

Supporting healthcare providers in

# ATTAINING EXCELLENCE

through LEAN planning and design



**EAPC**

BUSINESS EXCELLENCE

Identify and eliminate wastes, errors,  
and inefficiencies, improve process flow,  
and increase value for patients.

[www.eapc.net/be](http://www.eapc.net/be)

# IMPROVE PROCESSES IMPROVE MARGIN

A new building will not fix broken processes. EAPC has been an industry leader in incorporating LEAN principles in the facility planning, design, and project delivery process. Key to this philosophy is the incorporation of LEAN and Six Sigma concepts as we plan the design alongside our clients.

## **SCHEDULING**

Reduction in avoidable cancellations  
Improved scheduling accuracy  
Optimized room utilization

## **STAFF & PHYSICIAN**

Aligned goals and metrics  
Ownership of processes and outcomes  
Improved physician and staff satisfaction

## **ON-TIME STARTS**

Demand-match staffing  
Reduction in supply waste  
Improved turnaround time

## **OPERATIONAL COSTS**

Completed pre-admission tests prior to date of surgery  
Accurate case carts

## **CLINICAL QUALITY**

Improved patient experience  
Effective transitions of care  
Reduction in complications



**EMPOWERING**  
CARE PROVIDERS TO  
CONSTANTLY IMPROVE

# Applying LEAN during planning and programming

EAPC has an integrated programming process that brings together the client stakeholders, patients' point of view, architects, and a LEAN facilitator to transform the process and co-develop a final design that not only considers the patients' needs, but also the staff and providers needs as well.

EAPC advocates using a LEAN-based approach to the planning and programming phase of projects. This approach allows healthcare organizations to review processes, incorporate industry best practices, collect input, and secure buy-in from all stakeholders prior to starting the design. The result is a LEAN space tailored to your specific people and process needs.

During this phase, we have the unique opportunity to help our clients identify and eliminate the wastes, errors, and inefficiencies of the core service streams and transform them into value engines for their patients.

## 8 FORMS OF WASTE IN HEALTHCARE

### OVER PRODUCTION

More blood vials drawn than needed

More lab tests completed than necessary

### OVER PROCESSING

Moving patients between units

Multiple patient sticks for blood draw

### TRAVEL OR TRANSPORT

Movement of patients, supplies, and staff from place to place

### INVENTORY

Pharmacy deadstock

Outdated or too many supplies

Patients backed up in queue

### WORKER MOTION

Searching for patients and supplies

Excessive travel distances for meds or lab results

### CORRECTION OF DEFECTS

Medication errors, billing errors, incomplete information, HIPAA violations, retained objects in surgery

### WAITING

Waiting for test results, information, and patients

Longer than necessary length of stay

### STAFF UTILIZATION

Working to the top of licensure

Staffing to patient volumes

Cyclical staff downtime

## LEAN healthcare tools that may be used by EAPC during the planning process

### **5-S Methodology Used for Visual Workspace Standardization**

- Sort through cabinets, drawers, and work areas
- Straighten/organize what belongs
- Scrub up the area
- Standardize inventory, work areas
- Sustain the standardization

### **Value Stream Mapping**

- Determine the value or scope to be improved
- Understand the current operating process
- Develop an implementation plan
- Follow up

### **Flow Diagrams**

- Spaghetti diagram used to analyze travel distances and visualize flow and the interaction of staff and patients with the work space
- Process flow and deployment maps to identify high risk areas

### **Gemba Walks and Fishbone Diagrams**

- Walk of the work area with staff and providers to see waste and flow in real time
- Collecting and documenting waste and flow issues to drill to root cause

### **Kaizen Events**

Short timeframe improvement events with process stakeholders doing hands on changes and improvements to the process and physical area; based on GEMBA Walks or Value Stream Mapping exercises (VSM)

Examples include 5S on the storage room as well as improving lab and imaging turn-around times to compress overall appointment times

### **3P (Product, Process, and Preparation) Events**

3P is an innovative way to integrate LEAN into the design of a product or service using a system-based approach versus a single process approach like KAIZEN.

In healthcare architectural design, the 3P process is implemented using cross-functional teams and information gathered from Value Stream Mapping activities. This allows the team to collaboratively design a layout that supports the new LEAN improved process. This creates the highest perceived value from the point of view of the patient.

Examples of this process include 2D or 3D versions of the new workspace to help staff and providers see what the future looks like.