

Lean Enterprise Academy



LEA Healthcare e-letter – 7 May 2006

Leaning Healthcare

Dear Lean Community Member

Healthcare is the next great industry to begin the lean journey. The existing model in which the hospital doctor acting as a skilled craftsperson effectively manages their own waiting list of patients, clinics and operations inside someone else's mass production general hospital is reaching the end of the road. We need to create a vision of what it means to be a lean doctor, what is involved in running a lean health delivery organisation and how the context needs to change to help bring this about.

Recent experience in the UK has shown the problem can not be resolved by spending more money or by increasing capacity and staff. Better outcomes for patients, more satisfying working conditions for staff and lower costs to the tax payer (or members of private healthcare schemes) can only come from fundamentally redesigning the underlying processes for delivering healthcare.

The most important difference between healthcare (and many services) and manufacturing is that the patient is present throughout most of the process, indeed the patient is the product and their problem is the purpose of the activity. If you are a manufacturer just think how different your life would be if your product could experience your process and tell you what it was like!

So healthcare is actually two parallel processes that have to be synchronised: the patient process (which begins and ends at home), the diagnostic and treatment process which mirrors it (in GPs surgeries and hospitals) and several enabling support processes like radiology, pathology, pharmacy, supplies, bed management and theatres.

Healthcare has traditionally focused on the patient doctor interaction and ignored the rest of the patient journey - on waiting lists, searching for a place to park, sitting in queues etc. The introduction of patient choice in the UK is beginning to focus attention on reducing these non value creating steps. Our lean experience tells us that these are also symptoms of lots of wasted time and effort in the diagnostic and treatment processes and in the support processes.

The second characteristic is the huge variety of patients with different conditions coming into the surgery or the hospital. To make sense of this we need to see the different product flows through the healthcare system and begin to manage them separately. What turns out to be critical in defining these flows through a hospital is the length of stay (or the rhythm or takt time in lean language) – whether patients go home that day, stay



Lean Enterprise Academy

LEA Healthcare e-letter – 7 May 2006

for a day or two, stay for more than a few days, or whether they need long term care – and then whether they need surgery or other specialist treatments or not (what process routes they follow).

Like manufacturing there is a common assumption that demand is volatile and unpredictable. Experiments with open access to GP surgeries and analysis of people coming into Accident and Emergency Departments shows that demand is actually quite stable and predictable. The greatest variation is in elective work that has been sitting in waiting lists and scheduled and rescheduled many times. Queues (just like inventories) and the scheduling and planning that goes with them actually create significant and unnecessary extra costs throughout the system. The underlying pattern of demand for elective work is also relatively stable.

Having defined the flows (value streams) there is still a strong belief that every patient is different – and cannot be treated like cars going down a production line. However if we sieve the types of problems being treated we quickly see that in each value stream a few problems account for the majority of the work. Once we create a regular flow of patients with these common problems we can actually free up more time for treating the patients with more unusual problems. Indeed because we have a more predictable process we are better able to tell patients what to expect, and even involve them in managing it.

To create steady flow means starting at the end of the value stream – with discharge! If you are not discharging patients as fast as patients are arriving then the process inevitably gums up. So discharge has to pull patients into beds and through theatres and through admission. This means much greater cooperation between departments, more standard procedures, synchronised test cycles and ward rounds and much clearer and unambiguous handoffs. This is where the lean foundations such as standard work, 5S and problem solving can initially help to improve quality and later as activities are linked to increase the number of patients that can flow through the system.

We are still at the beginning of the lean journey in healthcare, as courageous pioneers figure out how to do all this in practice. Once we have a better understanding of how lean can transform existing healthcare delivery organisations it will be time to look beyond at innovative new ways of delivering care and at the design of right-sized tools to facilitate them.

In the end healthcare and manufacturing are not so very different. The language and the sequence of changes may differ, but the lean principles work everywhere. Some senior clinicians and chief executives have recently said that “lean can save healthcare”. Manufacturing and service firms and lean experts can help this cause by sharing their knowledge and their experience of lean with local healthcare organisations.

Lean Enterprise Academy



LEA Healthcare e-letter – 7 May 2006

Yours sincerely

Daniel T Jones
Chairman, Lean Enterprise Academy