

▶ Making Your Department LEAN

D. Gilmore (Boston)

Lean is the newest theory in process improvement. Lean dates back to the 1970s and was capitalized on by Toyota. Since this time, LEAN has become the single standard approach to many manufacturing industries. The airline industry is one industry that has adopted LEAN and made significant process improvements. Womack and Jones published *Lean Thinking* and stated that lean thinking is a perspective that is important and that “The endless transformation of waste into value from the customer’s perspective.” The goal of LEAN is to improve a process that adds value to the “product”, but eliminates the “waste” in the process.

In health care, this product can be translated to care of the patient and the waste can be everything from wasted time to errors to products. In medical imaging, the focus is on the quality of the image or study as the product or ways to reduce costs. The waste can be the inefficiencies such as waiting times or duplication of efforts. However, a process improvement requires a cultural change and that everyone involved has to be brought into the process as a participant to make it a success. LEAN is a different way to think about process and is all about a change in thinking versus a focus on doing.

Spears defines the four rules of LEAN. They are to understand how people work, how people connect, how processes are constructed, and how to improve. To start the process, one must understand what is the goal, who is the customer, what is value-added, and what is the non-value added. The process is based on the PDCA cycle-Plan, Do, Check, Act. The 5 S’s are required in LEAN to make the process sustainable. The 5 S’s are: sort, straighten, shine, standardize, and sustain. The first process is to create a value stream map. This requires observing all of the actions one takes to create the final product. For example, this could be from getting a unit dose to injecting the patient. Every single step a technologist takes to get the dose, check the activity, changing the needle, to injecting the patient must be documented. Every step should be mapped to show a visible map. From here, plans can be made to get to the ideal state. Can steps be reduced? Can time be saved? Can items be placed in different location to reduce steps for the technologists? These are all questions that must be addressed in the LEAN process. Reducing waste, increases quality!

References:

1. Bush. Reducing waster in the US healthcare system. *JAMA* 2007; 297-871.
2. Kim, Spahinger, Kin, Billi. Lean health care: What can hospitals learn from a wold-class auto-maker? *J Hosp Med.* 2006; 1: 191.
3. Womack & Jones. *Lean Thinking: Banish waste and create wealth in your corporation.* (2003).