



LEAN HEALTHCARE

LAUNCH IN CHINA



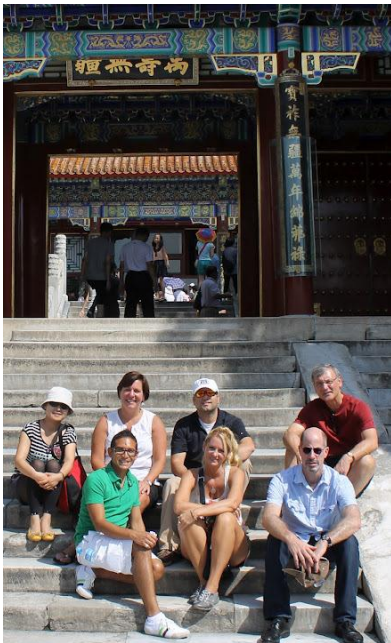
To make the World a Safer place has been at the Core of ULs existence for over a century, healthcare delivery has become one of the highest risks elements affecting humans around the world. China is the most populous nation and has an under-developed and rapidly expanding Healthcare delivery system. Lean Healthcare can enable safer and more effective processes for all.

LEAN HEALTHCARE

LAUNCH IN CHINA

August 12, 2012 marked the beginning of Lean Healthcare in China. Solidifying the relationships and aligning the interests of our key collaborators to focus efforts on carrying forward the awareness campaign of Lean Healthcare in China was a first priority.

Representatives from various organizations traveled from the United States to collaborate with UL on this task. The delegation included Dr. John Toussaint, CEO of the Thedacare Center for Healthcare Value (TCHV); Mrs. Helen Zak, President and COO of TCHV; Mr. Kenneth Segel, Principal at Value Capture; Dr. Marcus Chao, President of Lean Enterprise China, and our group from UL.



The team visited the Summer Palace in Beijing. This Palace was built to provide the emperor a place to escape the heat and bring serenity. The team here sits at the foot of Longevity Hill as a symbol of commitment to our relationship. From top left Lily Liu, Helen Zak, Juan Amador, John Toussaint. Bottom left José Paredes, Natasha LaBruce and Kenneth Segel.

During our visit we not only focused on learning from the environment around us, but we also leveraged our context in order to forge sturdier relationships to support the success of our collaboration. With the great support from our local UL team, we visited historically significant landmarks and delighted in the gastronomy that Beijing offered us.

Like true lean leaders who value understanding the current condition by going to the Gemba, we arranged two key visits. The first was to DiTan

CHINA'S
Rural Healthcare Reform

Key Issues:

1. Rural-urban disparity
2. Inaccessible facilities for the poor
3. Lack of information technology
4. Outdated equipment
5. Rising costs

Three tier rural network:

1. 2,000 county hospitals
2. 29,000 township health centers
3. 620,000 village clinics

What is Lean Healthcare?

Lean healthcare is an organization's cultural commitment to applying the scientific method to designing, performing, and continuously improving the work delivered by teams of people leading to measurably better value (quality/cost) for patients and other stakeholders. Lean healthcare is based upon 5 principles:

1. Specify value
2. Identify value stream
3. Flow without interruptions
4. Patient "pulls" services
5. Pursue perfection

Hospital, a teaching and research institution with a mission to treat infectious diseases. Our delegation was welcomed with open arms and a discussion presented an opportunity to share. We quickly realized that Lean was a foreign concept in healthcare when one of their leaders had to Google lean healthcare just prior to our visit. We also learned that the challenges seen in the US are shared by China, i.e., unbalanced workload, rampant waste in the processes, and a myopic focus on technology as the silver bullet.



After our conversation we ventured out onto the GEMBA. They brought us to a highly automated laboratory for blood analysis where capital equipment investments lay unused. The single morning production batch had already been run; although an adjacent room had a small area with few people working diligently to process blood analysis for outpatients. We asked why the capital equipment was not being leveraged and their response was that it was too costly. We then proceeded to see the inpatients at one of their 44-bed floors staffed by 12 nurses and 8 physicians. Of note was again a high tech system for dispensing medication and even a robot to deliver these to the floors. They also had an inner track and outside track system where the staff worked in the inner track and the patients and their families walked thru the exterior track. The focus of this hospital was infectious diseases and the volume was minimal compared to general hospitals. This hospital was funded by the government and the cost for an inpatient stay was 8 US dollars per day as mandated by the law. When we asked to see metrics not much was shown, and they actually requested help in this area. They understand the financials well but processes are not well understood.

After visiting the Gemba we attended a welcome dinner where we had to understand the cultural norm of determining seating position. After several minutes of seat assignments, we started dinner and tasted the local cuisine, which was a first for many of us. We also toasted with Baijhou to thank our hosts and celebrate the visit.



In this picture you can see our General Manager Larissa Lin along with Natasha LaBruce and Helen Zak raising their glasses to welcome the group into China.

Our next Gemba visit was to a People's Liberation Army (PLA) hospital named 301 military hospital and famous for treating government officials including Chairman Hu. This is one of the largest hospitals in the world with around 10,000 employees, 6,500 beds, and over 15,000 visits per day. The cultural etiquette of China meant our welcome reception had to take place in a very formal room where our delegation met with the top officials of the hospitals who shared an introduction of their hospitals and then gave us the opportunity to share our intent. We met General Gao and Dr. Zhou who hosted us throughout the visit and who can be seen in the welcome room below.



Top Left: welcome reception by General Gao

Top Right: General Gao and Juan discuss intent of UL

Bottom: Delegation pose for picture with key leaders of 301



After the welcoming and an exchange of gifts, we proceeded to a room where over 30 staff members were waiting to hear a lecture from Dr. Toussaint on Lean Healthcare. After this lecture two key questions surfaced. One was about how to share beyond departments. The second one was about who leads the value stream change. Additional ones on metrics and tools also came to light. These questions suggest that they operate in silos and are not part of team but rather individual delivery units. Patients do not want the handoffs and do not like repeating themselves over and over again, all of which imply a lack of respect. At the conclusion of the visit we provided copies of Lean Healthcare in Mandarin to everyone to provide additional insights and headed to the Gemba.



Left: highly automated machine to mix drugs for IV

Below: Ken, John, Helen and Jose in Gemba walk learning about the pharmacy process



Left: trays to insert drugs and separate before dispensing

Right: A team sorting drugs in batches



At the Gemba we walked to the medication distribution center and we saw a great deal of technology underutilization and many examples of waste, e.g., sorting of medications, absence of flow, and many staff members working very hard. All of the aforementioned are things evident in American hospitals where Lean Healthcare knowledge is nonexistent. We then proceeded to the inpatient cardiology CCU floor where after donning germ-protective shoe-coverings, we learned about how they created standards for each role to delineate what patients should get. As we entered the area staff were eager to show and tell us about their fancy iPad, used as a tool to learn about the patient. They also explained how one-nurse patient assignment worked, and how each patient was assigned critical levels in order to downgrade criticality and shift to a large room where others recuperated. They showed us a cart of general consumables outside of the patient room which was replenished daily. The chief nurse

on this floor she was very interested in learning more about lean and reducing waste. She wants to deliver better healthcare and share the benefit of a better process for all of her staff.

After the Gemba walk we proceeded to have lunch with Dr. Zhou and his staff. During our meal one of our delegation members spoke to a young doctor who was touring with us and was reconsidering changing professions because he felt Healthcare workers in China are overworked, underpaid, not respected and the conditions in which they work are not safe. Another challenge that China has is the safety of the employees as well as the patients. The staff at 301 again was very grateful for the visit and has asked us to collaborate with them on many fronts with Lean Healthcare.

After visiting 301 we attended a preconference meeting with the leaders of the Chinese Hospital Association (CHA). The intent here was to gain an understanding of the organizations' goals and how we can align with them. We realized at this meeting that this was the first time that all of the association was coming together with over 3500 participants registered for the summit and 150 originally signed up for our track and now numbering in the 300s. They shared the following objectives:

1. Transform CHA to be more effective and value added to its members
2. Decrease the number of forums and make these larger
3. Increase the number of members from 2800 to 6000
4. Become a knowledge provider (management books, trainings...)
5. Leverage online forums to communicate and share lessons learned
6. Create a Standard for Healthcare (Metrics and Systems)

After our discussions it was determined that Lean Healthcare could become a major element of transforming healthcare in China. The Deputy Minister supported this and encouraged organizations.



Above: At the CHA conference VIP reception, the deputy of the ministry of health of the People's Republic of China and President of CHA Mr. HUANG Jiefu with Dr. John Toussaint and Juan Amador

At the conference we had over 3500 participants learn about UL and Lean Healthcare through our booth, and our track brought over 250 people to hear about Lean Healthcare. In this forum we shared UL's mission and intent, the story of Lean Healthcare Transformation at TheDACare, Johnson and Johnson's lean projects in Hospitals, and Ingersoll Rand's lean experience and products to help make hospitals safer. At the end we launched the Mandarin version of John Toussaint's book, On The Mend, called Lean Healthcare. Dr. Toussaint signed the books and took pictures with the interested leaders.



Left: Juan Amador Kicks off Lean Healthcare Track



Right: John with the CHA Deputy Minister presenting him with a signed copy of Lean Healthcare



Left: over 250 participants join the Lean Healthcare Track



Right: UL, J&J, IR, TCHV, Value Capture together at the first Lean Healthcare forum in China



Left: Helen and John celebrate the translation of On The Mend into Mandarin.



Right: Juan and Marcus posed together at the CHA conference

Overall a great start to share Lean Healthcare in China. Together with our partners we can promote a safer more effective healthcare delivery system that can help people in China live a longer life. Thank you to our great team in China for making this happen, and thank you to those who committed their time and traveled such long distances. Attached you will find several points of learnings and take aways that can help us be successful in China.

Lessons from China visit into Healthcare

Current Thinking

- Covet Technology over Process
- Problems are neither shared nor cherished
- Cost does not seem to be an obstacle
- Lean Healthcare is not understood
- Little evidence of Lean thinking/individuals want it but are not equipped
- There is a clear need for lean
- Mindset of bigger is better
- Too many metrics which are not well defined or communicated

Business

- Consulting business model different than US, i.e., “Capital Equipment Manufacturers give consulting free”
- Price is fixed to a really low level
- We need to start and identify what is the right model that works leveraging the existing one as much as possible
- Certification Products could be welcomed
- Modular education could be welcomed
- An Exchange program with a sister hospital would add value
- We can align many services with the CHA Objectives
- Understand the right leader to engage and define the role
- We still need to learn more from Level 2 hospitals

Policy

- Government is pushing performance management (Standards, Metrics...)
- Healthcare reform is about increasing the access of healthcare and this will create more capacity challenges for healthcare providers
- Ministry of Health is key in driving the right behaviors

Lessons from China visit into Healthcare

Culture

- Relationships are key to gaining commitment
- Awareness of local knowledge and cultural/political implications
- It was visible that the leadership culture is very well controlled by the Government and that Top leaders are figure heads and not actual workers as these get appointed by the government so finding the right leader may not be the TOP leader.
- Speaking local language is important for Advisory and Support
- Chinese have adopted visual queues as a great way to communicate this should be leveraged in marketing to them, as well as in integrating Visual Management
- There are many cultural norms that we must be aware of and make sure we deal with accordingly
- Respecting their knowledge by collaborating with them not just telling them
- Position is important in the organization

Infrastructure

- Primary care is not well developed
- 70% of hospitals? are registered in rural areas
- An average Hospital in the US is equal to the best hospital in China
- There are no dedicated improvement people at the hospitals
- There are 3 types of healthcare providers: Government, Military, Private
- Logistics are a challenge: traffic and other infrastructure
- Utilization of equipment low
- The more capital intensive the higher the hospital level rating and the more funding these get

People

- Building teamwork is high
- Quality of life is impaired by long work hours Silos are high
- Staff are very proud to be helping people's lives
- Enthusiasm for change is high, people want to do the right thing
- Lack of employee engagement
- Safety of employees is paramount; people are not interested in becoming a healthcare service provider as they are not respected (low pay, unsafe...)