

Is Lean the missing puzzle piece to transform health care?

By Dr. Edward Boudreau

Denver Health, serving a population that is 40 percent uninsured, just announced yet another year of positive financial results. Virginia Mason Medical Center is recognized by Dr. Donald Berwick, founder of the Institute for Healthcare Improvement and the former administrator of CMS, as an example of an organization best prepared to take on the challenges of health care in the future.

Both organizations have used the deployment of Lean principles and tools to position themselves as we see them today. Let's not, however, get distracted by the tools. Over the past 25 years, health care has employed a broad range of improvement tool sets. Starting with Total Quality Management (TQM) in the mid-1980s and progressing through the influence of W. Edwards Deming and Walter Shewhart to PDCA (Plan, Do, Check, Act) or PDSA (Plan, Do, Study, Act), hospitals have moved through many tool sets. Each one seems to last about three to five years in the popular literature. Six Sigma made its way into health care in 2000 at Mount Carmel Health system in Columbus, Ohio with terrific results. Crew Resource Management (CRM) and the push toward High Reliability Organizations (HRO) are making their way to the contemporary literature today.

Which one will be the best? Which will lead to sustainable results? The answer is... Any of them!

The truth is, it isn't the tool that makes the difference. It is the craftsman. Our experience today, as leaders in the deployment of Lean Six Sigma and innovation tools, has given us the opportunity to visit and work with hundreds of hospitals in the past decade. And wherever we go, we find examples of hospitals that have generated sustained results using every one of the tools mentioned above. But what is also painfully clear is that when leaders cede the responsibility of deploying the tool set to the quality or process improvement department, the likelihood of success drops dramatically. We usually view that circumstance as an indicator of impending failure.

So what does success look like? In every case we have seen, success depends heavily on the following:

- A CEO with a clearly articulated vision
- A CEO who personally takes ownership of the responsibility for driving change, and who recognizes that the techniques of the past 20 years will not be sufficient for the next 10 years
- An organization prepared to provide resources dedicated to education and deployment of the chosen tools

- A well-developed supporting infrastructure that creates a visible and consistent link between the strategies of the organization and the project work chosen
- A finance system sufficient to support the planning for, and delivery of, project results
- A hard financial target.

Following our observations that the factors noted above are critical to success regardless of the tools to be used, the question still remains: What tools should we use? We believe that there is considerable evidence that Lean or Lean Six Sigma tools have been and continue to be the most effective to bring about sweeping change if the other pieces are in place. There is ample evidence that Lean tools have been successful in resolving both clinical and non-clinical operations.

Lean tools have been effectively applied in all of these areas:

Workflow		Revenue Cycle	
OR scheduling		Advance Beneficiary Notice (Medicare)	
OR turnaround time		Contractual allowances with payors	
Radiology transcription flow		Insurance verification	
Point of entry patient throughput		Improving admission demographic info	
Admit process for OR patients		Discharge final billing	
Nursing supply distribution		Claim denial reduction	
Medical administration process steps		Reduce patient AR balances	
Cafeteria process flow		Charge errors	
		Purchase to pay error reduction	
Managed Care		Patient Throughput	
Referral denials compliance		Reduction of patients leaving without being seen in the ED	
Duplicate claims paid		Reduction of time and space used in preoperative screening	
EDI claims rework		Reduction of time to deliver a critical drip	
Provider contract configuration errors		Reduction of time between the decision to admit and patient being placed in a bed	
Reconciling contract to capitated rate		Reduction in ventilator acquired pneumonia	
Automatic claim adjudication			
Appropriate referral use guidelines			
Optimizing referral turnaround time			

Steven Spear and H. Kent Bowen, in their *Harvard Business Review* article, “Decoding the DNA of the Toyota Production System,” posit that at Toyota, everyone has been trained to be a scientist. Everyone is taught the scientific method. Once a worker is taught that their job is to find a better way to do the job they were hired to do, the infrastructure is in place to allow them to create a hypothesis, test it and implement it if it proves to be the better way.

Returning to the initial question. Is Lean the missing puzzle piece? We believe the answer is a resounding, “No.” Lean tools are easy to teach, effective in eliminating waste and inexpensive to deploy. The differentiator—the missing piece of the puzzle, if you will—is the leadership and infrastructure. If the appropriate level of ownership, the policies, procedures, processes and resources are not in place, the organization will have only limited success, no matter how good its selection of tools.

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