

Abstract

The following senior project was first introduced during a summer internship at a biomedical company called Asthmatx Inc. Asthmatx is responsible for the development and manufacturing of a catheter-based device for moderate to severe cases of asthma. Upon the approval of FDA, Asthmatx had planned to ramp up their production capacity significantly in order to accommodate the potential growth.

The first step in the process improvement was a facility reconfiguration that involved the adjustment of process sequencing and the implementation of ergonomic catheter channels. Next, time studies were conducted to gain more accurate time standards of the production process. After witnessing a learning curve for some of the individual process steps and making outsourcing decisions, the time standards were established and analyzed. The line was then balanced resulting in reduced cycle time and an observed decrease in labor necessary.

As a result of these changes, the travel distance was reduced by 140 feet per catheter from the facility reconfiguration. Line balancing reduced cycle time by 30 minutes and decreased labor by 6 operators. The mentioned improvements had an associated cost savings amounting to just a little above a million dollars annually.