

WHITEPAPER: PERSPECTIVES ON MILITARY HEALTHCARE QUALITY IMPROVEMENT

Strategic Collaboration

LEVERAGING LEAN SIX SIGMA TO HARNESS THE BEST OF VA & MILITARY HEALTHCARE



› Introduction



Continuous Process Improvement (CPI) in the military healthcare system and the Veterans Health Administration (VHA) have some differences but share many similarities in their approach to quality improvement as well as their overall focus on healthcare. It is often said that two heads are better than one in dealing with complex issues. With an emphasis on sharing best practices, the opportunity for future advances is something that can rapidly benefit both the military healthcare system and the VHA. This paper seeks to touch on past accomplishments and consider the benefits of future collaboration. The combination of the VA and military healthcare systems, jointly applying CPI / Lean Six Sigma (LSS) methodologies, can dramatically improve the performance of both systems and the quality of care provided to the military, their families and the nation's veterans.

› Similarities and Differences in the Approach to Patient Care

“VA and military healthcare systems collaboratively and jointly applying CPI/LSS methodologies can dramatically improve the performance of both systems – and the quality of care provided to the military, their families and the nation's veterans.”

Military and VA medical systems are intensely devoted to the quality of patient care. In doing so, both share an enormous passion for understanding the needs of the military, and especially of veterans who have suffered in wars, conflicts and the hazards of military deployments in hostile environments around the world. As you walk the hallways and into the clinical areas of both types of facilities you immediately sense the dedication of the physicians, nurses, technicians, and administrative and support staff. Their pride in caring for the military, families and veterans is highly visible. Both systems recognize that they are heavily and publicly monitored for the medical outcomes of their patients. Recent instances at facilities such as at Walter Reed clearly illustrate this.

The primary difference between the military healthcare system and the VHA is the healthcare population served. The military health system (MHS) is designed to provide medical care to active duty and reserve military personnel and to their families, as well as military retirees and their families. The key focus in today's environment is “family-centered” care. Care is provided to personnel in return for service and sacrifices rendered and, at the same time, provided to their families. Veteran's Administration medical centers primarily focus their care on personnel who either have left military service before full retirement with service-connected illnesses or injuries or those who have retired with such issues. In either case, the VA conducts a complete physical assessment of the individual and determines if the person warrants further care for the military-related injuries, illnesses or other issues. If so, the individual would then be “rated” for specific categories of VA medical care.

Upon entering the VA medical centers, you immediately notice that the patients are mostly older, many who are from WWII, Korean War, Vietnam and the Gulf wars. The younger patients are most recently from the conflicts in Iraq and Afghanistan. They often suffer from long-term illnesses and injuries that require prolonged treatment extending over many months if not years. Veterans' medical care, therefore, is for a far longer period of time than in military hospitals.

› Similarities and Differences in the Approach to Patient Care, cont.



Military hospitals are designed to provide care to younger military populations and their families as well as the retirees. Many military hospitals provide such services not normally found in most VA medical centers, including:

- Labor and Delivery
- Neonatal Intensive Care
- Pediatrics
- Adolescent Medicine
- Operational Battlefield Medicine
- Ship-Board Medical Care

Military hospitals provide acute care rehabilitation to the military – especially for those active duty members injured during war-time. If the service member cannot be returned to full military duty, they are discharged and referred to the VA for on-going care.

Recently, however, the VA and the military have entered into joint partnerships in which some of the active duty will be treated in the VA medical centers. The Great Lakes Naval Hospital and VA Medical Center, near Chicago, is an excellent example of such a partnership. They have already begun combining the highly skilled healthcare staff of both facilities to maximize the use of their medical skills, hospital equipment and medical treatment protocols. Thus, in the near future, many more VA medical centers will begin treating the entire patient continuum – from the very young to the elderly and from active duty to retired veterans.

› CPI in Military and VHA Hospitals

Continuous Process Improvement (CPI) has been a part of the military and VHA medical systems for decades. Along with their civilian counterparts, the military and VA hospitals are surveyed once every three years by the Joint Commission, an organization that has established rigorous standards by which all hospitals must measure their own healthcare processes. Passing the survey enables the hospital to be “accredited” and doing exceptionally well adds prestige to the facility’s credentials. Failure to pass the Joint Commission’s survey may result in significant loss of revenue for the hospital, considerable remedial work to make corrections, as well as having to repair a tarnished reputation.

Drawing upon the pioneering work of W. Edwards Deming, the Juran Institute, the Institute for Healthcare Improvement (IHI) and many other others, the Joint Commission has for many years focused significant efforts on helping hospitals improve their healthcare processes. Through such CPI efforts as Performance Improvement (PI) or Quality Management (QM) the goal has been to help fix administrative and clinical processes, especially those that cause potential harm to patients. Not surprisingly, there is considerable pressure by Congress on military and VA medical facilities to improve their processes and successfully pass all Joint Commission surveys.

Some of the processes that the VA and military hospitals frequently target for improvement include:

- Turnaround time for laboratory results
- Turnover of operating rooms
- Admission and discharge procedures
- Documentation in electronic medical records (EMR)
- Medication and treatment or procedure errors
- Patient falls
- Operations on the wrong patients
- Post-operative infections
- Hospital-acquired infections
- Appointment scheduling
- Follow-up medical care
- Medical supply inventories

› Lean Six Sigma Process Improvement



Significant results achieved in military healthcare with CPI/LSS

- Turnaround time for labs decreased 50%
- Procurement process improvements saved \$10,000,000
- Credentialing process improvements saved \$113,000,000

In May 2006, the Secretary of the Navy directed the deployment of Continuous Process Improvement / Lean Six Sigma (CPI/LSS) throughout the Department of the Navy (DoN). In 2008, the Secretary of Defense issued a mandate that all departments and all military services in DoD implement CPI/LSS as the principal method of achieving operational and organizational efficiencies. Then in 2009, a formal DoD instruction was issued, detailing the implementation and management of the DoD-wide CPI/LSS program. This instruction mandated immediate action.

As a result, Navy Medicine (along with its sister services) updated its CPI/LSS program. For many years, military healthcare has utilized the FOCUS-PDCA methodology to improve its processes. Adapted from Hospital Corporation of America, FOCUS-PDCA was designed for hospitals to quickly and effectively resolve broken or misused patient and administrative processes. Using a structured roadmap, hospitals formed process improvement teams that systematically attempted to improve processes and permanently fix problems.

While the use of this methodology was adequate, the more recent introduction of CPI/LSS has created a new and more intense focus on improving healthcare processes. LSS, as mandated for DoD agencies, incorporates into the traditional CPI programs a disciplined and rigorous use of data in conjunction with executive leadership, statistical analysis and a strong emphasis on sustainment of the process improvements. LSS requires a high-level, readily visible commitment by executive leadership to insure that LSS methodologies, tools and principles are deployed throughout a hospital or medical system in a systematic and organized manner. The proper use of data and the accompanying statistical methodologies enable hospital staff to improve processes at the right time, with the right tools and achieve long-term sustainment.

Although relatively new to the use of LSS, military healthcare has already achieved significant return on its investment through CPI/LSS. For example, turnaround times for laboratory data to Emergency Departments have been reduced by 50%. The cost of procuring and storing high-cost immunizations has been reduced by 40% with potential long-term savings of \$10,000,000. The time required for credentialing of military and civilian contract healthcare providers has been reduced by 35-40% in local hospitals. More recent LSS work on credentialing of healthcare providers has the strong potential to save \$113,000,000. Given the size of the VA healthcare system, replicating similar efforts in their hospitals could very likely achieve equal or greater results.

› Deployment Challenges



The initial successes of CPI/LSS have spurred even more investment by military healthcare in expanding LSS initiatives. However, the deployment of CPI/LSS within the military faces many challenges, including:

- Frequent rotation of military personnel to new duty stations.
- Sudden and unexpected deployment of individual physicians, nurses and technicians to overseas hospitals and Navy ships.
- Uncertain funding for military hospitals due to the cost of funding the war.
- Difficulty in assigning active duty personnel as full-time Black Belts.
- Negative experiences with previous CQI methodologies.
- Time constraints – providing care to patients and conducting LSS activities while understaffed.
- Difficulty in determining the true return on investment in not-for-profit healthcare systems.

To overcome these difficulties, military healthcare command centers have taken a five-pronged approach:

1. Assign permanent civilian contractor Master Black belts (MBBs) to guide each major region in its deployment of CPI/LSS.
2. Establish an apprenticeship program by which the contracted MBBs guide and mentor the military's Black Belts to eventually become MBBs.
3. Establish a Change Management program to help military hospitals transform from traditional, older Performance Improvement methodologies to the more disciplined and greater return on investment, LSS.
4. Place increased emphasis on achieving "Breakthrough Results" in which PI outcomes meet and exceed the customers' expectations.
5. Formally train executive leaders and process Champions on how to establish and sustain LSS methodologies, on specific roles and responsibilities of all personnel and on the critical steps required for long-term sustainment.

Recent assessments by healthcare command centers demonstrate that these measures are taking hold and transforming military healthcare into a data-driven, statistically-minded performance improvement system. The regionally-located MBBs are intimately involved in helping senior military and civilian officials determine which processes are most suitable to CPI/LSS; personnel that should be assigned as Champions, MBB candidates, Black Belts and Green Belts; and methods to successfully deploy CPI/LSS throughout both administrative and clinical departments. Black Belts and Green Belts are taking on the additional responsibilities of leading LSS improvement teams, achieving significant results and documenting their activities.

To augment the power and advance the successes of LSS, the methodologies found in Theory of Constraints (TOC) imply a unique opportunity to look at managing an organization's policy constraints. Many hospitals – including military, civilian and VA – likely have outdated policies or instructions that impede the flow of patient care, restrict access to care during certain hours of the day or create bottlenecks in patients accessing even routine appointments. Other policies may limit which departments can access the surgical operating rooms even if the rooms remain empty for several hours. Patients as well as hospital staff routinely encounter bottlenecks or constraints in performing their daily work. Effectively managing such constraints, coupled with LSS efforts may well achieve significant and sustainable breakthroughs.

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› Strategy Alignment

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As both the military and VA healthcare systems undertake and advance CPI/LSS methodologies, efforts must be in alignment with their organization’s strategic goals and objectives, and support their unique missions. As such, this may be a unique opportunity to combine the best practices of both systems, focusing on the combined and separate missions of the military and the VA. It is quite likely that a research project jointly conducted between the two can achieve this quickly and efficiently. Navy Medicine and VHA have already started partnerships.

Proposing a joint research effort that builds upon and extends this partnership would be an appropriate next step. Current experiences clearly illustrate that when the organization’s performance improvement initiatives are only loosely tied to its mission and goals, success will be minimal at best. Replication across the organization’s various facilities is often haphazard. Much time and effort is wasted in fixing low-level processes that are not in alignment, provide marginal improvement or those that cannot be replicated in other areas.

Military and VA healthcare leaders deal with strategic and tactical alignment issues every day. Patients expect it. The demands of today’s healthcare force it to be a reality. And the Joint Commission and other accrediting agencies look closely for it. As an example, the VHA’s implementation of a TAMMC improvement framework (Team, Aim, Measure, Change and Sustain) provides strategic alignment with their System Redesign initiatives. The outgrowth of which integrates LSS methodologies to focus on patient care services, Quality and Safety and creating a culture of continuous improvement and learning. The overarching goal is to fulfill the VHA’s mission of “Honoring America’s Veterans by providing exceptional healthcare that improves their health and well being.”

› The Future



The military and VA healthcare systems have a great deal in common. They focus on providing world-class medical care and treatment to active duty military, their families and to veterans. They are dedicated to assuring that compassionate, cost-effective and injury-free care is provided to all eligible patients. For this care to remain the very best possible, continued and highly focused improvement efforts must be made to constantly assess all healthcare processes for potential improvements. CPI/LSS is a proven, reliable and sufficiently robust methodology to improve those processes. However, it will continue to require top-down, executive-level support and commitment; all levels of hospital personnel must be involved and sustainment of the improvement efforts must be continually monitored. The great news is that the early efforts in the military and VA medical treatment facilities clearly demonstrate that it works. There is enormous potential for both systems to jointly share best practices and then replicate their successes. The quality and effectiveness of patient care will clearly benefit from these efforts.

› About the Author



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Charles Mount, CAPT, USN (Ret.) is the director of healthcare services for NOVACES. He oversees the company's Lean Six Sigma programs to improve patient care, safety and satisfaction which simultaneously generate more profitable business outcomes. He has deep and abiding experience at all levels of healthcare, owing to his 38 years in the U.S. Navy dedicated to advancing patient care at military hospitals around the world. For example, he coordinated the implementation of Total Quality Management for 5,000 employees at the U.S. Navy's largest medical center in San Diego. In addition to his expertise in healthcare and education, as a Commanding Officer he has conducted strategic planning sessions for a variety of organizations with emphasis on development of mission, vision and values. Over the years, he has written about managing change in healthcare for a variety of publications. He is both a Lean Six Sigma Black Belt and a graduate of the Institute for Federal Health Care Executives. He holds a B.Sc. degree in Nursing from the University of Washington and a M.Ed. from the University of San Diego.

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