What problems are we trying to solve?

What challenges do frontline leaders in healthcare face?

- Time pressured - high service demand
- Data rich but information poor
- Unclear on what to prioritise
- Communication challenges
- Variability in quality of care & patient experience
- Inconsistent processes & inefficiencies
- Staff time not always well utilised
- Resource constrained

…..Putting out fires all day

Model 1: Squeeze the orange

- **Top-down**
- Squeeze the non-clinical activities
  - Supply costs
  - Revenue cycle improvements
  - Preferred suppliers / vendors
  - Labor costs
- Clinicians resist 'standardization' & cost-cutting
- Morale suffers: done to, not done with

Model 2: "Knowledge is Power": Bottom Up

Data on cost & quality

$+$

Performance Improvement Methods

$+$
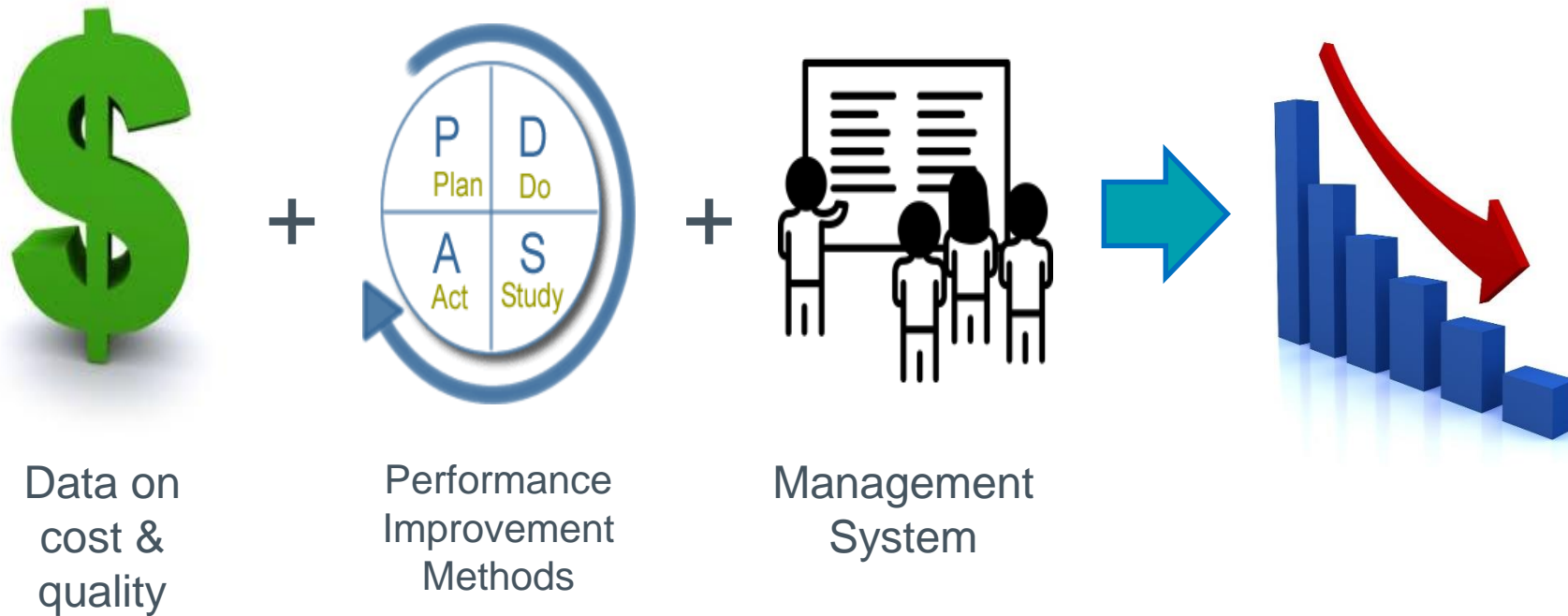
Management System

Continuous Value Improvement @ the Front-Line
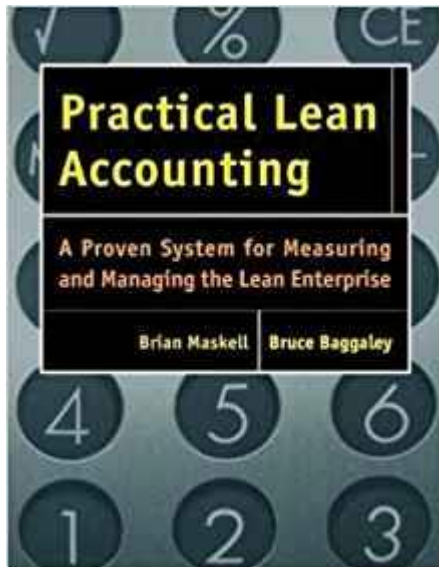
Value Management System

- Provide frontline staff with **timely & useful data** in order to inform improvement efforts that **align with organisational goals**

- Improve **quality**, better utilise **staff capacity** & maintain/lower **costs** as part of routine local management

$$\text{VALUE} = \frac{\text{Quality}}{\text{Cost}} = \frac{\text{Outcomes + Patient Experience}}{\text{Direct Costs + Indirect Costs}}$$

Lean Accounting

This is not new … in industry

… focuses on the key principle of Lean thinking, which is creating value for the customer. This focus highlights the need to measure financial progress from a perspective of relevant business issues and real cost instead of traditional standard cost methods.

J.T. Battenberg III,
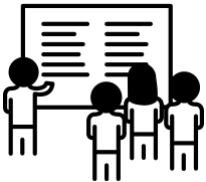Chairman, CEO and President, Delphi Corporation,
June 2004

The solution – 3 key elements

Value can be achieved through the application of **improvement science** & these 3 elements:

1. **Box Score**

2. **Visual Management**

3. **Communication Method - Huddles**

1. Box Score

2. Visual Management

3. Communication Method - Huddles

4. Achieving Results

Box Score

1. Performance Metrics

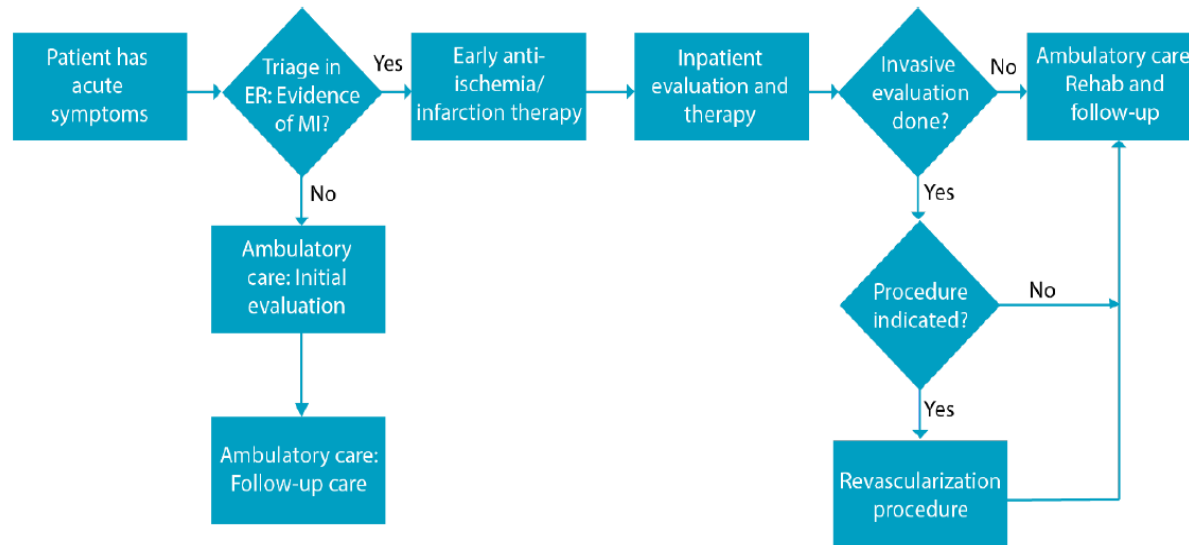| 2. Capacity Metrics |
|:---:|

3. Financial Metrics

|		Week-1 4 th to 10th Feb 2018	Week-2 11th to 17th Feb 2018	Week -3 18frb to 24 feb 2018	Week -4 25th feb-3rd March 2018
Performance Measures	Discharge timing to improve the patient access to bed	40%	36%	25%	50%
	Long Term Patients	10	11	11	10
	patient experience- What matters to you				85%
	Prevalence study of HDU B Skin issues	2	0	3	2
	Rejected samples	0.00%	1.50%	0.00%	0.60%
	Total number of Blood samples	238	190	166	154
	RN overtime hours	176	160	176	136
Capacity Measures	Direct Nursing care hours/ Day Shift	57%	57%	57%	61%
	Indirect Nursing care hours/ Day Shift	42%	42%	42%	37%
	Available Nursing hours. /Day Shift	1%	1%	1%	2%
	Direct Nursing care hours /Evening shift	55%	55%	55%	60%
	Indirect Nursing care hours/evening Shift	30%	30%	30%	25%
	Available Nursing hours. /Evening Shift	15%	15%	15%	15%
	Direct Nursing care hours/ Night Shift	40%	40%	40%	40%
	Indirect Nursing care hours/ Night Shift	25%	25%	25%	35%
	Available Nursing hours. /Night Shift	35%	35%	35%	25%
Financial Measures	RN regular time costs			QR.134064	QR.137200
	RN OT costs	QR.10112	QR.9193	QR.10112	QR.7814
	Pharmaceutical costs	QR. 11236	QR.7535	QR.12120	QR.16789
	Consumables costs	QR.16443	QR.15871	QR.18814	QR.19406
	Laboratory costs	QR.18550	QR.11790	QR.13560	QR.13120
	Total cost per patient days			QR.1347	QR.1398

HH.HDU-B Value Stream Box Score

Selecting metrics that matter

Process mapping with multi-disciplinary team

Alignment to strategic goals & measures (linkage chart)
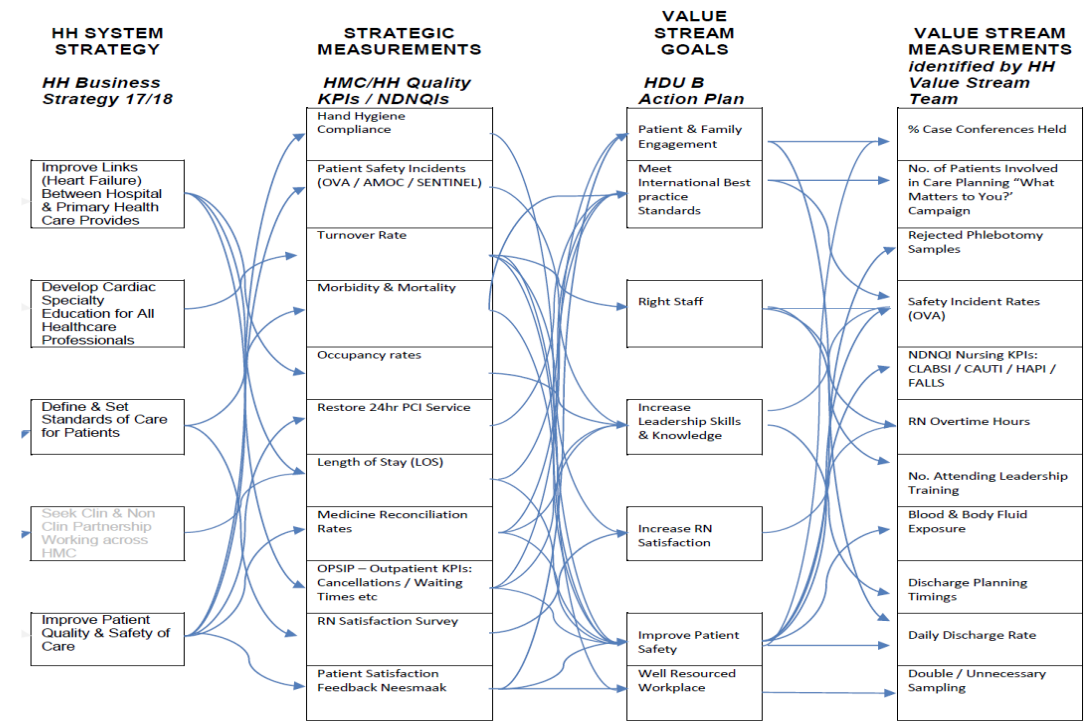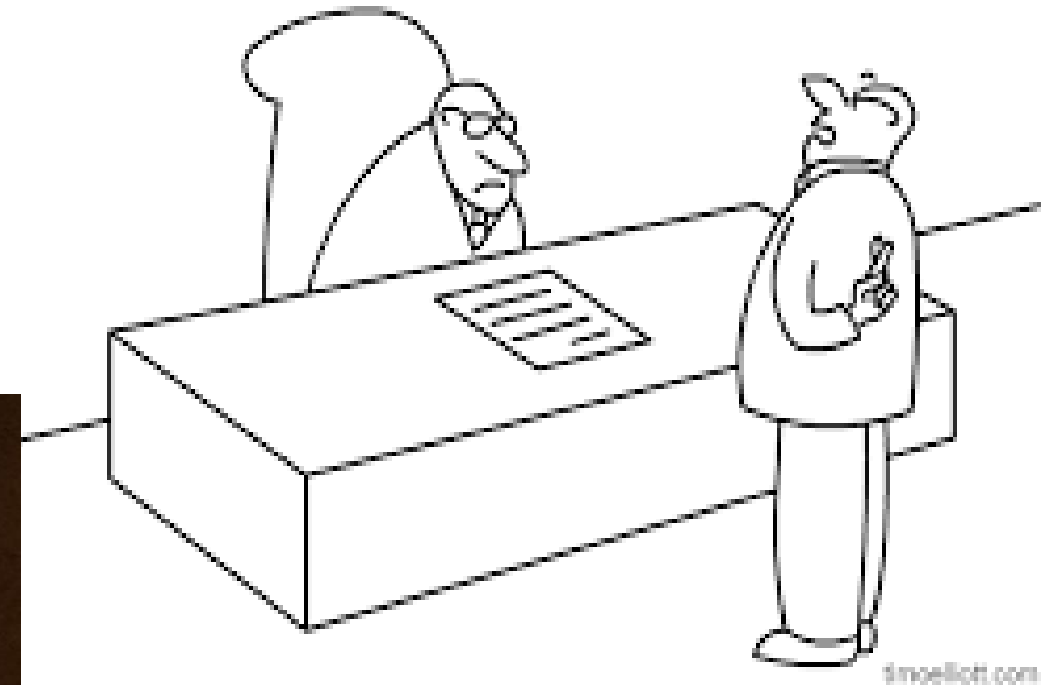
Capacity Measures

Why measure capacity?

- Understand how staff are spending their time over different shifts:
  - Direct care
  - In-direct care
  - Available time

- Identify opportunities to better utilise time

Direct Care	Time allocation	Indirect care	Time allocation
Personal care (washing/dressing/feeding)		Communication (huddles, handovers)	
Medication administration		Medication preparation	
Hourly rounding (toileting/position changes/skin checks)		Social (MDTs, care homes, district nurses)	
Clinical (catheter/lines/drains/wounds)		Paperwork & documenting in medical record	

Financial Measures

- Engage staff from the finance team

- Focus on variable costs

- Try to get weekly data - but be pragmatic

- Aim to maintain/reduce costs ....whilst improving quality

VALUE = QUALITY / COST

GOT THIS...
DATA IN OUR EHR

MISSING THIS!
ACCURATE COST DATA

timoelliott.com

"Yes sir, you can absolutely trust these numbers"

1. Box Score

2. Visual Management

3. Communication Method - Huddles

4. Achieving Results

Visual Management Board

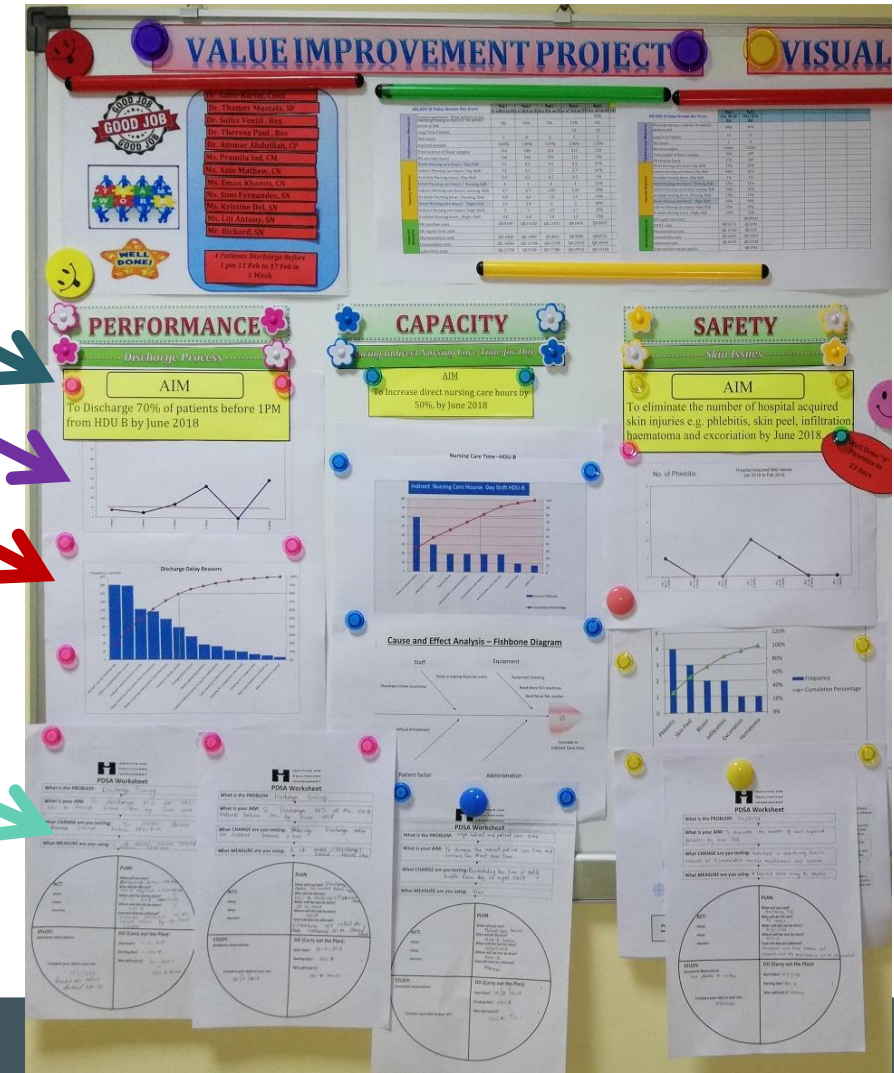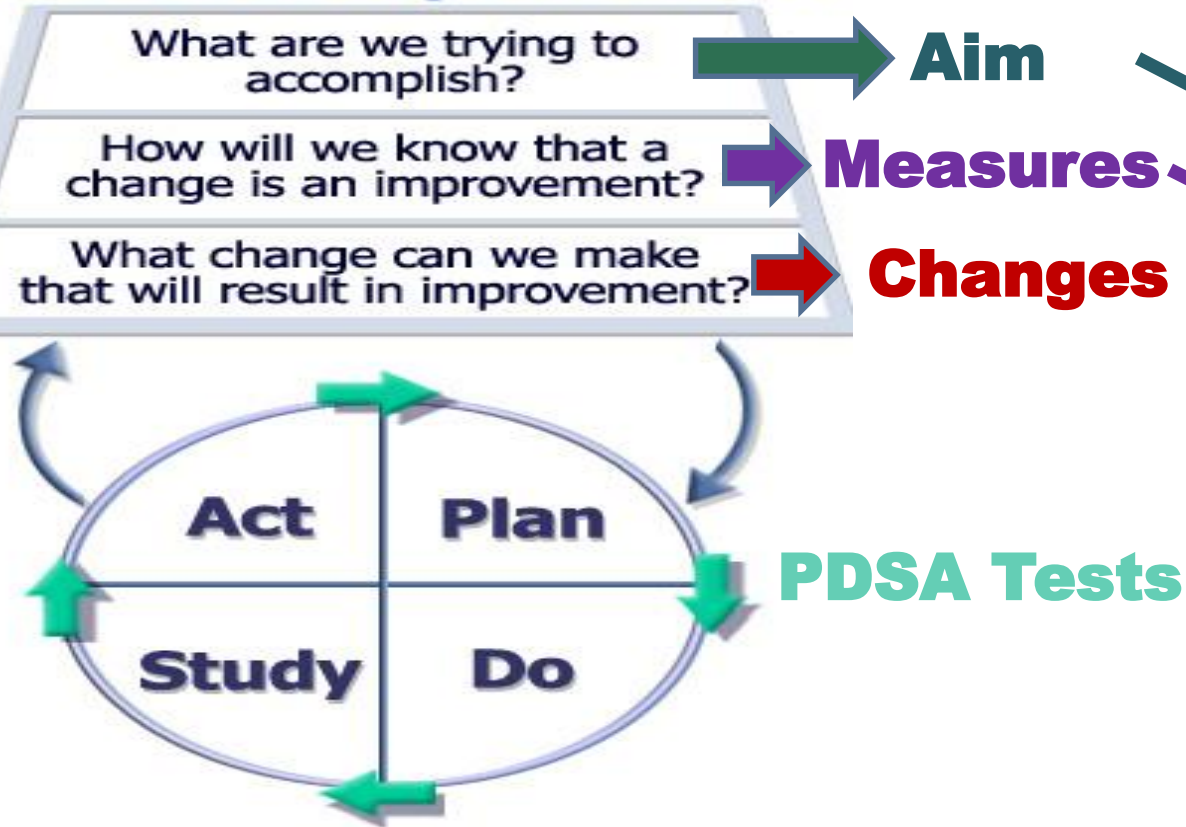# Visual Management Board

Box score - updated on a weekly basis

Select ~5 strategic improvement areas based on measures from box score for "deeper dives"

Use improvement science to get results

Apply improvement science to get results

Model for Improvement

What are we trying to accomplish? → **Aim**

How will we know that a change is an improvement? → **Measures**

What change can we make that will result in improvement? → **Changes**

Act · Plan · Study · Do

PDSA Tests

Langley, et al, The Improvement Guide, 2009

PDSA examples

- Quality (Outcomes & Patient Experience)
  - Established best practice bundles (phlebitis, VTE, falls etc.)
  - Introduced SOPs for ward rounds & discharge checklists

- Cost
  - Substituted high cost pharmaceuticals with lower cost equivalents
  - New ordering processes to reduce unnecessary blood tests

1. Box Score

2. Visual Management
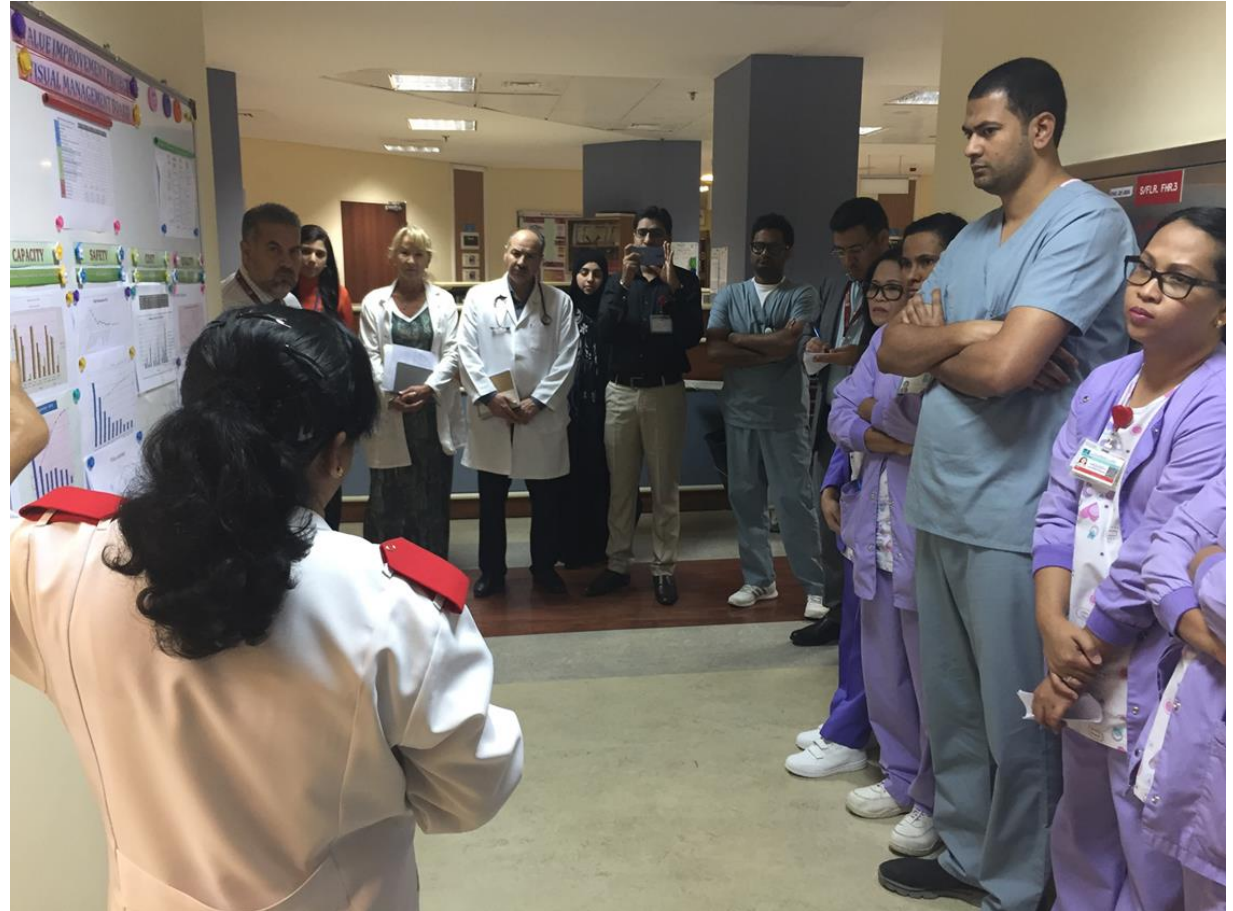
3. Communication Method - Huddles

4. Achieving Results

Communication Method - Huddles

- Conducted weekly around the Visual Management Board

- Should involve multi-disciplinary team

- Last < 15mins

- Uses a standard agenda
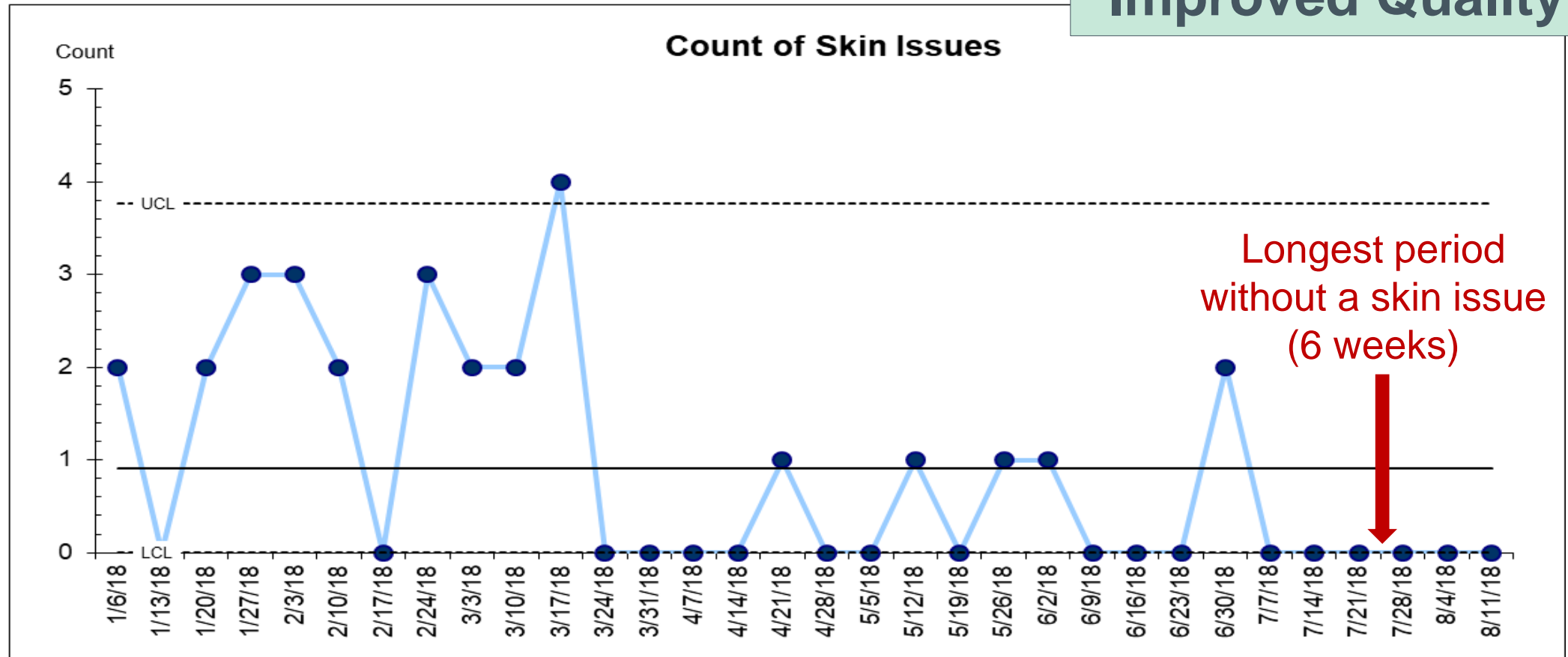
1. Box Score

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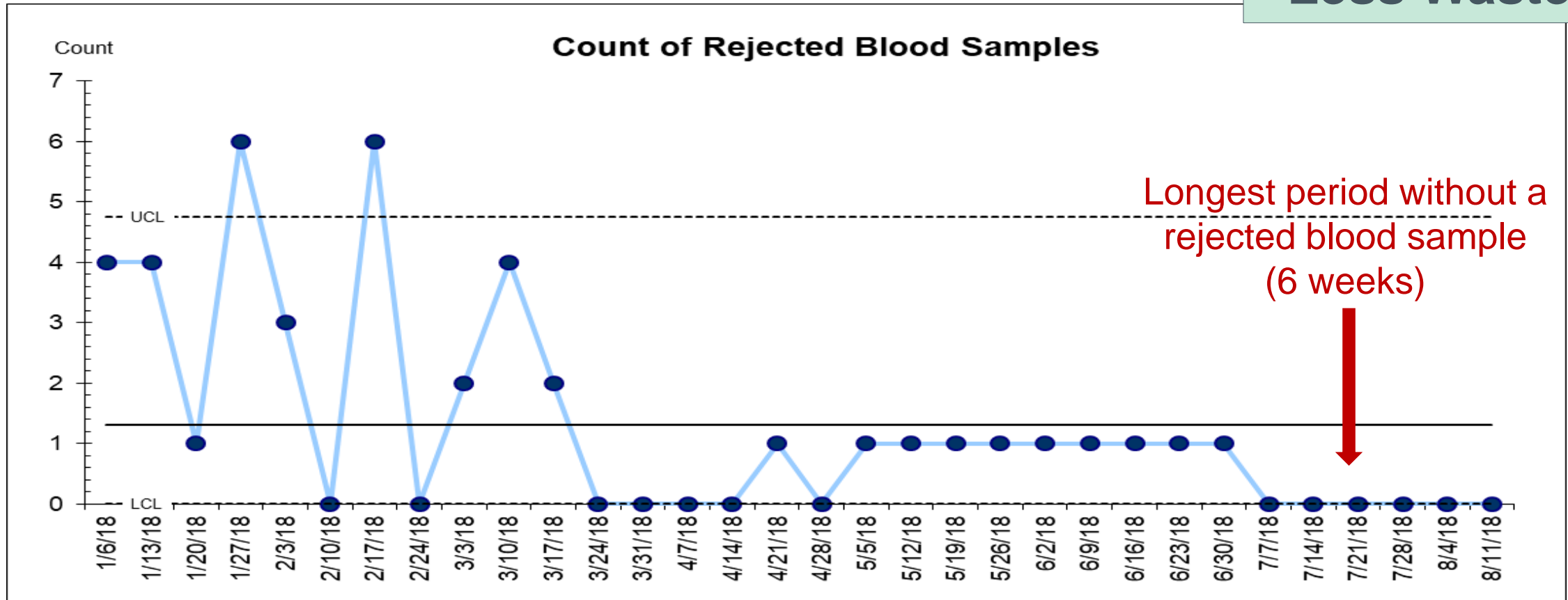
4. Achieving Results

Results: Heart Hospital Pilot (Doha)
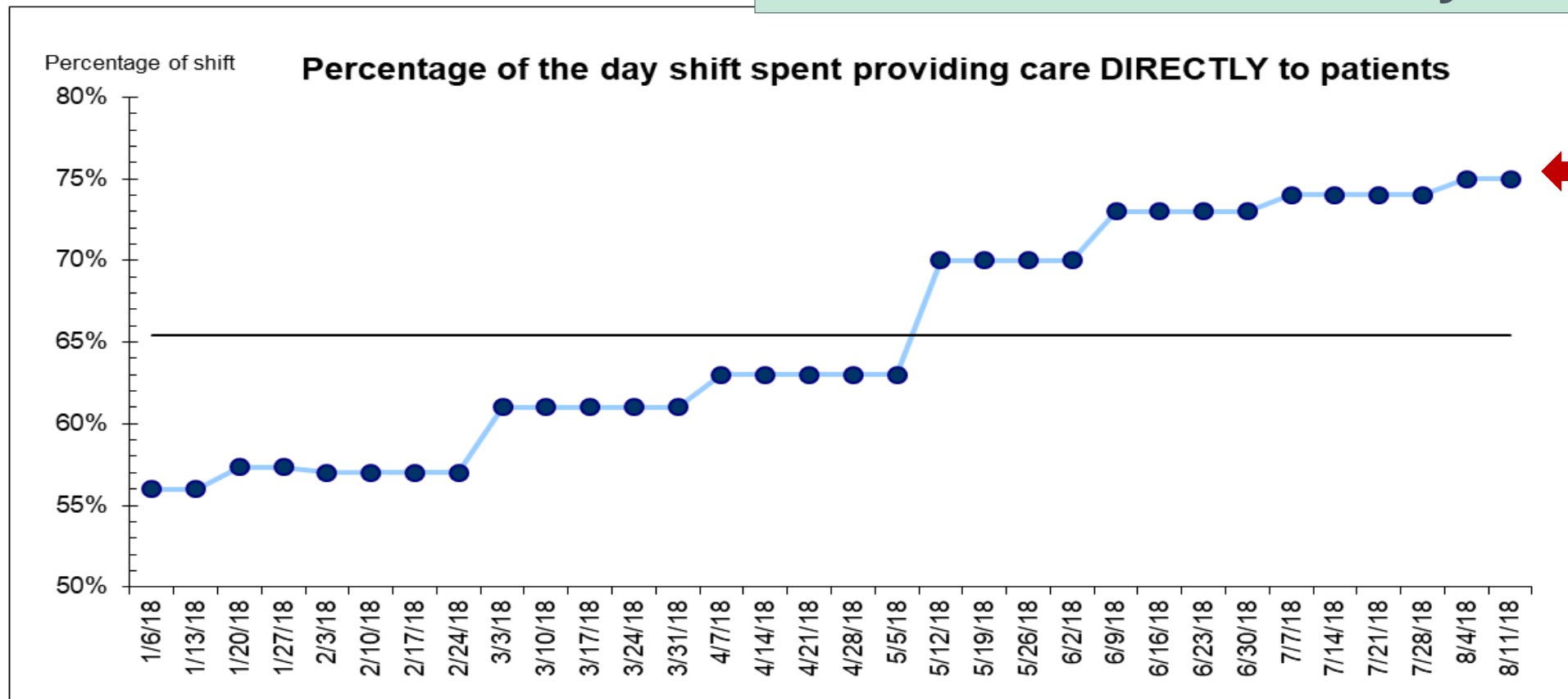
Improved Quality

Count of Skin Issues

Longest period without a skin issue (6 weeks)

Results: Heart Hospital Pilot (Doha)

Results: Heart Hospital Pilot (Doha)

Increased time directly with patients

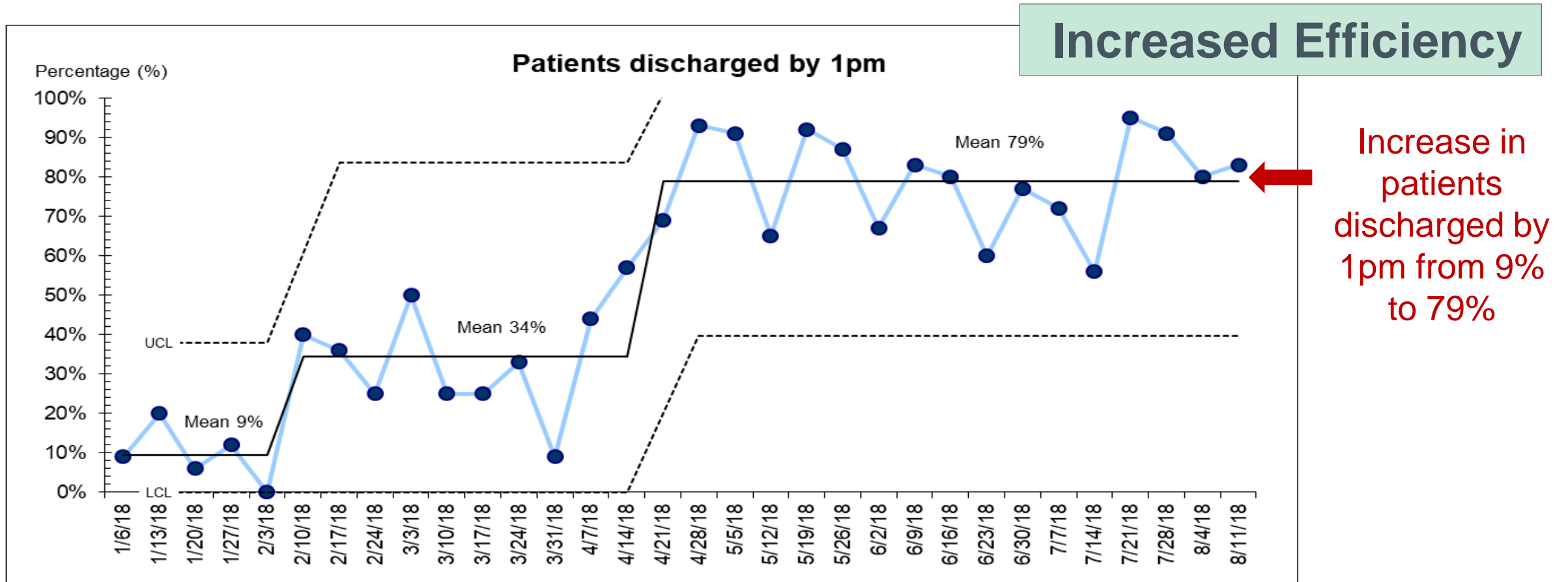Percentage of shift

Percentage of the day shift spent providing care DIRECTLY to patients

Increase in percentage of the day shift spent directly providing care to patients from 56% to 75%

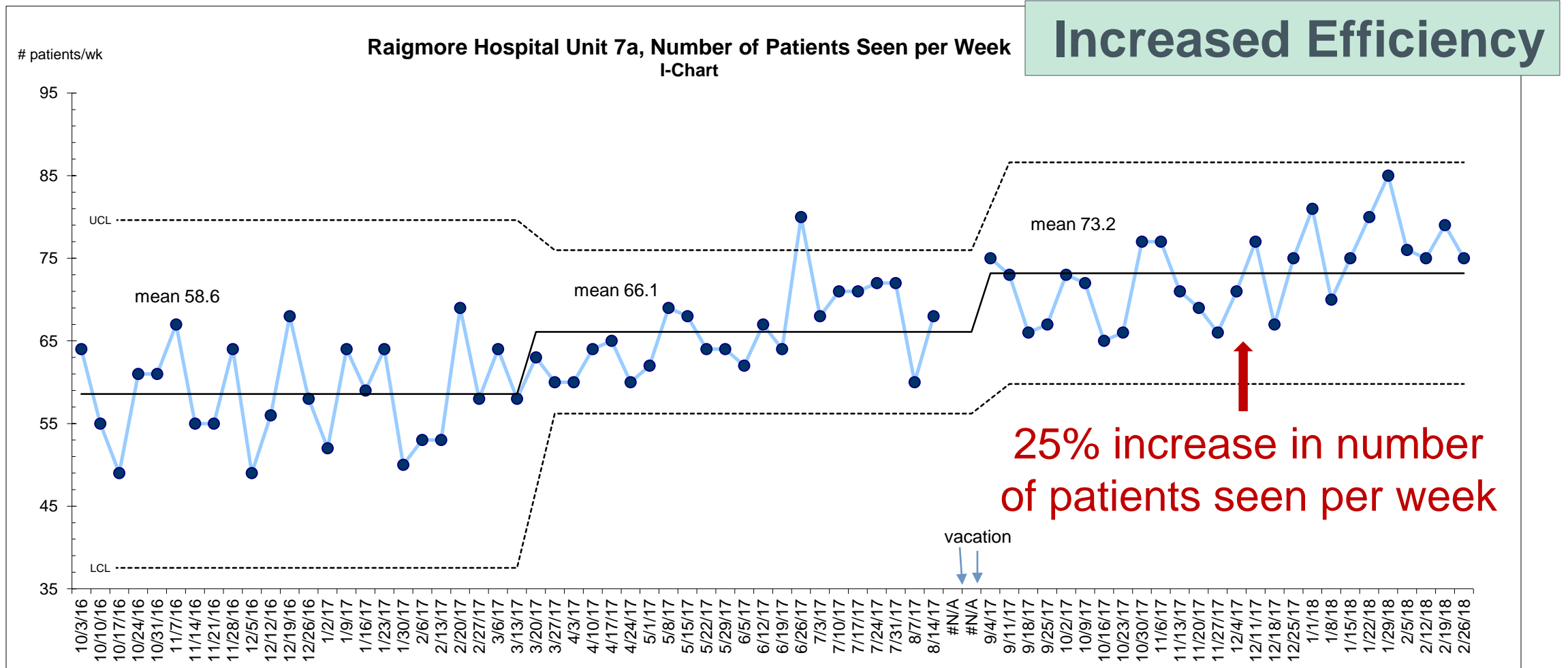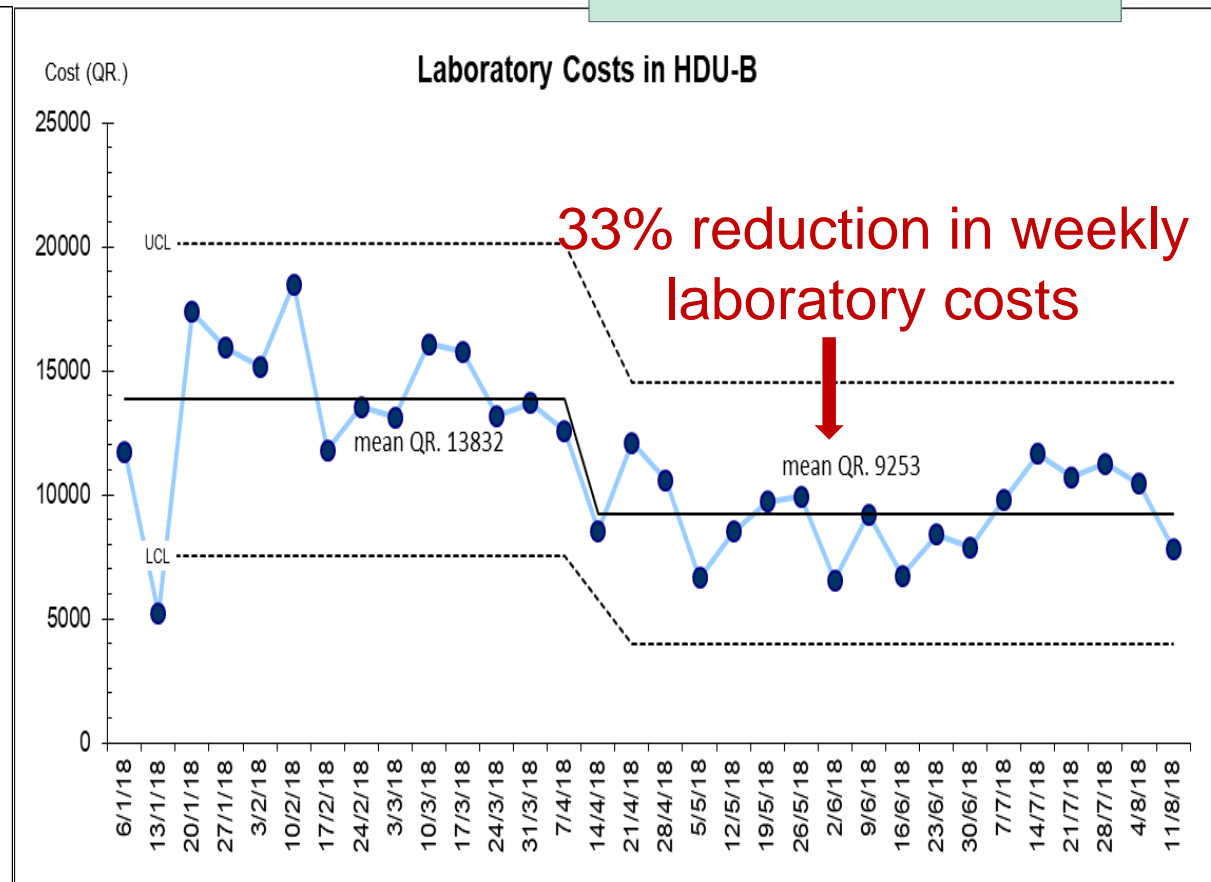# Results: Heart Hospital Pilot (Doha)

Increased Efficiency

Increase in patients discharged by 1pm from 9% to 79%

Results: Raigmore Hospital Pilot (Scotland)

Raigmore Hospital Unit 7a, Number of Patients Seen per Week
I-Chart

patients/wk

Increased Efficiency

mean 58.6

mean 66.1

mean 73.2

UCL

LCL

vacation

25% increase in number of patients seen per week

Results: Heart Hospital Pilot (Doha)

Lower cost

52% reduction in weekly RN overtime costs

33% reduction in weekly laboratory costs

Results: Raigmore Hospital Pilot (Scotland)

Lower cost

Raigmore Hospital Unit 7a, Weekly Average Cost Per Patient
I-Chart

Cost per Patient, £

mean 823£

mean 732£

mean 621£

25% reduction in cost per patient

vacation,
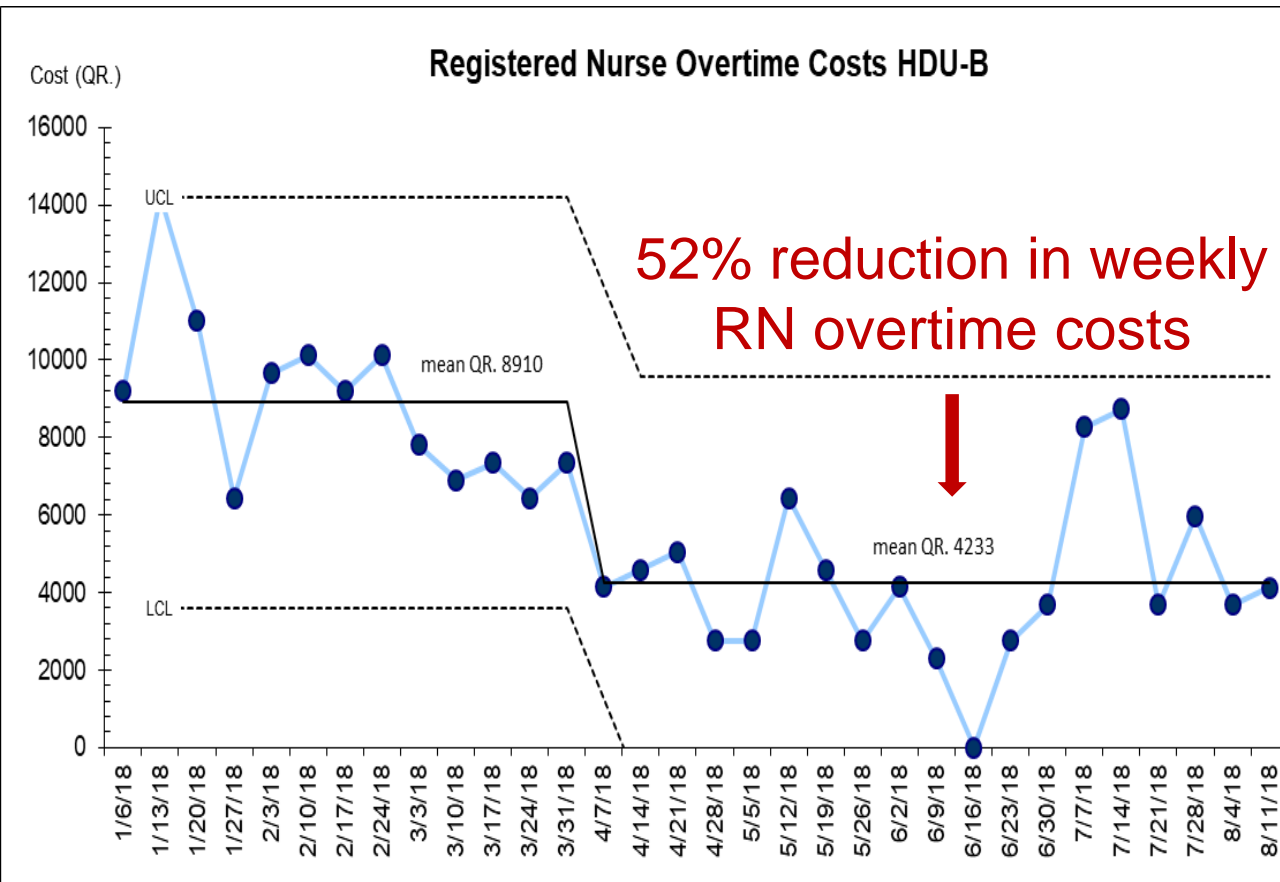
What have we achieved?

What is a 'day in the life' for a frontline leader in health care?

- Visibility of metrics that matter
- Clarity on what to prioritise
- Alignment of efforts
- More effective communication
- Less variability – processes & outcomes
- More efficient & coordinated services
- Improved staff morale & better utilisation of time
- Improved patient experience
- Value – Increased quality & lower costs (ROI)

….. Focus on continuous improvement

How do we get there?

Visual Management + Data (Box Score) + Communication Method (Huddles) + Improvement Capability + Will to Solve Problems + Leadership Support
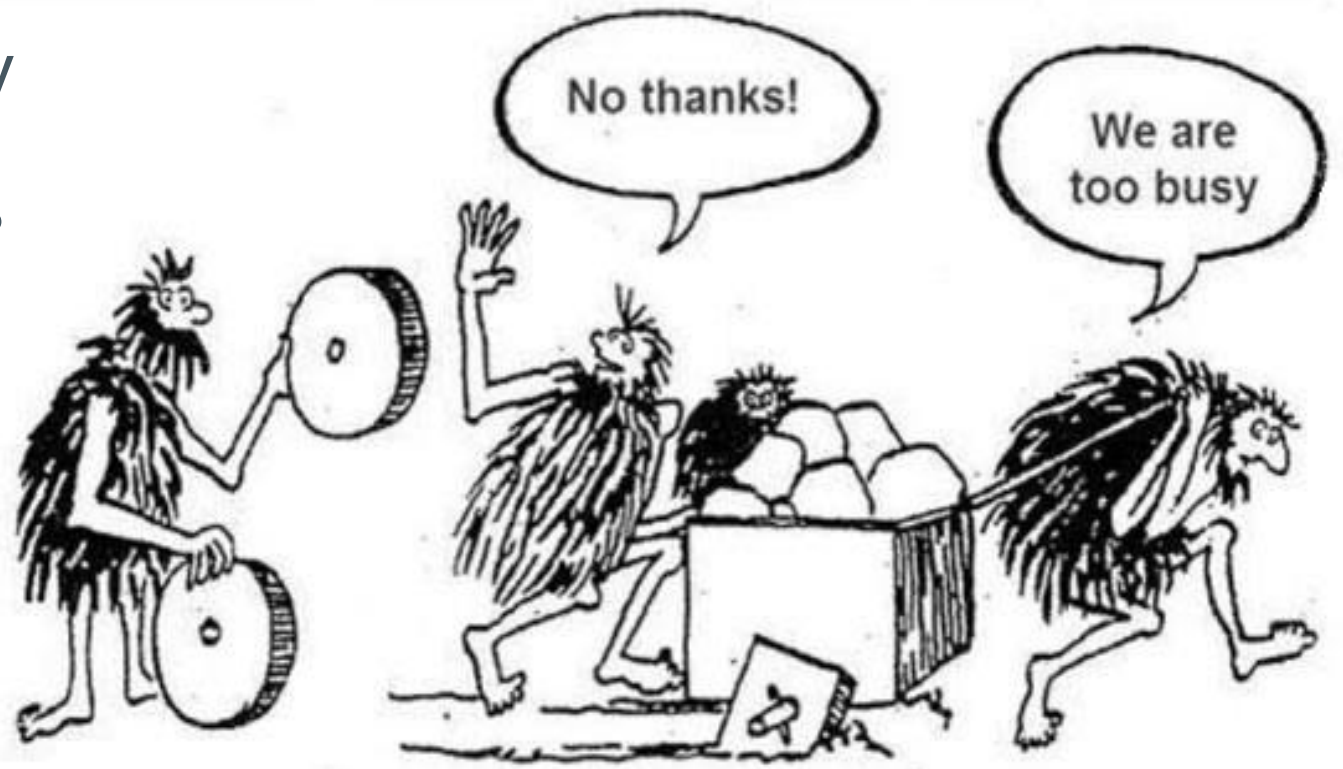
PROCESS + **PEOPLE**

= VALUE = Quality / Cost = Outcomes + Patient Experience / Direct Costs + Indirect Costs

Additional Enablers

- Effective governance structures & role clarity: Exec. Sponsor, Team Lead, QI Coach, Physician Champion & Project Owners

- Coach & build staff capability

- Embed into routine practices

- Standardise & sustain

- Celebrate success….

  & learn from failure

Lessons Learned

- It's possible to get staff to engage deeply in cost reduction, as long as you empower them; devolve power to the front line
- Teams are capable of continuously *doing the work* and *improving the work* simultaneously, but they need a coherent management structure to organize those workstreams
- Power of building on improvement methods– we could hypothetically do this work with any health system anywhere in the world and see significant benefit

How are we evolving the system?

- Developing standardized tools (training modules, pre-work, team contract, deep-dive tools, coaching guide, progress tracker)

- Building daily management system

- Focusing on strategy deployment with system executives

- Scale up across health systems

Resources

- Value Management References

    https://hbr.org/2016/11/4-steps-to-sustaining-improvement-in-health-care

    https://hbr.org/2017/10/a-simple-way-to-involve-frontline-clinicians-in-managing-costs

    http://www.ihi.org/communities/blogs/_layouts/15/ihi/community/blog/itemview.aspx?List=7d1126ec-8f63-4a3b-9926-c44ea3036813&ID=302

    http://www.ihi.org/communities/blogs/lean-accounting-how-to-turn-data-overload-into-continuous-improvement

- IHI Open School http://www.ihi.org/education/IHIOpenSchool/Pages/default.aspx

- IHI's QI Essential Toolkit

    http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx

Questions