

What is Lean Sigma Prescription for HealthcareSM?

- Education and support to enable breakthrough improvement from within healthcare
- Adapted from Medtronic's successful methodology
- Proven at Johns Hopkins Medicine
- Modified to meet healthcare needs
 - Healthcare specific training curriculum
 - Actual healthcare project case studies
 - Process improvement aimed at the patient
 - Safety and effectiveness
 - Delays and waste
 - Focus on key processes that support care delivery

This activity has been approved for AMA PRA Category 1 Credit™

How Do Healthcare Organizations Succeed?

- Keys to Success - The Four X's
 - Roadmap
 - More than brainstorming – science and data
 - Project Selection
 - Lean, Six Sigma or Kaizen
 - Linked to business objectives
 - Infrastructure
 - Champion involvement, support
 - Regular phase/project reviews
 - Master Black Belt coaching
 - People
 - Green Belts, Black Belts, Master Black Belts

Where Do Healthcare Organizations Start?

- Different organizations may require different approaches
 - Send a few Green Belts to training
 - Launch a comprehensive program
 - e.g. tie to career success
 - Establish a Master Black Belt or Black Belt core team
 - Top Down or Bottom Up
 - Executives become Green Belts
 - Others

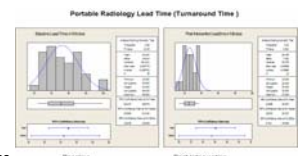
What Are Our Next Steps?

- Lean Sigma Prescription for HealthcareSM
 - First class begins at JHU in January
 - Link to class brochure
 - <http://www.hopkinscme.net/etrakwebapp/CourseSearchResult.aspx>

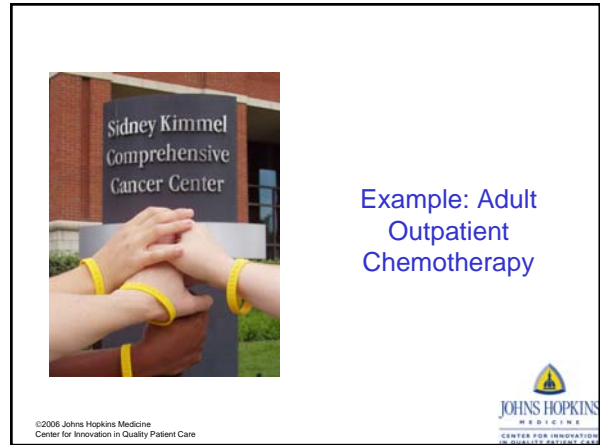
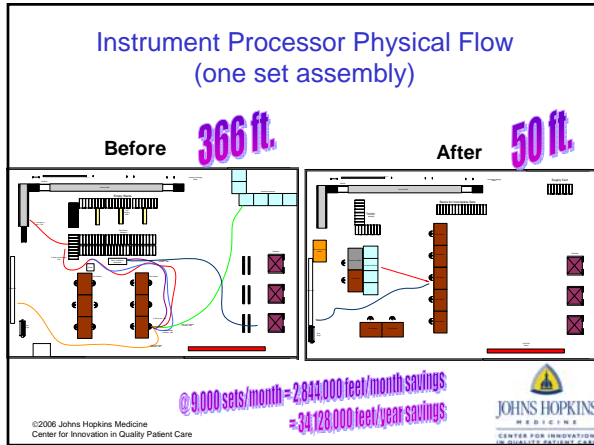
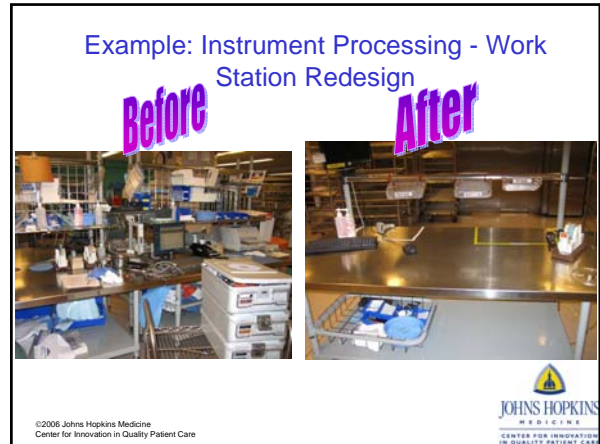
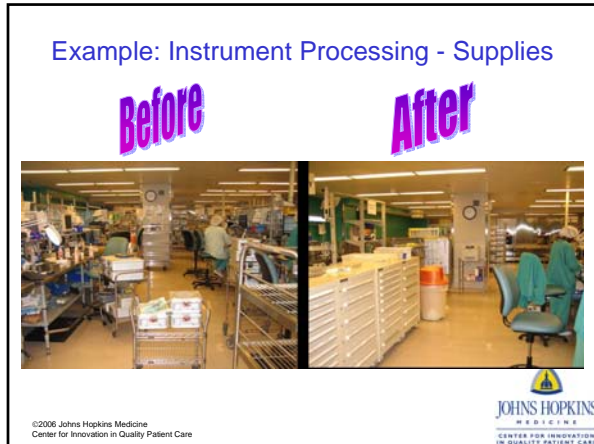
Enter Lean Sigma into the search engine

How is Johns Hopkins applying Lean Sigma?

- **Decreased average turnaround time for portable radiology exams** from 52 minutes to 26 minutes
- **Reduced average length of stay in the Urgent Care Center** from 2.4 hours to 1.8 hours leading to...
 - Improved capacity
 - Reduced need to divert ambulances
 - Improved patient satisfaction
- **Reduced number of wasted red blood cell units** leading to...
 - Improved patient safety/access to needed blood
 - Better stewardship of donated blood
 - Reduced cost



©2006 Johns Hopkins Medicine
Center for Innovation in Quality Patient Care





Outpatient Chemo Pharmacy

Pharmacist – Order Acknowledge Standard Operating Procedure

TOC: ▲ Work Content: □ Verify: ●

* If utilizing the cloning function, please utilize the "Cloning Quick Reference Sheet"

1) Enter into OCIS and pull up Point of Service (POS) screen	
2) Review highlighted patient next in cue	
3) Obtain patient file from rolling cart under pharmacist counter to the left and verify that all necessary documentation is present (e.g. chemo checklist, etc)	

Visual procedures

©2006 Johns Hopkins Medicine
Center for Innovation in Quality Patient Care

JOHNS HOPKINS MEDICINE
CENTER FOR INNOVATION IN QUALITY PATIENT CARE

Process Step	Potential Failure Mode	Risk Priority Number (RPN)	Action Recommended to prevent failure
Enter into Computer	Enter wrong patient-esp when working on multiple patients	1000	Do not allow order entry from admission screen
Transmit Order to Pharmacy	Wrong dose, route, frequency or duration	800	Preprinted standard orders
Transmit Order to Pharmacy	Order is not updated with changes	800	Modification forms not used as it should be not filed completely/verbal orders not assigned on high alert meds
Enter into Computer	Enter wrong dose, route or frequency	640	Training on using cloning functions
Reknowledge Order	Incorrect patient classification (TI, PA, PC)	600	Process to consistently classify patients
Verify Order	Missing drug-drug interactions	600	Need to provide standard information to pts on interactions with products? Visual aid to remind pharmacists and nurses on this
Select Medications & Subsets	Wrong volume	480	Preprinted orders
1st Safety Check	Missing/incorrect dose	480	Reduce distractions
Transmit Order to Pharmacy	Incomplete lab monitoring order	480	
Reknowledge Order	Wrong patient	360	
Select Medications & Subsets	Look alike/confusing names or packages	360	
Second safety check	Wrong/incorrect dose	300	
Transmit Order to Pharmacy	Wrong medication	300	
Verify Order	Missing overdose orders	300	
Verify Order	Missing patient allergies	300	
Select Medications & Subsets	Expired product	300	
Second Safety Check	Putting wrong chemo in patient tray	240	

Chemo order location # 6
Chemo stand "waterboards" # 27

Reduced Distractions & Patient Risk

©2006 Johns Hopkins Medicine
Center for Innovation in Quality Patient Care

JOHNS HOPKINS MEDICINE
CENTER FOR INNOVATION IN QUALITY PATIENT CARE

