Creating Cost-Effective Care Management Structures

The Four Themes:

* Pre-Op Management
* Inpatient Stay- OR Services
* Postop Management
* Outcomes and Analytics
Using an Health Care Navigator

Physician Engagement

Predictive Tools

Patient Optimization

Identify Champions

Care Coordination

Pathways

Multidisciplinary Teams

Daily Tracking

Improve MCC documentation

Discharge Dispos Planning

Post Acute Communication

Post Acute education and outreach

Functional Outcomes

EMR Integration

Coding/Documentation/Claims Review

Episode Payment Review

Cost Reduction

Monthly readmission review

OR Cost Reduction and Efficiencies

Preoperative Coordination

Inpatient Coordination

Postoperative Coordination

Program Analytics

Identify Champions

Care Coordination

Pathways

Multidisciplinary Teams

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OR Cost Reduction and Efficiencies
Arthroplasty Inpatient Detailed Direct Cost
Spine Inpatient Detailed Direct Cost
Sample Project Timeline
(Joint Recon)

Sept 2015
- Hospital/ JNJ Charter

Oct 2015 – Nov 2015
- OR Data Tracker Baseline data collection

Jan – Feb 2016
- Tray Consolidation implementation

Feb 2016
- 2nd Round of OR Data Tracker to evaluate efficiency improvements

EO Feb – early March 2016
- OR Data Tracker Final Review and Tray Consolidation Analysis
# Project Charter

**PROJECT TEAM CHARTER**

**Name of Project:** Tray Optimization Project  
**Target Department/Area:** Operating Room / Central Sterile

<table>
<thead>
<tr>
<th>Champion</th>
<th>Rob Frey (DS)</th>
<th>Process Owner</th>
<th>Todd Lambert (Norton Staff)</th>
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<tbody>
<tr>
<td>PI Coach</td>
<td>Steve Darby (DSA)</td>
<td>PI Team Leader</td>
<td>Norton Staff</td>
</tr>
<tr>
<td>Target Start Date</td>
<td>9/14/15</td>
<td>Target End Date</td>
<td>10/31/15</td>
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<tr>
<td>Team Members</td>
<td>dePuy Synthes, Rob Frey, Ryan Frey, Steve Darby, Lisa Perdomo, Norton, Todd Lambert, PI representative Project Coordinator</td>
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**Project Description:** Although there are current improvements underway to promote OR efficiencies, DePuy Synthes and Norton Healthcare are planning to work together to further promote those efficiencies through tray and instrument optimization. The Tray consolidation program will measure the efficiency and benefit of standardizing and reducing the number of Joint Reconstruction trays brought into the Operating Room. In doing this we will use the OR Data Tracker as a tool to track efficiencies before and after implementation of the Tray optimization project.

Specific measurements will include:
- Sterile Processing Costs
- Time Stamps: Setup, anesthesia time, OR time and clean down
- Costs of Blue Wrap vs Rigid Sterile Containers

**Project Scope:** Process will begin with the collection of baseline data using the OR Data Tracker. Once baseline is collected Tray Optimization will be initiated and once the new standardized process is stabilized additional data will be collected to using the OR Data Tracker. A analysis of the before and after will be generated to determine overall benefit of the project.

**Assess:**
- On Nov 2015
  - Collect baseline data

**Implement:**
- Dec 2015
  - Standardize data

**Measure:**
- Jan 2016
  - Implement progress
  - Feb-Mar 2016
  - Report overall results

**Goal:** The goal of the pilot is to provide:
- A more standardized tray list in the operating room with fewer trays reducing complexity
- Overall improved OR efficiency (pre peri and post time stamps)
- Reduced sterilization costs
- Reduced Blue Wrap Resources

**Metric(s):**
- This will be determined via DATA tracker and current cost information obtained by Norton.

**Financial Indicator(s):**
- Sterilization cost savings
- OR turnover

**Finance quantifying the project's financial return:**
- Blue wrap cost savings
- Potential OR setup and turnaround time reduction
- Reduction in Delays
- Potential for additional revenue if turnover time is reduced

**Project Constraints:**
- What is non-negotiable from an external/ internal perspective?
- DePuy Synthes Solutions
- Norton Healthcare Hospital - Further improvement in OR efficiencies
- Norton Healthcare Staff - Potential increased staff satisfaction due to reduced complexities in the OR
- Patients - Reduced chance for infections for patients and less chance for delays ensuring on time starts and a better patient experience.

**Benefit to Customers:**
- Who are the external/ internal customers? How will they benefit from the project?
- This project is aligned with Norton's objectives.

**Business Results:**
- Why does this project make good business sense?
- To reduce costs in their system and lower procedural costs while positively impacting patient outcomes and experiences.

**Support Required:**
- (What special needs or access to resources will be required?)
- 1. DePuy Synthes Joint Recon Distributor to supply Ascuteq Trays
- 2. DePuy Synthes human resources to obtain baseline and streamline trays
- 3. Norton Healthcare to provide communication to OR teams to gain alignment of pilot
- 4. Norton Healthcare human resources to help obtain baseline and measure outcomes of pilot

<table>
<thead>
<tr>
<th>PI Team Leader</th>
<th>Signature/Date</th>
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Please reference PI Coach Training Materials on Project Definition for directions to complete a Project Charter  
Rev 05-24-2012

DePuy Synthes  
Companies of Johnson & Johnson
A Customized Approach to Solutions Delivery
Provides a periodic evaluation of OR productivity that identifies customized solutions for your operating room needs

- Actual operative times (OR set-up, Patient in/out, anesthesia, surgery, turn-around)
- Graphic comparisons based on surgeons, surgery type and case delays
- Optimized operative times and potential savings
• The OR Tracker is an app that focuses on processes surrounding the TJ or Spine Procedure not individuals within the process

• Data is housed at secure third party site and DePuySynthes cannot use data for commercial use

• Shows Optimized models for comparison and potential time savings
Two Ways to Record DATA

1. DePuy Synthes Sales Consultant Records Data – on ipad while covering cases

2. Hospital Records Data – Consign an iPad to hospital to record the data or provide input sheets for manual data collection

DePuy Synthes Advantage™ Team to support efforts and provide reports at appropriate intervals.
## OR DATA Tracker - Baseline

<table>
<thead>
<tr>
<th>Procedure Type</th>
<th>Trays opened</th>
<th>Setup Time</th>
<th>Setup Time to Patient In</th>
<th>Anesthesia Ready Time</th>
<th>AR to Cut</th>
<th>Cut to Close</th>
<th>Close to Pt Out</th>
<th>Clean Down Time</th>
<th>OR TIME (Pt In to Pt Out)</th>
<th>Turnover</th>
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<tbody>
<tr>
<td>Cemented Primary Hip Average</td>
<td>3</td>
<td>0:22</td>
<td>0:11</td>
<td>0:11</td>
<td>0:18</td>
<td>0:42</td>
<td>0:28</td>
<td>0:14</td>
<td>1:44</td>
<td>0:37</td>
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<tr>
<td>Total hip - Anterior Approach Average</td>
<td>2</td>
<td>0:16</td>
<td>0:11</td>
<td>0:15</td>
<td>0:20</td>
<td>0:55</td>
<td>0:13</td>
<td>0:20</td>
<td>1:48</td>
<td>0:41</td>
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<tr>
<td>Total hip - Bilateral Average</td>
<td>2</td>
<td>0:18</td>
<td>0:02</td>
<td>0:12</td>
<td>0:22</td>
<td>1:20</td>
<td>0:32</td>
<td>0:25</td>
<td>2:31</td>
<td>0:27</td>
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<tr>
<td>Hospital A Average</td>
<td>2</td>
<td>0:18</td>
<td>0:09</td>
<td>0:13</td>
<td>0:20</td>
<td>0:55</td>
<td>0:19</td>
<td>0:19</td>
<td>1:52</td>
<td>0:35</td>
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</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Setup Time</th>
<th>Setup Time to Patient In</th>
<th>Anesthesia Ready Time</th>
<th>AR to Cut</th>
<th>Cut to Close</th>
<th>Close to Pt Out</th>
<th>Clean Down Time</th>
<th>OR TIME (Pt In to Pt Out)</th>
<th>Turnover</th>
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<tbody>
<tr>
<td>Cementless Primary Hip Average</td>
<td>7</td>
<td>0:13</td>
<td>0:12</td>
<td>0:10</td>
<td>0:18</td>
<td>1:11</td>
<td>0:16</td>
<td>0:18</td>
<td>1:56</td>
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<td>Primary Knee - Reusable instruments Average</td>
<td>6</td>
<td>0:20</td>
<td>0:28</td>
<td>0:12</td>
<td>0:16</td>
<td>1:30</td>
<td>0:15</td>
<td>0:11</td>
<td>2:17</td>
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<tr>
<td>Revision Knee Average</td>
<td>11</td>
<td>0:23</td>
<td>0:45</td>
<td>0:10</td>
<td>0:06</td>
<td>1:40</td>
<td>0:18</td>
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<tr>
<td>Total hip - Anterior Approach Average</td>
<td>7</td>
<td>0:25</td>
<td>0:26</td>
<td>0:13</td>
<td>0:20</td>
<td>1:17</td>
<td>0:12</td>
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<tr>
<td>Hospital A Average</td>
<td>8</td>
<td>0:21</td>
<td>0:27</td>
<td>0:12</td>
<td>0:17</td>
<td>1:27</td>
<td>0:15</td>
<td>0:12</td>
<td>2:14</td>
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<tr>
<td>Hospital B Average (less Revision)</td>
<td>7</td>
<td>0:19</td>
<td>0:20</td>
<td>0:12</td>
<td>0:18</td>
<td>1:19</td>
<td>0:14</td>
<td>0:14</td>
<td>2:06</td>
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- **Reduction in trays – Sterilization cost savings & Blue wrap**
- **9 min reduction in setup time**
- **Efficiency Opportunity**

- Reduction in trays are true cost saving in sterilization and blue wraps
- Reduction in setup time is an efficiency improvement from fewer trays and should improve with time
- Data also identified other opportunities in Setup time to patient in and Turnover time
Digital Templating

- Pre-operatively Identify Implant Sizes
- Reduced Trays and Sterilization Costs
Tray & Instrument Optimization

Current Knee Tray Layout

- Total Trays: 7
- Tray Weight: 104.92 lbs

Optimized Tray Layout

- Total Trays: 2.5
- Tray Weight: 46.55 lbs
Whitepaper on Creating Efficiency
Aaron Altenburg, M.D | Idaho Orthopedic and Sports Medicine Clinic

- Digitally Templates each case 3 weeks out
- Uses ONE tray per TJA procedure!
- 1,465 fewer trays/yr. = savings of $380,000
An Orthopedic Surgeon Perspective
(Dr. Aaron Altenburg, Portneuf Medical Center)
Joint Recon Tray Consolidation Example

Project Summary:
• 2 Procedure Types – Total Hip and Knee
• 4 Surgeons - Sterilization cost $75 per tray
• Total Tray annual reduction – 1,700 trays = approximately 34,000 lbs = 17 Tons
• Annual Cost savings - $128,000

HIP:
• Dr. X
• Tracked Procedure – Hip; approximately 50 a year
• Sterilization cost $75 per tray
• Tray Reduction from 7 to 4
• Annual Cost Savings $11,250

HIP:
• Dr. Y
• Tracked Procedure – Hip; approximately 150 a year
• Sterilization cost $75 per tray
• Tray Reduction from 7 to 2
• Annual Cost Savings $56,000

KNEE:
• Tracked Procedure – Knee; approximately 200 a year
• Sterilization cost $75 per tray
• Tray Reduction from 8 to 4
• Annual Cost Saving $60,000
Take Away Points to Consider

- Periop and SPD efficiency problems and solutions will be unique to each institution but commonalities exist.
- EMR may contain some relevant data, but often doesn’t capture granularity needed for accurate decision making.
- As with any process improvement initiative, a committed change management team, often with surgeon leadership is a must.
Key Questions to Ask of your Data and Staff:

- Incidence and impact of holes in blue wrap?
- Frequency of lost or missing instruments?
- Average number of trays per procedure?
  - Sterilization cost per tray?
  - Total environmental impact potential?
  - Overall weight savings potential?
- Impact of tray and instrument volume on room clean down, turnover times, SPD?
- Staff satisfaction? (Scrub techs?)
- Correlation between back table complexity and set up time/surgical time?
- Is there opportunity for industry collaboration?