, the average on hand costs on the top 10 products in Medicine Specialty Clinic decreased from $8,802.17 to $6,418.32.

◆ Total saving for Orthopedics and Medicine Specialty Clinics = $7414.45 during this project

◆ Savings on salaries due to shorter time spent ordering and redeployment of staff hours to patient care
  ◆ Orthopedics pre-salary of $5200 and post-salary of $2000 with a potential savings of $3200 per year
  ◆ Medicine Specialty pre-salary of $2652 and post-salary of $1326, with a potential savings of $1326 per year
  ◆ Total potential savings on salaries for both the Orthopedics and Medicine Specialty Clinics are $4526 per year

Soft savings seen during this project

◆ More space readily available for other uses
◆ Efficient supply access optimizing product access
◆ Improving supply room organization and reducing clutter to promote supply rotation and increasing efficiency and patient safety
◆ Fewer POs
◆ Faster turn around time ensures patient safety and decreases the number of expired supplies
◆ Clinic data driven inventory
◆ Just in time delivery through the optimization of the General Store
MAINTAIN THE GAIN OF COST REDUCTION

◆ General Store to continue audits of PAR levels to maintain optimal levels
◆ Continue to monitor and report PAR levels and progress to leadership
◆ Educate Practice Managers on how to create and maintain PAR levels for their departments
◆ Work with all departments to ensure that the General Store is able to keep the supplies necessary to maintain clinic operations at its peak
◆ Educate staff organization-wide regarding necessity for date/initials on multi-use vials for patient safety and cost control
NEXT STEPS

◆ Marketing the General Store to all departments at the MARC, Cancer Center, and our other off-site clinics
◆ Develop Training / Orientation materials for new Practice Managers and all supply managers for each department
◆ Secure medication storage space and create a process to keep medications in the General Store
◆ Renegotiating lower prices with our supplier based on volume once all supplies are being ordered by the General Store
◆ Collaboration effort with other UT systems for future cost and inventory control opportunities
LESSONS LEARNED

Why are you ordering 10 cases of paper clips?

That’s The Way We’ve Always Done It

Why don’t you use these?

No thanks! We are too busy
THANK YOU

SHOW ME THE MONEY . . .