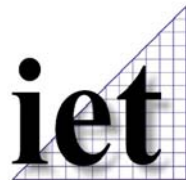


HEALTHCARE SERIES

A WHITE PAPER

IET, INC. A U.S. BASED INDUSTRIAL ENGINEERING CONSULTING FIRM WITH EXTENSIVE EXPERIENCE IN PROCESS IMPROVEMENT SUGGESTS SPECIFIC METHODOLOGIES FOR REDUCING COSTS AND INEFFICIENCIES AND IMPROVING BUSINESS PERFORMANCE IN THE HEALTHCARE INDUSTRY.

Vital Healthcare Reformation



Measure. Simplify. Standardize. Realize

Vital Healthcare Reformation

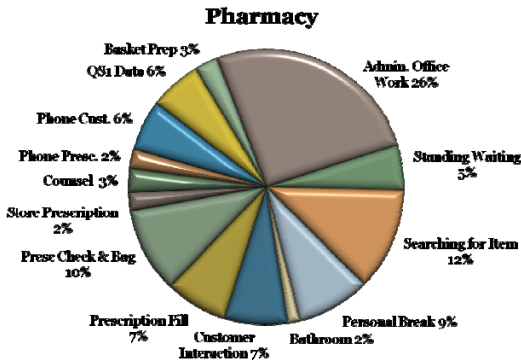
“The competition keeps getting better, so we need to do the same.” This phrase is used thousands of times in modern day automotive manufacturing plants. The meaning behind this statement is not hard to understand. It simply means that in order to stay in business, the company must find ways to improve their bottom line usually through cost reduction and efficiency improvements. The problem with this philosophy is that the motivation is completely reactive. The companies using this phrase are implying that they are falling behind, and out of necessity, they must improve.



A better way to ensure success in the marketplace is to be the industry leader. In order to accomplish that goal, a proactive approach is required. In the automotive industry, Toyota has become the benchmark for success because early on they recognized the difference in approach. Understanding that continuous improvement is an absolute necessity, Toyota utilized improvement techniques that address all avenues of competition and has cemented their place in history. American automakers have yet to recover from Toyota’s customer driven philosophies, cost containment measures, new echelons of quality assurance, and unceasing search for innovation. They have developed programs of improvement entitled lean and six-sigma, but have difficulty driving these programs to the bottom line. Who will be the healthcare industry leaders in the next five years? History predicts that they can expect a similar journey.

The IET approach to healthcare reformation is to address all of the avenues of business competition including cost, quality, speed and customer service. IET has developed a proven approach to healthcare reformation and will discuss the need for improvement, the specific process driven approach, and the competitive advantages to using professional and objective professionals within your improvement teams and processes. All of these innovations must be driven to real bottom-line improvements.

Cost improvement within the healthcare area can be an emotional effort, to say the least. Professional groups offering high cost opportunity can include pharmacists, nurses, respiratory therapists, medical technologists, and yes, even doctors. These immediate and necessary cost improvement efforts seem almost irresponsible when applied to an overworked and understaffed professional medical service department. However, our studies have consistently presented data that indicates that redesigns to these medical service processes, roles and scheduling practices can drive the utilization of these personnel to significantly higher levels. Specifically, these professional groups are typically overworked with extraneous activities that do not improve patient care. Pharmacists are consistently spending a mere 30% of their work day on pharmacy healthcare activities and 70% of the day on hospital



administrative and unrelated activities that are required within their job design. Furthermore, these professionals desire the opportunity to adjust their professional responsibilities to allow them to work with patients and address the professional needs of their hospital. Similar data can be presented for all of the healthcare groups discussed.

Cost improvement can also be significantly addressed through improving the low levels of asset utilization typically experienced in healthcare. More surgeries, urgent care patients, pathology tests, and ancillary support services will ensure competitive advantage in the twenty-first century. Typical OEE (overall equipment effectiveness) for these types of resources is well under twenty percent. Doubling these measures requires redesign, team training and effort, measurement and a desire by the leadership to be better.

All team members desire quality improvement within the multifaceted healthcare systems. The issues tend to be highlighted for short-term, improved for short-term, and then fall off the radar out of necessity. The IET approach strives for an overall philosophy of simplification, combined with data collection, statistical tools, mistake proofing, organization, and sustainable improvement. A real approach to sustainable quality improvement across a healthcare organization must include all the tools in the toolbox, not just a faddish tactic with a stirring title.

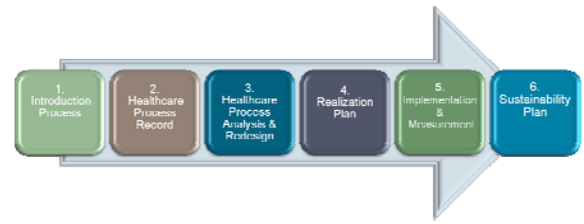
Speed enhancement is a fundamental requirement for healthcare reformation. This is not limited to the complicated queuing models of emergency and urgent care services. Surgical unit speed, first case on time starts, medical testing, patient administration, and all business processes necessitate measures of speed to ensure significant improvement. Simple interview and casual observation processes will not accurately model these systems and often lead to solutions that fall apart when the exceptions occur. IET's approach is to model these systems and apply appropriate queuing and engineering principles of improvement with statistically sound solutions. Ensuring team involvement and understanding, combined with on-going measurements will ensure solution sustainability.

All of these fundamental improvement processes required data collection, observation, and analysis that allow IET engineers insight into customer interactions. These customer interactions are not limited to simply the patient, but also include patient visitors, support organizations, inter-department relations, and quite often, medical doctors. IET has found that documentation, assessment and redesign of these customer interactions are an important, yet often simple fringe benefit to the enhancement of customer service at all levels.

The **IET Healthcare Reformation Process** follows a six-step engineered approach to a targeted process improvement or a corporate-wide initiative to any healthcare organization. This includes the following.



- Introduction Process
- Healthcare Process Record
- Healthcare Process Analysis and Redesign
- Realization Plan
- Implementation and Measurement
- Sustainability Plan



The introduction step is necessary in any improvement process to define SMART goals, clarify team member roles, establish guidelines, define the customer, and develop a strategic plan for analysis and redesign. This is an opportunity for the team to separate the efforts from past fads of unsustainable slogans and introduce a proven process of necessary success. Overcoming resistance to change is also a critical anxiety that can be addressed in this step. Resistance has been shown to be minimal if the team members understand the need for the change, believe there is commitment from leadership, and are involved in the process. The necessity to separate the following specific process steps to guarantee objectivity, systematic analysis, and statistically sound solutions, will make certain the team views the process as a commitment to a real and a professional approach to improvement.

The second step in the Vital Healthcare Reformation Process requires the preparation of healthcare process records. These will identify the planned steps including healthcare, customer service, transportation, administration and impediment factors, as well as all of the unplanned and “real-world” factors that are required. These records can be prepared for patient processes, visitor processes, medical personnel processes, information processes, ancillary service processes or business processes. Data collection will include process step durations, frequency, distance, and other appropriate quantitative related data to allow the healthcare process record to accurately depict and model the current situation.

The third step in the Vital Healthcare Reformation Process is the analysis and redesign process striving for a new healthcare process record that offers simplified steps, eliminates process variability, reallocates professional roles, and ultimately provides a significantly higher level of customer service. This step requires a strong IET lead to ensure improvements are driven by data, understood by all team members, and results in bottom-line improvement. This process step often results in many improvements that need to be prioritized based on significance of improvement and change effort required. IET will lead the process team through this step and ensure a level of enthusiasm and teamwork to achieve stellar change and reformation.

The fourth step in the Vital Healthcare Reformation Process is the preparation of a redesign realization plan for the progression. This will include a clearly redefined future state healthcare process record, as well as clarification of improved team member roles, standard operation procedures, measures of



improvement, and specific timing. Everyone who has a role in the specific change initiative will understand their new responsibilities and the expected performance measures of each redesigned step. Improvements must not be complicated and supported with simple and timely measures of performance.

The fifth step in the Vital Healthcare Reformation Process is implementation and measurement. IET will work with the team as additional training and buy-in is required. Procedural controls and team adjustments are often made to further gain on the simplicity of the redesigned process and new professional roles. IET will work with the team to monitor achievements, while providing affirmation and celebration through recognition and modest rewards.

The sixth step in the Vital Healthcare Reformation Process is ensuring sustainability of new process. Continued measurement and auditing may be necessary, but the objective will be to put into place self-service measure systems that can create friendly competition, goal setting and feedback, and a solid framework for incremental and continuous improvement into the future. This is also an opportunity for department or area leadership to report on cross-functional improvements and an overall assessment of the organization-wide improvement results.

The medical industry can learn a great deal from automotive manufacturing history. Specifically, there is a requirement for reformation in the healthcare industry and significant change is just around the corner. The question is whether an organization desires to lead this reformation or spend the next generation struggling in a competitive chase. The Vital Healthcare Reformation Process developed and utilized by IET offers a systematic engineered approach, utilizing the tools of lean, six-sigma, process mapping, teamwork, measurement, goal-setting, feedback and many other necessary enablers of analysis, redesign and significant change. We would welcome the opportunity to introduce our process and establish a target for vital healthcare reformation within your organization.



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