

A Day at a Lebanese University Hospital:

What Cardiac Catheterisation Taught Me About Patient Value

A Field Report & LinkedIn Reflection | By Dany H. Elias

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FOREWORD

Lean thinking was born on the factory floor, but its core philosophy — **eliminate waste, deliver value, respect the human** — is universal. Nowhere is this more urgent than in healthcare, where waste is not measured in scrap metal or idle machines, but in patient suffering, family anxiety, and eroded trust.

Recently, I accompanied a relative for a **Cardiac Catheterisation** procedure at a reputable Lebanese university hospital. As a lean consultant, I could not help but observe every process step with professional eyes. What I witnessed was a textbook case of good intentions undermined by poor process design — a system built around the convenience of providers, not the **value of the patient**.

This report documents that experience, maps it against the 5 Lean Principles and the 7 Types of Waste, and proposes practical recommendations for patient-centred care transformation. This is not a criticism of dedicated healthcare workers — it is a call to redesign the system they operate within.

" The patient's time has value. Their anxiety is real. Their dignity matters. A world-class hospital is not just about surgical excellence — it is about the entire experience. "

THE PATIENT JOURNEY — MINUTE BY MINUTE

Below is a factual reconstruction of the day, from the patient's arrival to discharge. Read it as a **value stream map** — and identify for yourself where value ends and waste begins.

07:00	Patient arrives at hospital as instructed.
07:00–07:20	Admission papers processed — efficient start.
07:30	Admitted to room. Gown provided, questionnaire completed in 5 min.

07:30–08:00	Routine tests: blood pressure, blood samples, temperature.
08:00	ALL pre-op steps complete. Patient told to wait 1–2 hrs. Wait begins.
10:30	Family asks for update. Answer: 'Soon.'
11:30	Family asks again. Nurse reveals patient is scheduled LAST of 3 procedures.
12:30	Patient finally taken to OR — 4.5 hours after pre-op completion.
13:15	Patient returns with severe nausea and headache. No prior warning given.
13:15–14:15	Family pushes for pain relief — 1 hour delay before medication administered.
15:30	Patient stabilised. Discharge. Family leaves exhausted and frustrated.

Key Observation: The entire pre-operative process was completed efficiently in under 60 minutes. The patient was then held waiting for **4 hours and 30 minutes** with zero value-added activity, zero proactive communication, and zero transparency on scheduling. The procedure itself took only 45 minutes. Total value-added time: ~105 minutes. Total time spent at hospital: ~8.5 hours. **Value Ratio: 20.5%. Waste Ratio: 79.5%.**

THE 5 LEAN PRINCIPLES — APPLIED TO THIS EXPERIENCE

James Womack and Daniel Jones defined Lean through five fundamental principles. Let us examine each through the lens of this hospital visit.

1	2	3	4	5
VALUE	VALUE STREAM	FLOW	PULL	PERFECTION
Define value from the patient's perspective. Not the doctor's schedule.	Map every process step. Eliminate steps that add no patient value.	Make the care journey smooth and continuous. No unnecessary stops.	Schedule based on real OR readiness — pull the patient, don't push.	Continuously improve. Every patient experience is a kaizen opportunity.

1. VALUE — Define It From the Patient's Seat

In this hospital, 'value' appeared to be defined by the surgical team's schedule: three cath procedures in a morning block, patients admitted early for convenience of preparation logistics. But the patient's definition of value is radically different: receiving the procedure safely, being informed at every step, experiencing minimal waiting, recovering with proper support, and going home feeling cared for — not processed. The hospital delivered on clinical outcome but failed on almost every dimension of experiential value.

2. VALUE STREAM — Map and Eliminate Non-Value Steps

A value stream map of this patient's day would reveal that of the 510 minutes spent at the hospital, fewer than 110 minutes involved direct clinical activity (pre-op, procedure, recovery monitoring). The remaining ~400 minutes were pure waste — waiting, uncertainty, and reactive management. A value stream mapping exercise with the hospital team would surface this starkly and build the case for process redesign.

FLOW — Make Care Continuous .3

Flow was broken the moment the patient entered a 4.5-hour holding pattern. In lean terms, the 'baton' was dropped after pre-op. The OR schedule was not synchronised with the ward schedule. Care stopped flowing and the patient became inventory — waiting in a room, a number in a queue.

4. PULL — Schedule Based on Real Demand

This hospital operated on a push system: admit everyone early, run procedures when the OR team is ready. A pull system would trigger patient admission only when the OR slot is confirmed and imminent. This is standard practice in many European and North American hospitals and reduces ward occupancy, patient stress, and family burden dramatically.

5. PERFECTION — Pursue Continuous Improvement

The nurses were friendly, the facilities functional, and the procedure was clinically successful. But perfection demands we ask: can we do this better? Can the patient leave saying 'that was efficient, clear, and respectful of my time'? The gap between today's experience and that ideal is the lean improvement roadmap. It starts with listening to patients, not just treating them.

THE 7 TYPES OF WASTE — ALL PRESENT IN ONE DAY

Taiichi Ohno identified seven types of waste (Muda) that consume resources without creating value. Remarkably, all seven were observable in this single patient journey. In a hospital context, these wastes do not just cost money — they cost patient wellbeing.

1. WAITING	4.5 hours of non-value-added waiting after pre-op completion. The longest and most painful waste experienced.
2. OVERPROCESSING	Patient arrives at 7 AM for a procedure not scheduled until the afternoon. Full pre-op at 8 AM for a 12:30 slot adds zero value.
3. DEFECTS	Incomplete post-procedure information: no briefing on side-effects, anaesthesia, or administered medications — causing anxiety and delayed care.
4. TRANSPORTATION	Unnecessary early physical transfer to a room and preparation for a procedure hours away from being ready.
5. INVENTORY	OR queue mismanaged: three procedures stacked without levelled scheduling. Resources (room, nurse, family time) held idle.
6. MOTION	Family forced to repeatedly walk to the nursing station to chase updates that should have been proactively communicated.
7. UNDERUTILISED TALENT	Nurses unable (or unwilling) to answer basic clinical questions, preventing informed decisions and eroding trust.

PATIENT-CENTRED VALUE: REDESIGNING THE EXPERIENCE

The fundamental problem revealed by this experience is a **misalignment of value**. The hospital's processes are designed around the operational convenience of the medical and scheduling teams. This is understandable — coordinating ORs, surgical teams, anaesthesiologists, and equipment is genuinely complex. But complexity on the provider side must never be transferred as burden to the patient.

A **patient-centred value process** starts with a simple question: *'If I were the patient, what would an ideal experience look like?'* The answer is not complicated:

- ✓ I arrive when my procedure is actually near — not 5 hours early.
- ✓ I am told exactly what will happen, step by step, before and after.
- ✓ I am updated proactively if there are delays — not left wondering.
- ✓ When I experience side-effects, the team is prepared and responds immediately.
- ✓ I leave informed, cared for, and respected — not exhausted and confused.

None of these requirements demand advanced technology or significant investment. They demand **process discipline, communication protocols, and a cultural shift** that puts the patient at the centre of every operational decision.

SIX LEAN RECOMMENDATIONS FOR THIS HOSPITAL

SCHEDULE SMARTLY	Align patient arrival time with actual procedure slot. If OR slot is 12:30, admit at 11:00. Eliminate 4+ hours of pointless waiting.
COMMUNICATE PROACTIVELY	Provide real-time updates on queue position and estimated time. A simple WhatsApp message or display board eliminates anxiety and nurse interruptions.
BRIEF THOROUGHLY	Pre-procedure AND post-procedure briefings are non-negotiable. Patients and families must know what to expect: side-effects, medications, recovery signs.
EMPOWER NURSES	Nurses must be trained and authorised to answer clinical questions confidently. They are the primary point of contact — their competence is the hospital's reputation.
LEVEL THE LOAD	Balance OR scheduling using heijunka principles. Three complex procedures in one morning without levelling creates bottlenecks and cascading delays.
MEASURE WAIT TIME	Track and publish patient wait-time KPIs. What gets measured gets improved. Target: zero non-value-added waiting.

CONCLUSION — THE PATIENT COMES FIRST. ALWAYS.

This hospital did many things right. The staff were kind. The facility was clean. The procedure was performed successfully. But kindness without process efficiency is not enough. A patient undergoing cardiac catheterisation — and their family — arrive at that hospital in a state of vulnerability, anxiety, and trust. They deserve a system that honours that trust with precision, transparency, and respect for their time.

Lean is not about cutting corners or reducing headcount. In healthcare, lean is about **removing everything that is not care** — every unnecessary wait, every uninformed moment, every process step that serves the system rather than the person at its centre.

The most powerful lean tool in any hospital is not a Kanban board or a value stream map. It is the simple, radical act of asking patients: *'How was your experience today?'* — and then having the courage to act on the answer.

If you are a hospital administrator, a healthcare professional, or a lean practitioner reading this — I invite you to spend one day as a patient in your own system. Not in a board meeting reviewing KPIs. As a patient. Waiting. Wondering. Hoping. That single experience will tell you everything your dashboards cannot.



#LeanThinking #HealthcareImprovement #PatientFirst #LeanManufacturing #ProcessExcellence
#ContinuousImprovement #LeanHealthcare #Kaizen #WasteElimination #Lebanon

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