

# Performance Improvement-102



by Jim Burnette, President/CEO, HospitalMD

## "DO BETTER" IS NOT A PI METHODOLOGY

*What does "do better" mean? If anything, it means work **smarter**. High performance has little to do with working harder and faster.*

**W**HY IS IT SO PERPLEXING that we have such difficulty improving the performance of Emergency Medicine (EM) services? Even though some process improvements start well, they often regress or don't "stick", making way for Plan B— "we've just got to *do better*". What does "do better" mean? If anything, it means work **smarter**. It doesn't mean work faster and harder. High performance has little to do with working harder and faster. I think we all would agree that

reducing the overall **Average Length of Stay (ALOS)** of 90 minutes for all dispositions by 33% to 60 minutes is working **smarter**. But, what smarter steps lead to smarter results? And, are all "smart" steps equally smart? Let's look at the recent steps taken by a hospital that achieved a dramatic 33% decline in ALOS. We will see that there are several simple steps that form a set of **decision rules** that must be followed—fully and correctly. The hospital followed most of the steps and achieved the 33% reduction in ALOS, but took a short-cut described below. Also, the 33% reduction in ALOS overshadowed an unintended loss of \$2.4 million in annual net revenue. Download the full case study, "*Do Better" is Not a PI Methodology* on our web site: [hospitalmd.com/resources/insight](http://hospitalmd.com/resources/insight).

## UNDERSTANDING THE PROBLEM - A STARTING PLACE

An improvement solution must be designed to address the cause of the deficiency. Therefore, the solution design must match the complexity of the process.

- **COMPLEXITY.** The science of medicine is complex. Likewise, but in regard to a different topic, the process of medicine (workflow) is often complex with

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many decision rules linked to many “treatment” options. As with effective medical treatment, treating process “disease” follows much the same decision process and is only as good as the correct diagnosis and understanding how to use the appropriate tools.

#### • **PRODUCTIVE AND NON-PRODUCTIVE ACTIVITY.**

Let’s look at ED patient care complexity from the perspective of workflow. All patient care activity, from patient arrival to final disposition, is either **productive** or **non-productive**.

**Productive Activity (PA)** is all activity that directly or indirectly contributes to diagnosis, treatment, and patient comfort. Examples include: triage, initial assessment, initiating orders, performing exams, re-assessment, and disposition.

**Non-productive Activity (NPA)** is that which occurs between completion of one productive activity and start of the next productive activity. An example is the idle time that occurs between completion of a lab exam and re-assessment. From a practical and value point of view, this time is wasted

regardless of whether it is avoidable or not. NPA is non-essential. Therefore, length of stay (LOS) can be reduced if any or all of this time can be eliminated, and by an amount that NPA is reduced.

#### • **MOST TIME DEPENDENT EVENTS.**

The initial medical assessment and medical re-assessment are two **most critical productive** events and dictate how quickly the patient can be discharged or admitted. The initial medical assessment is critical because no significant diagnostic work can be done until the assessment is complete. The medical re-assessment is critical because no additional diagnostic, treatment, or disposition work can be done until this final assessment.

#### **THE PLAN**

After discussing the problem of length of stay (LOS), the doctors at this hospital felt that these ideas and changes made sense, but insisted that they would focus more of their effort on the intuitive but suboptimal steps of (a) getting patients into the treatment room quickly (reduce door-to-doc time), and (b) allowing the doctor to decide

the sequence of patients to attend rather than follow decision rules. Their argument was that lower acuity patients can be discharged quickly; and higher acuity patients naturally have long stays. So why rush?

#### **INITIAL ALOS RESULTS**

The project launched on a Monday at 7 AM. At the end of the first month, the project team was eager to hear that the new ALOS was 81 minutes. This seemed to be enough evidence that their efforts had gotten results. After a short discussion and congratulations around the room, the group adjourned with the feeling that they were on the right track and to continue the project.

The team was excited that the second month resulted in a new ALOS of 70 minutes, and even more excited about 63 minutes in the third month. They were energized. They believed that they had figured this thing out. They were almost willing to say out loud that this “PI thing” might work after all, and they might even reach 60 minutes!

#### **DIDN’T PLAN ON THIS**

However, they began to notice that the monthly patient visits had declined. This was strange and unexpected. The volume should increase if satisfaction has increased. But when we don’t

understand something, we have a tendency to rationalize. In this case, the explanation was that this is probably good because these were “probably” uninsured; or resulted from these new ACA narrow-network plans.

## THE DANGER IS ALMOST ALWAYS BELOW THE SURFACE?

This problem was very familiar to us. **HospitalMD** had warned against the short-cuts and assisted to help this hospital to determine if this **new** procedure was the cause of the decline of ALOS. It is likely that no one would have looked for further improvement or consequences of this project after having achieved an Olympic-level reduction in the ALOS. But the CFO's close examination of this 20% decline in ED patient visits revealed that the decline had occurred largely with high acuity patients. If this were true, the hospital would have lost its most productive source of acute inpatient admissions. The magnitude of these lost inpatient admissions could represent a decline in annual net revenue

(cash) of \$2.4 million! Talk about good news, bad news!


Our retrospective analysis revealed that the decision rules followed did achieve the decline in the ALOS. Our analysis also revealed that the short-cuts resulted in a wide range of variation of individual LOS that produced essentially two independent clusters of individual LOS around patients with low acuity, and a separate cluster of LOS around patients with high acuity. The chart below illustrates these two clusters.

*I hope you are not discouraged or becoming risk-averse. There are many tools and techniques available to you that will be vital to your survival.*

The reduction of 29 minutes (39% shorter) obviously pleased patients with low acuity. But the increase of 34 minutes (23% longer) was very frustrating to

higher acuity patients. We found that this cluster of patients in the higher acuity cluster was primarily older patients who presented to the ED with generally higher acuity illnesses, higher inpatient admission rates, and thus higher revenue. These older patients tended to be more critical of long waits. In addition to their longer wait time, older patients observed low acuity patients leaving before them which added to their frustration and their future hospital choice.

## DISASTROUS UNINTENDED CONSEQUENCE

I hope you are not discouraged or becoming risk-averse. There are many tools and techniques available to you that will be vital to your survival. **HospitalMD** welcomes the opportunity to discuss your needs and would like to be part of your success. 



**Jim Burnette** is the Founder and CEO of **HospitalMD**. Jim has worked in healthcare for more than 20 years. His mission is to strengthen small community hospitals across the nation and help them thrive in today's rapidly changing healthcare climate. Jim is a graduate of Georgia Tech and resides in Peachtree City, a small community right outside Atlanta.



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	Low		High
	ACUITY	AVERAGE	ACUITY
Prior to new procedure	75	90	146
Following new procedure	46	60	180
Change over old procedure	(29)	(30)	+34
Improvement	39%	33%	(23%)

# Outliers

## PULL UP ON THE STRAPS OF YOUR ICE SKATES!



In his extraordinary book, **Outliers, The Story of Success**, Malcolm Gladwell makes the case that the “self-made” man meritocracy is simplistic, sounds good, is inspirational, but largely myth, and usually not true.

To illustrate his belief, he

investigates why there are consistently more great Canadian hockey players and teams that are historically more successful than other leagues and nations. Roger Barnsley, a Canadian psychologist, and his wife were attending a Major Junior A league game in Alberta in 2007. As she casually read the team roster, she made a discovery about the link between hockey superstars and their birth month no one else had seen before.

17 of 25 players (68%) on the championship teams they were watching were born in January, February, March, and April because Canada’s Major Junior A league has an age cut off of January 1. A person born on January 2 is as likely to play with a child born at the end of the calendar year as on January 2. Age 16 is a transition year for growth and physical

maturity for boys which makes those with early birth months older and stronger on average than other members of their teams. This young talent gets more and better coaching, plays with other team members that are more capable, and plays 50 to 75 games a years compared to 20 for players not selected for these traveling teams. So naturally, older, stronger players with all of these advantages become better and are more likely to become future pros and Olympians thanks to this matter of “relative age”.

Through many other illustrations, he argues that most of life is like this. Underlying factors that are usually not obvious and apparent; and not family ties, being a “self-made” man, or other presumed myths, explain these phenomena. These factors are the true cause and effect. —Jim

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