BUSINESS IMPROVEMENT GROUP

www.BIGLEAN.com

A DIFFERENT KIND OF EMERGENCY ROOM

Part 3

Abstract

Emergency Department Seeks to Eliminate Protocols Through Lean Thinking…

Charlie Protzman
Charlieprotzman@biglean.com

George Mayzell, MD, MBA
gmayzell@e-healthsolutions.com

Mike Hogan
Mikehogan@biglean.com

A Different Kind of Emergency Room – Part 3

Emergency Department Seeks to Eliminate Protocols Through Lean Thinking

Most Emergency rooms are trying to make improvements to their processes. The first place most start is working on improving its protocol systems. We felt that while there is a place for protocols, our goal was to find a way to reduce and ultimately eliminate the need for protocols. This article outlines how we did that.

Initial Conclusions and Problems with Standing Orders/Protocols

In the traditional ED system, standing orders or protocols are initiated by the nurses at triage. Protocols are based on the patient's chief complaint and not customized to each individual patient. The protocol assigned is based on the nurse's best clinical judgment at the time, which is supported by the patient's vital signs, chief complaint, patient appearance, and the triage nurse's experience or intuition. The reason for the development and utilization of protocols is two-fold; one is to have the preliminary tests completed and resulted by the time (theoretically) the provider sees the patient. This is an attempt to make the doctor more efficient. By the time the patient finally sees the doctor, they have already received their lab tests and x-rays, etc. and the results are in process or completed. Most hospitals, to some degree, think that this makes fundamental sense. It is an attempt to process the patient's care promptly and reduce the Length of Stay (LOS).

The 2nd and significant reason is due to the typical lengthy time it takes to see the provider. Because we can't get the patient in to see the doctor quickly enough, the protocol becomes a "stop gap" type solution, and the patient feels something is happening.

Our Lean team challenged this solution because we felt protocols are inherently inefficient. Our experience at each hospital we have worked is that protocols sometimes create more problems than they solve. In 50% to 60% of the cases, we experienced the following problems:

- Patients were placed on the wrong protocol
- Patients were placed on the right protocol but had other problems
- The triage nurse ordered an X-ray that was not necessary
- The triage nurse ordered the wrong X-ray or did not get the right view.
- Patients tell the doctor different problems than they told the Triage Nurse

If the patient falls into one of these categories, they now have to wait longer and be subjected to more pain, additional lab draws, or tests. These all add up to being patient dissatisfiers. Protocols also put more work (rework) on the ancillary areas, i.e., the labs have to find and re-pull the specimen to make an addition test (SIL) or X-ray has to work in the same patient again which decreases their overall capacity. Many times, rainbows (all blood draw tubes are drawn) are ordered, which by definition, is over-processing. This all results in increasing LOS and the waste of over processing the patient.

Protocols implemented or increased standardized protocols:

- Initiates some basic diagnostic/labs to allow the physician to make treatment decisions on the first interview, thus shortening LOS
- In straightforward cases, protocols can provide all the information the provider requires to make a disposition.
- Often, the broad stroke approach either misses critical tests that must be done after seeing the provider and thus no real-time saved or too many tests done that cause increased cost and patient inconvenience.

Our Hypothesis

When we stepped back to look at the overall system, we determined if we could design a new system where the patient saw the provider immediately, protocols would not be required.

Our New Model – The ED Flex Track

We created a new system called the ED Flex Track. This track is very similar to the flow you have at your doctor's office. After you arrive at your doctor's office you are taken to one of two or three rooms, your chart is placed outside which is a visual cue you are in the room, and the doctor goes from room to room seeing patients. Then you are taken to a room where the nurse draws your blood if necessary, and then you head home and wait for results.

Our Flex Track system is similar. Patients go to an exam room instead of an ED room. We then asked ourselves why patients come to the ED, and we kept coming up with the same answer... To see the doctor. So, we designed the new process so the patient sees the doctor in the second step

of the process vs. the sixth or seventh step in the process. Now patients arrive, get registered and triaged in parallel, have vital signs taken, and then see the doctor. In this new process, they can get in and be examined by the doctor within 30 to 45 minutes or less. Now the doctor sets the "protocol," and we get it right the first time. Then the patient moves to another room where we do blood draws or carry out other orders from the doctor. We process everyone one-piece flow through first-in-first-out order.

Results

- Our door to provider time is typically less than 10 to 15 minutes with high volume EDs averaging around 20 to 25 minutes average. Our best case is 5 to 7 minutes.
- Our LWBS is close to zero, but we can guarantee less than 1%
- LOS drops by 10% or more
- ED Visits typically increase by 10%
- Doctor-patient ratio usually is 3 to 4 or more per hour – the best case has been 6 to 8.

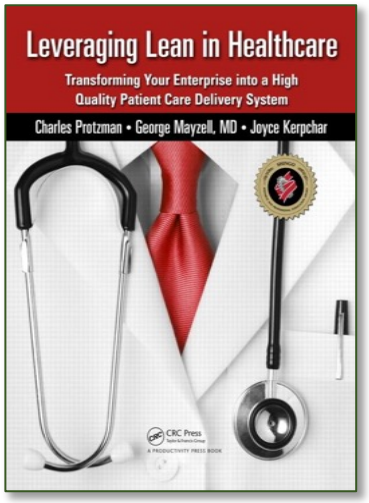
BUSINESS IMPROVEMENT GROUP

www.BIGLEAN.com

For more details check out the "Leveraging Lean in Healthcare**,"** Winner of a 2013 Shingo Research and Professional Publication Award

This practical guide for healthcare executives, managers, and frontline workers provide the means to transform your enterprise into a High-Quality Patient Care Business Delivery System. Designed for continuous reference, its self-contained chapters are divided into three primary sections:

- Defines what Lean is and includes some interesting history about Lean not found elsewhere.
- Describes and explains the application of each Lean tool and concept organized in their typical order of use.
- Explains how to implement Lean in various healthcare processes–providing examples, case studies, and valuable lessons learned



This book will help to take you out of your comfort zone and provide you with new ways to extend value to your customers. It drives home the importance of the Lean Six Sigma journey. The pursuit of continuous improvement is a journey with no end. Consequently, the opportunities are endless as to what you and your organization can accomplish.

Forty percent of the authors' profits from this book will be donated to help the homeless through two Baltimore charities.

Praise for the book:

… well-timed and highly informative for those committed to creating deep levels of sustainable change in healthcare.
– Peter B. Angood, MD, FACS, FCCM, Senior Advisor – Patient Safety, in *National Quality Forum*

… the most practical and healthcare applicable book I have ever read on LEAN thinking and concepts.
– Gary Shorb, CEO, Methodist Le Bonheur Healthcare

… well written … an essential reference in the library of all healthcare leaders interested in performance improvement.
– Lee M. Adler, DO, VP, Quality and Safety Innovation & Research, Florida Hospital, Orlando; Associate Professor, University of Central Florida College of Medicine

… a must-read for all Leadership involved in healthcare. … I can see reading this book over and over.
– Brigit Zamora, BSN, RN, CPAN, CAPA, Administrative Nurse Manager, Florida Hospital, Orlando