

Design of a Standardized Trial Process for the Evaluation of Medical Equipment

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Author Note: The Design of a Standardized Trial Process for the Evaluation of Medical Equipment team is a group of four graduating seniors at Binghamton University, State University of New York. They will be receiving Bachelor of Science degrees in Industrial and Systems Engineering. At the time of this writing, the four students were volunteers at United Health Services (UHS), allowing them the knowledge and access needed to complete the trial process. They would like to thank the Value Analysis and Procurement teams at UHS for supporting them. In addition, they would like to thank Rafaela Spence for being their point of contact and main guide throughout this process. Thanks to these individuals, they were able to complete this project. Further inquiries regarding this report can be directed towards Brianna Genova at bgenova1@binghamton.edu.

Abstract: Healthcare quality improvement is a widespread objective throughout the United States. This project has been dedicated to assisting United Health Services in improving their patient care by standardizing their trial process for the evaluation of medical equipment. To replace their current ad hoc process, a customizable process was designed consisting of key metrics (e.g. Safety, Durability) to allow varying medical equipment to be trialed. The process comprises numerous templates (e.g. process flow diagram, Clinical Champion Handbook) to ensure ease-of-use as well as accurate documentation and analysis. These templates are available within an Excel file, which is coded to receive trial customizations and collected clinical data. It then analyzes this data to determine the decision regarding equipment acceptance/rejection according to a predetermined 80% (of maximum possible rating) acceptance standard. This process was designed to reduce trial turnaround time, improve equipment quality, and lower costs associated with purchasing underutilized equipment.