



kinetik solutions



## Lean London Forum

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11<sup>th</sup> February 2010

Royal College of Surgeons - Holborn



## **We have several broad aims**

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- **To create the environment where Lean Solutions in the NHS are shared, discussed and acted upon by practitioners in the Health service**
- **To engage in a debate about strengths and weakness of lean in the current NHS climate**
- **To network and with new colleagues and friends**



## Agenda

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- **1800 - 1805**    **Introductions to Speakers, Agenda and Ground Rules**  
**Rob Worth, kinetik solutions**
- **1805 - 1825**    **Challenges in Implementing Lean - A Clinical Perspective**  
***Dr Ahmed Chekairi - Whittington Hospital***
- **1825 - 1835**    **A Better Definition of 'Value' in Lean**  
***Ketan Varia - kinetik Solutions***
- **1835 - 1900**    **Lean in the pharmaceutical drugs supply process**  
***Niall Ferguson - Milton Keynes Hospital***
- **1900 - 1930**    **Questions and Answers from practitioners**  
**Facilitator - *Ketan Varia***
- **1930 - 2000**    **Networking and Drinks**

# Challenges in Implementing Lean, a Clinical Perspective

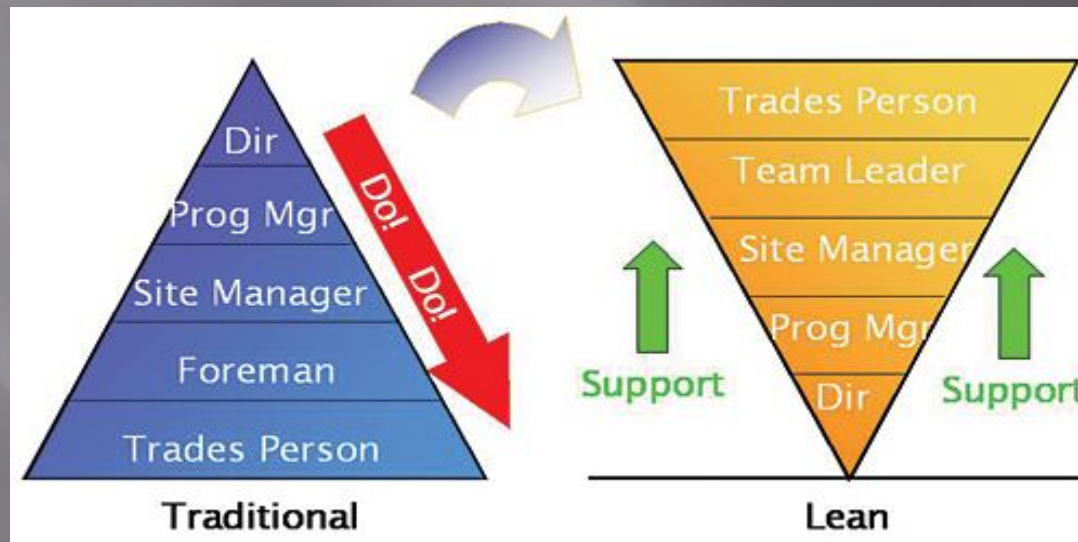
Ahmed CHEKAIRI

MD, FRCA, PGCert Management in Healthcare  
Consultant Anaesthetist, Whittington Hospital

Lean London Event: Royal College of Surgeons  
11 February 2010



# Organisation Structure



# Leadership



'Develop leaders who live your system from top to bottom' *The Toyota way* chapter 10: 219-241

**NHS**



# Leadership

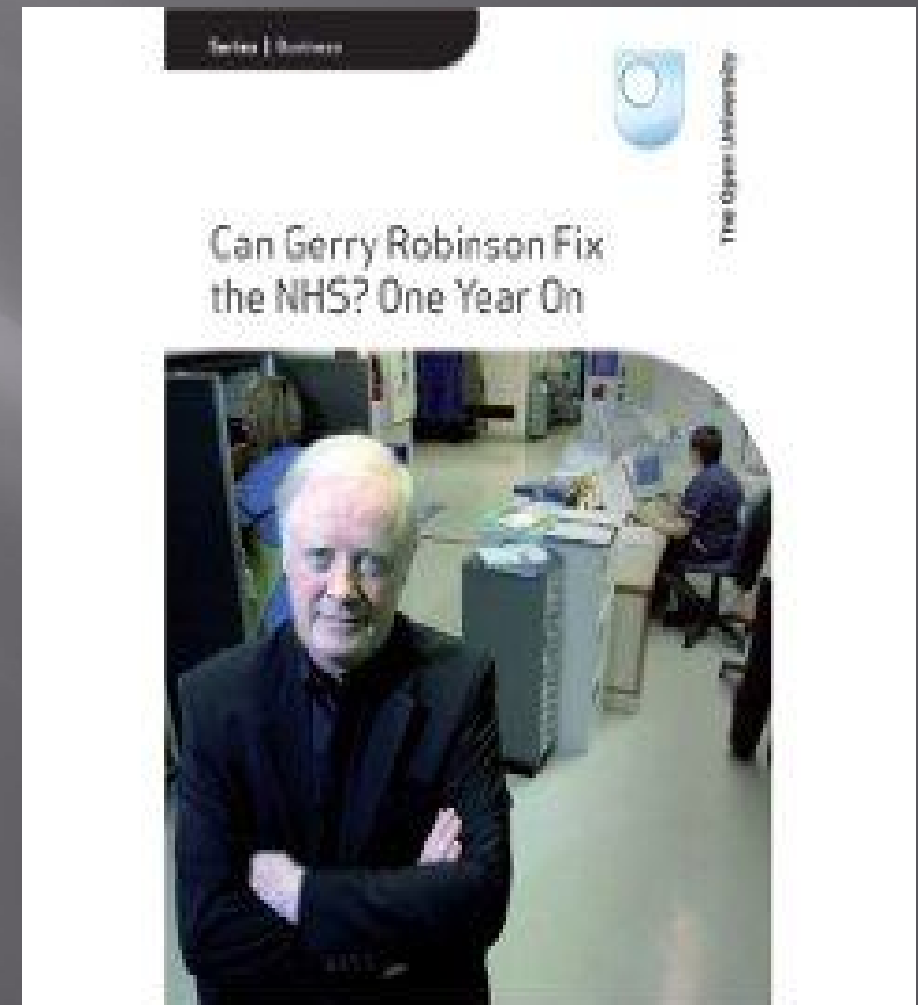


'Develop leaders who live your system from top to bottom' *The Toyota way* chapter 10: 219-241

*'what strikes managers entering healthcare organisations from other sectors, whether from public or commercial sectors is the absence of defined hierarchical structures for command and control'*



## Sir Roy Griffiths, 1983



# Customer & Product



**NHS**



**FreakingNews.com**

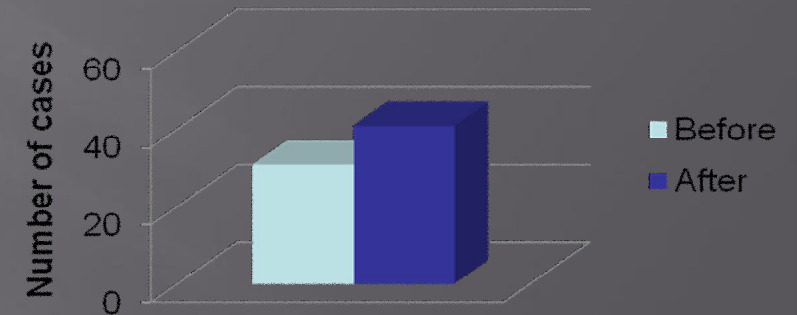


# Measuring Performance



**NHS**

Number of cases done before and after introduction of Trauma List Plan



## The Toyota Production System "Lean" Healthcare Cultural Transformation

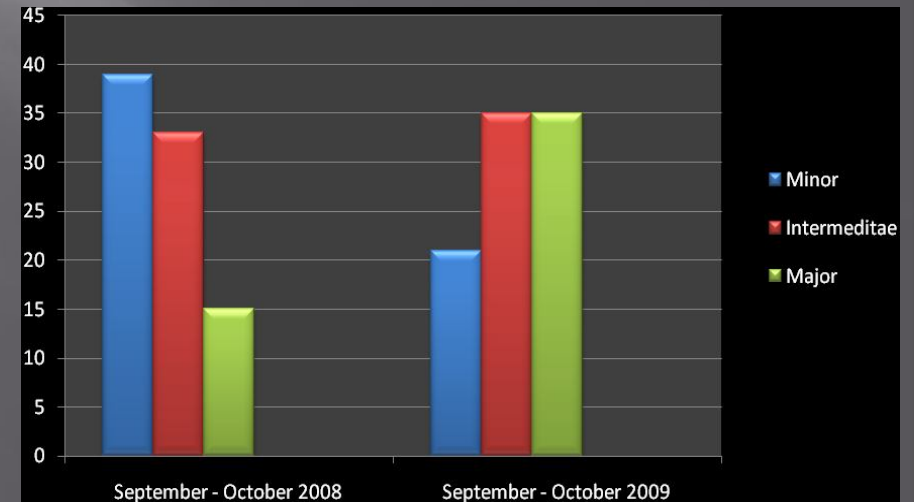
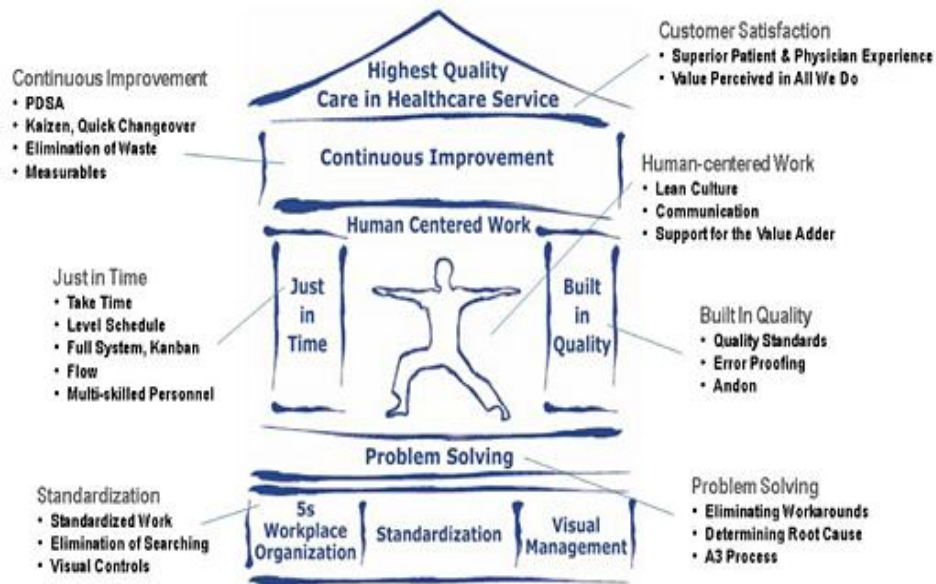


Figure 1. The types of trauma operations performed in September and October 2008 and 2009

DATE: 14 Feb 2010  
THEATRE: 2

AM/PM

SURGEON: Mr Smith  
ANAESTHETIST: ?

First/Family name	Sex	Hospital Number	Date of Birth	Ward	Operation	G&S(Units crossmatched)*	Other information**
Ms JK	F	32555564	21/02/23	JS	Right knee replacement	?	
Mr LKH	M	45566565	03/12/44	MH	Right knee replacement	?	
Mr THJ	M	45456666	25/07/33	VH	Right hip revision	4	Diabetic
4							
5							
6							
7							

\*If risk of >500ml blood loss (7ml/kg in children), \*\* alert like: MRSA, diabetes, latex allergy, operation urgency

In case of cancellation or change of order of the list, please bleep the floor lead on 2709

DATE: 14 February 2010  
THEATRE: 4

AM/PM

SURGEON: Mrs Smith  
ANAESTHETIST: Dr White

First/Family name	Sex	Hospital Number	Date of Birth	Ward	Operation	G&S(Units crossmatched)*	Other information**
Mr JHY	M	7579598	12/09/56	HJ	Right knee replacement	2	
Mrs MJA	F	87479730	12/11/12	ER	Right knee replacement	2	
Mr FGJ	M	897429970	23/07/67	HC	Right Hip revision	?	
4							
5							
6							
7							

\*If risk of >500ml blood loss (7ml/kg in children), \*\* alert like: MRSA, diabetes, latex allergy, operation urgency

In case of cancellation or change of order of the list, please bleep the floor lead on 2709

# How do measure safety?



# Waste



1. Overproduction
2. Transportation
3. Waiting
4. Inventory
5. Motion
6. Defects
7. Over processing



# Philosophy/Culture



**NHS**

*“experienced leaders within Toyota kept telling me that these tools and techniques were not the key to TPS. Rather the power behind TPS is a company’s management commitment to continuously invest in its people and promote a culture of continuous improvement.” (The Toyota Way; J Liker)*

*‘Thank you so much for the unexpected present which I found in.... Take every opportunity of work that is offered to you both in the NHS....Make friends out of everyone: porters, switchboard,.... **And learn to be patient: you now have decades ahead of you in which to get things right,...**’  
(Mentor)*





## **'Toyota's defence strategy: Wrap itself in the American flag'**

'The car in front was a Toyota... now can it find road to recovery? '

'Toyota recalls, hydrogen cars and James Hunt's Porsche'

**'Toyota The company's problems sharply illustrate the failings of Japanese corporate Governance'**

Belief... 'be lean'



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# Lean Principles and Processes - Understanding 'Value' to drive change

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Ketan Varia – kinetik solutions

February 11 2009

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## Recap – What is Lean?

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- Focus on Value from a **Customer (Patient) point of view** on every step of process
- **Obsession on removing waste** within the ‘whole system’
- Bottom up approach in identifying value and waste – assumption that **much of waste and value is hidden**
- A true lean system would “flow” and need **little command and control**



## What does Value mean?

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### Value

#### What this means

- The customer normally defines value
- What does the process 'change' that someone is willing to pay for

#### What this means in the NHS

- Anything that *transforms* patient care and experience, otherwise it is waste:
  - meets expectations all the 'value' elements of a journey
  - would recommend the experience to a friend/relative
- Customer is normally the patient/GP, but may be other stakeholders (who is the customer?)



## Current methods of patient experience analysis are poor and reveal little

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***“We need a tool that provides rapid, simple feedback from patients to staff in order to improve their performance. The current method is not helpful to those of us who wish to improve the patient experience”***

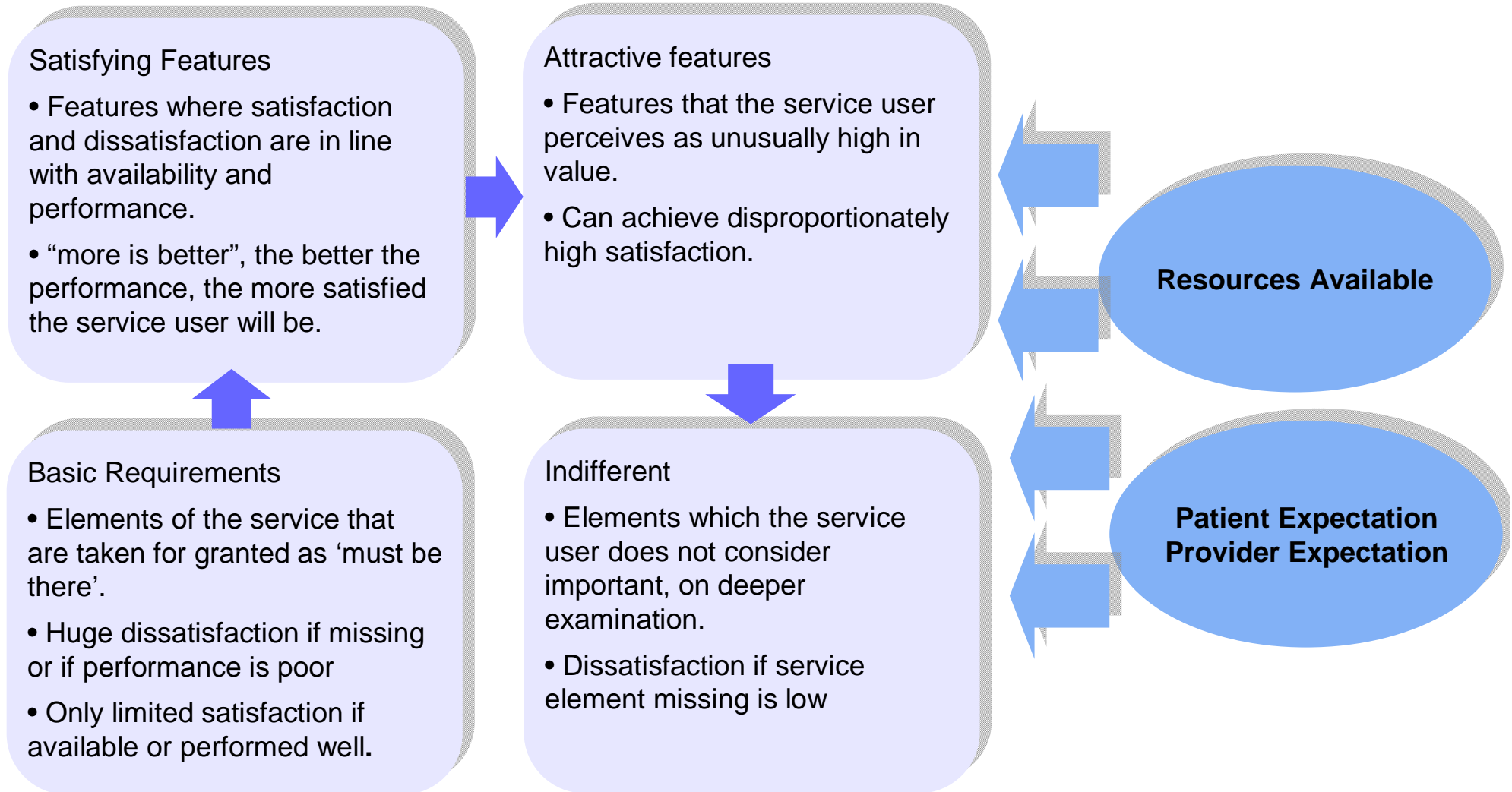
*Dr John Coakley – feature writer HSJ journal July 2008*

**“Patient experience - Quality of care includes quality of *caring*. This means how personal care is – the compassion, dignity and respect with which patients are treated. It can only be improved by **analysing and understanding patient satisfaction** with their **own experiences”****

*Lord Darzi- NHS Next Stage Review June 2008*



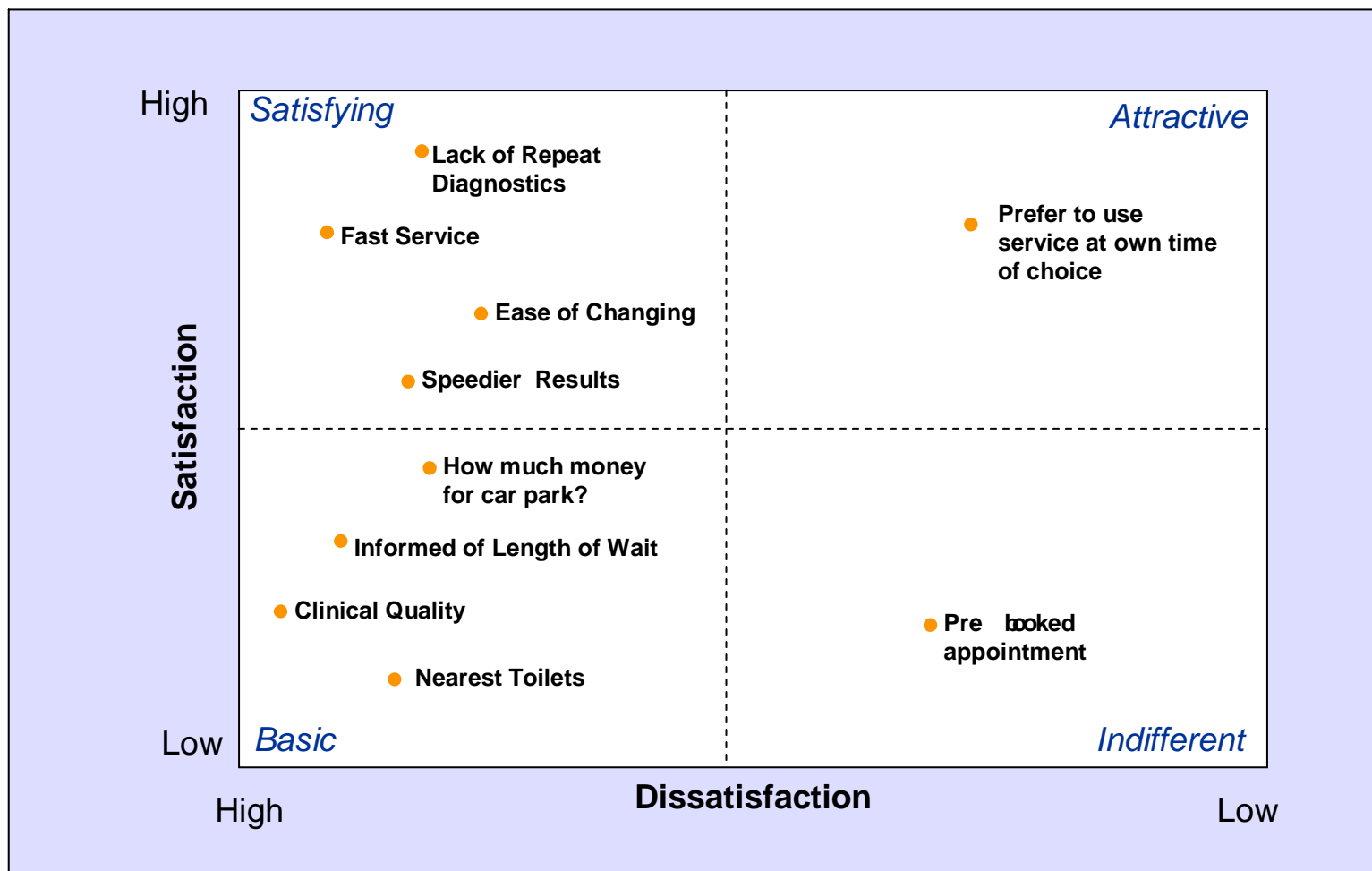
# Patient/Stakeholder value is based around four attributes and managing expectations





# Elements of the patient experience should be categorized around a matrix of satisfaction/dissatisfaction

Example – Diagnostic Service







# Managing expectations need to be aligned around all elements of service

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## Mismatch in Expectations is a critical element of measurement

### *Example – Diagnostic Area*

#### Patient/Stakeholder Expectations

##### Basic

- Need to know in advance how much money to put in car park
- How long will I wait?
- Where are the nearest toilets?
- Professional service

##### Satisfying

- Easy to change in cubicle
- Quicker the journey the better
- Speedier the results the better
- Adapted X-Ray for certain patients\*

##### Attractive

- Prefer appointment date/time of their choice

#### Trust Expectation

##### Basic

- People arrive dressed appropriately
- Professional clinical service

##### Satisfying

- Quicker the journey the better
- Speedier the results the better
- Little re-work for diagnostic test (right first time)

##### Attractive

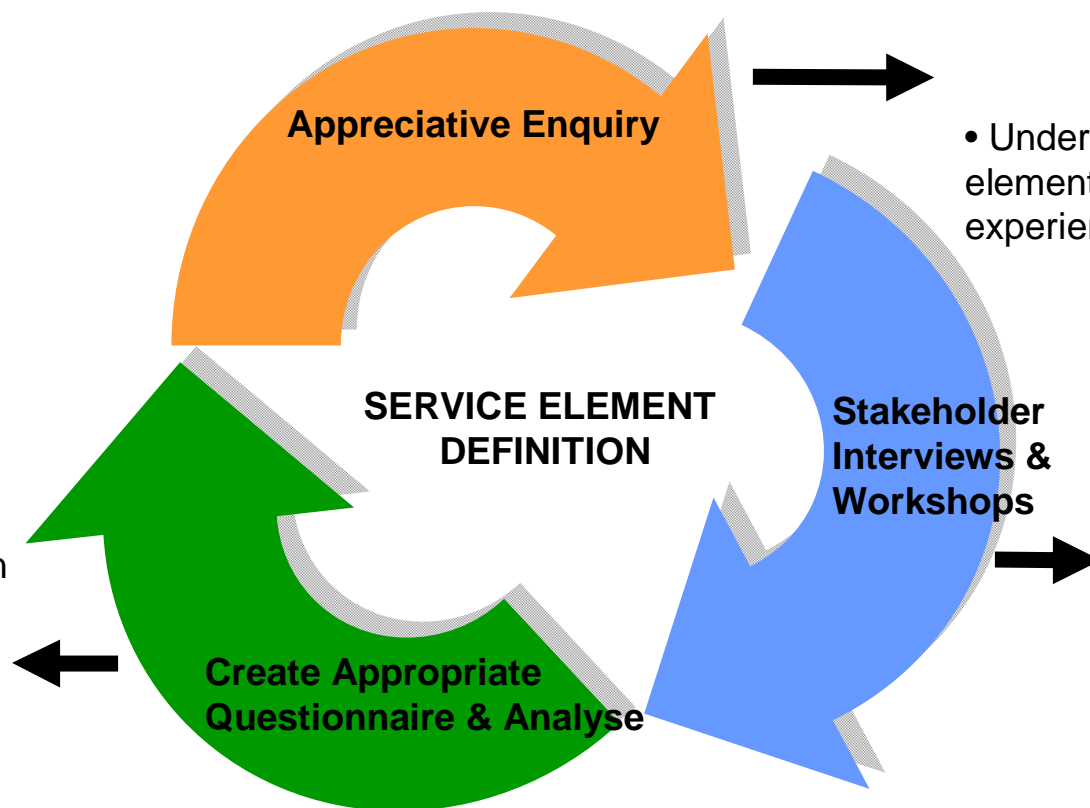
- Absence of DNA



# Gathering patient experience information needs to be done in a 3 leg approach



- Understand latent and functional elements with a dialogue on the experiences of a sample of patients.



- Articulate a list of features and functionality with a wide range of stakeholders (including clinicians, GPs, administration)



- Focus on giving choice in the fields of basic, satisfying, attractive.

**Our approach for defining service elements is in depth and ensures our Kano Survey is enabled for success**



## The 'value' part of Lean needs more exploration in an NHS service environment

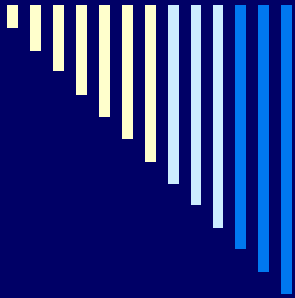
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- **Current methods of the 'value' a service provides needs exploration in four dimensions**
- **Exploring 'value' mismatches from stakeholders is what the start point of sustainable service improvement**
- **Value can be delivered before doing detail process mapping/Value stream mapping**

# Lean Thinking Working Towards Continuous Improvement



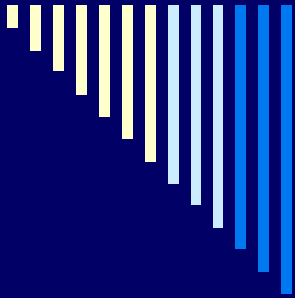
By  
Niall Ferguson



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# Milton Keynes Hospital

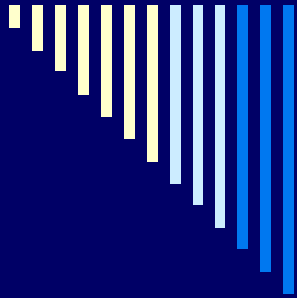
- 500 bedded District General
  - Average length of stay 3 – 4 days
  - Located centrally
  - 25 years old
  - Expanding services
  - Repatriating patients
  - Population of 270,000 and growing
-



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# Lean in the Drug Supply Process

- Dispensary
  - Stores
    - Goods receipt
    - Distribution
    - Top – up
  - Procurement
-

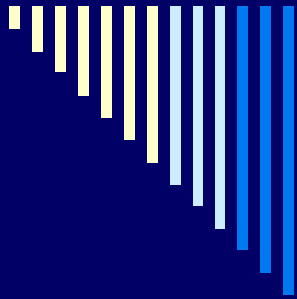


# W. Edwards Deming

“Trying harder is the worst plan.”

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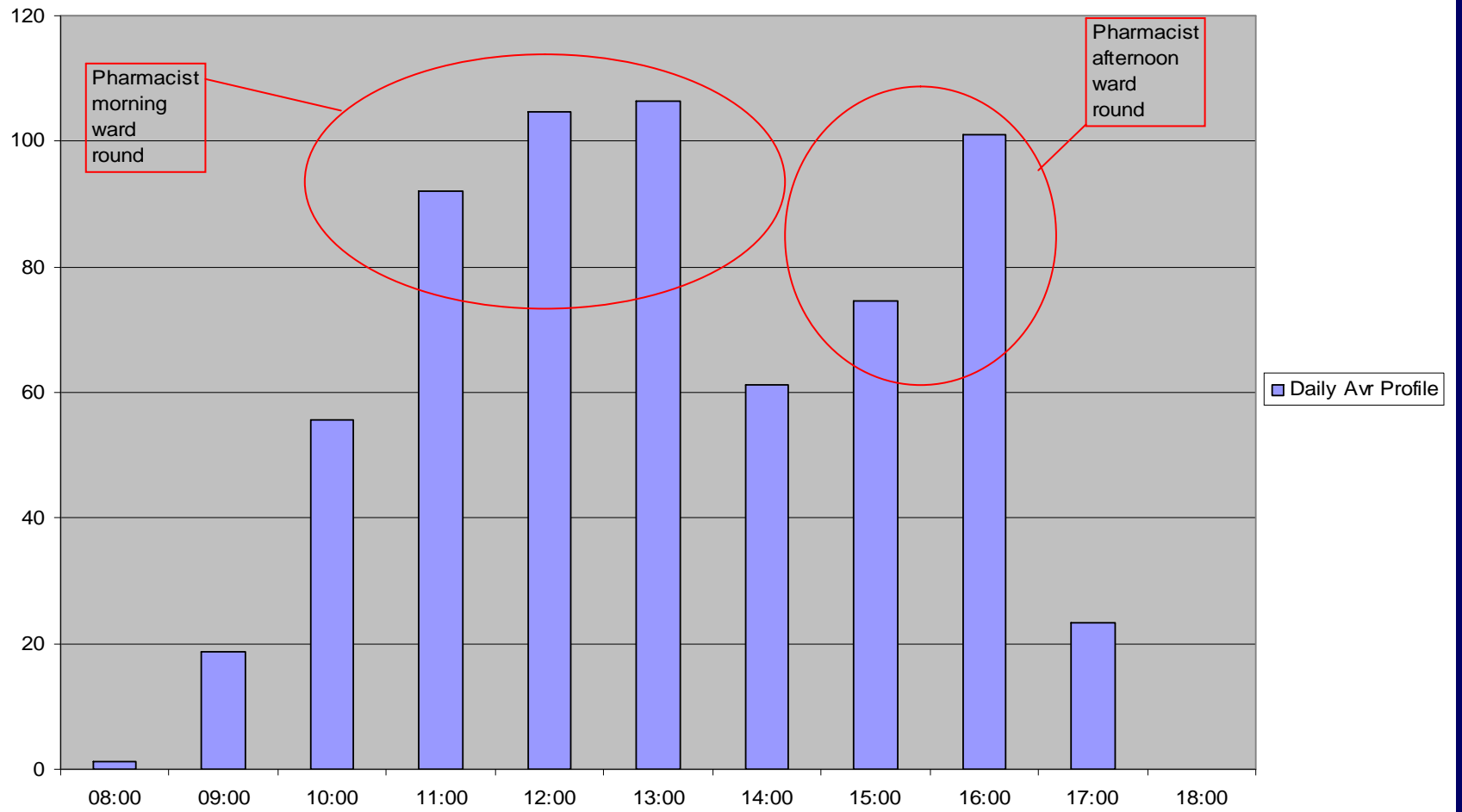


Paul Batalden

“Every system is perfectly designed  
to achieve exactly the results it  
gets.”

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## Daily Avr Profile



**Robot Room**

**Dispensary**

**Extra Duties**

**Dispenser 1**

**Tracker/Hatch**

**Controlled  
Drugs**

**Dispenser 2**

**Co-Ordinator**

**PEC**

**Dispenser 3**

**Validation**

**Study**

**Dispenser 4**

**Emergency  
Boxes**

**Phone/Door**

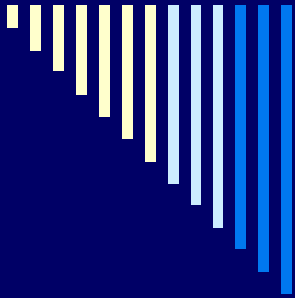
**Top-Up**

**Checker 1**

**Annual Leave**

**Checker 2**

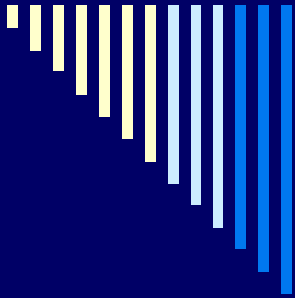
**Checker 3**



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# Project Activity

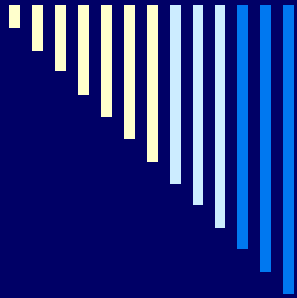
- Mapped process
    - Confirmed
      - staff
      - Previous work
  - Observed staff
  - Brainstorming with staff
  - Trial
  - Feedback to staff
-



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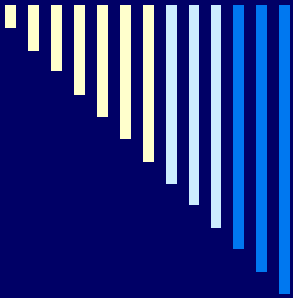
## Concerns / Issues

- ❑ Large amount of interruptions telephone calls and reception ( Around 4 hours/day)
  - ❑ No clear roles & responsibilities
  - ❑ Delays in receiving scripts back to Pharmacy
-

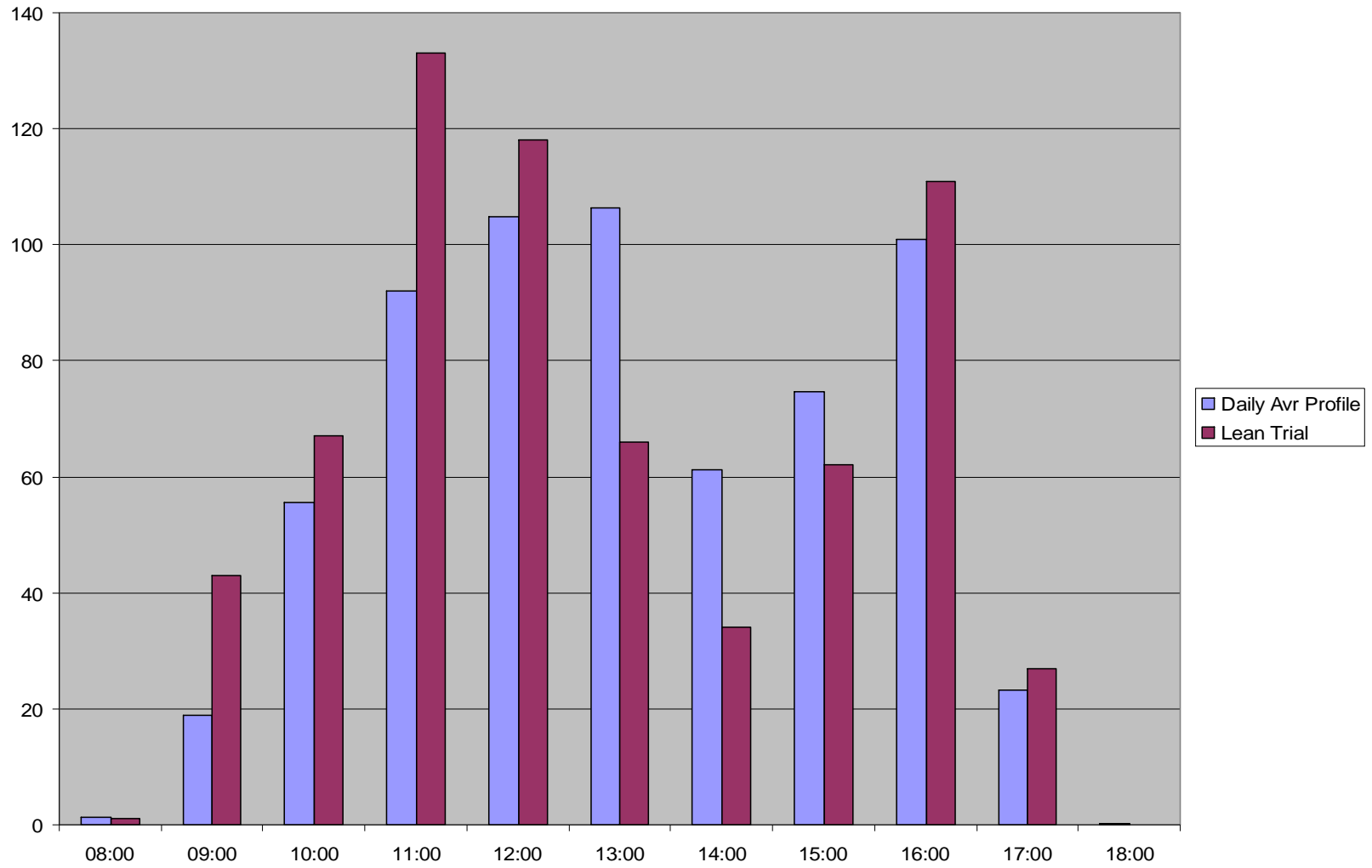


# Results

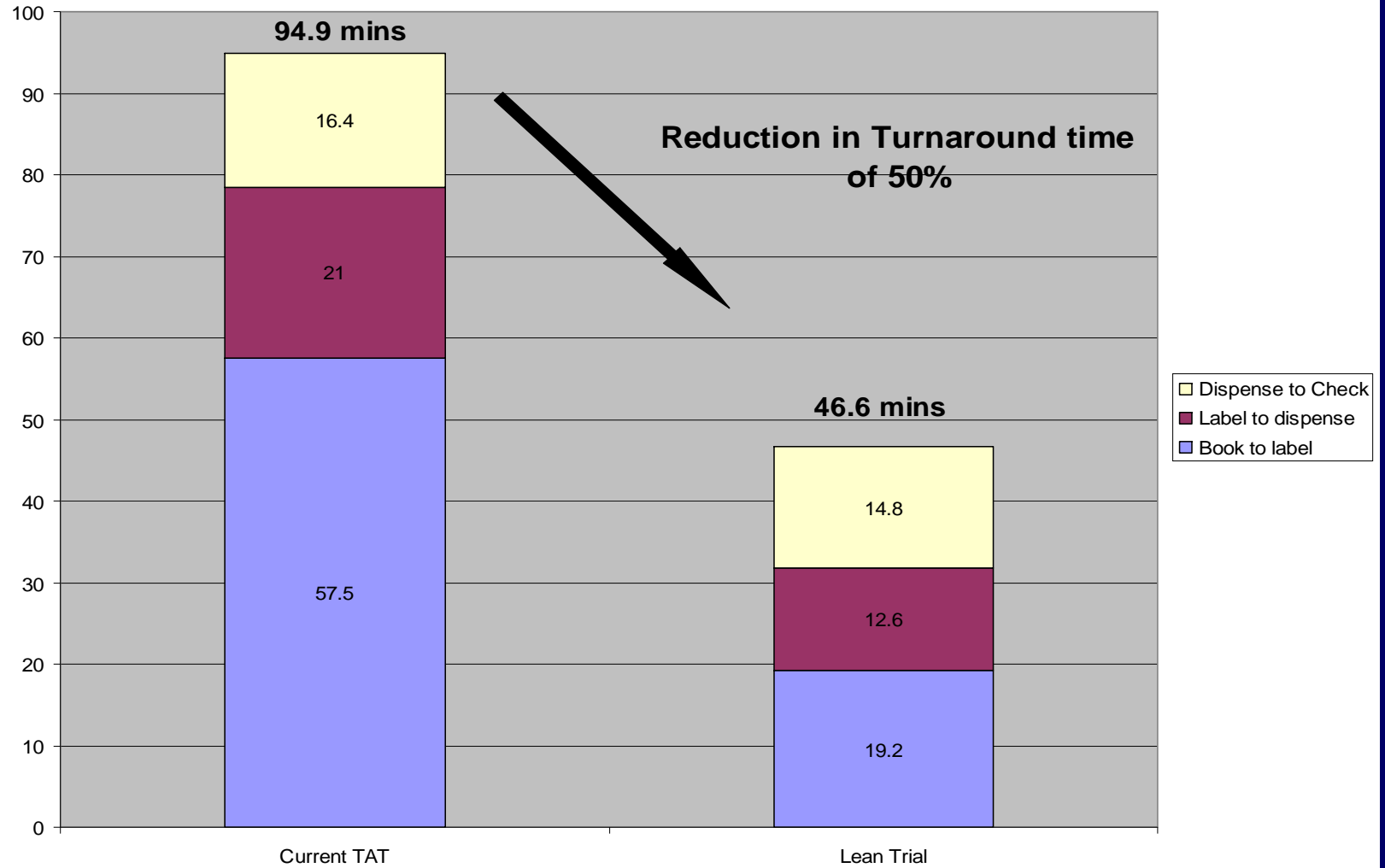
- Much smoother flow of work through Pharmacy 30% more scripts processed before 12:00 v's the daily average.
- 50% reduction in turnaround time.
- Time freed up within the working day to utilise for training & housekeeping tasks.
- Reduction of telephone calls during the afternoon



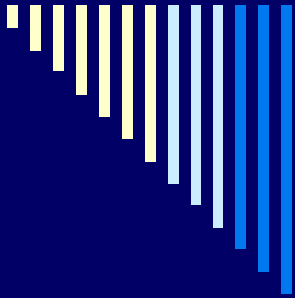
Comparison of daily profile v's lean trial



### Comparison of TAT







# Order and Deliveries

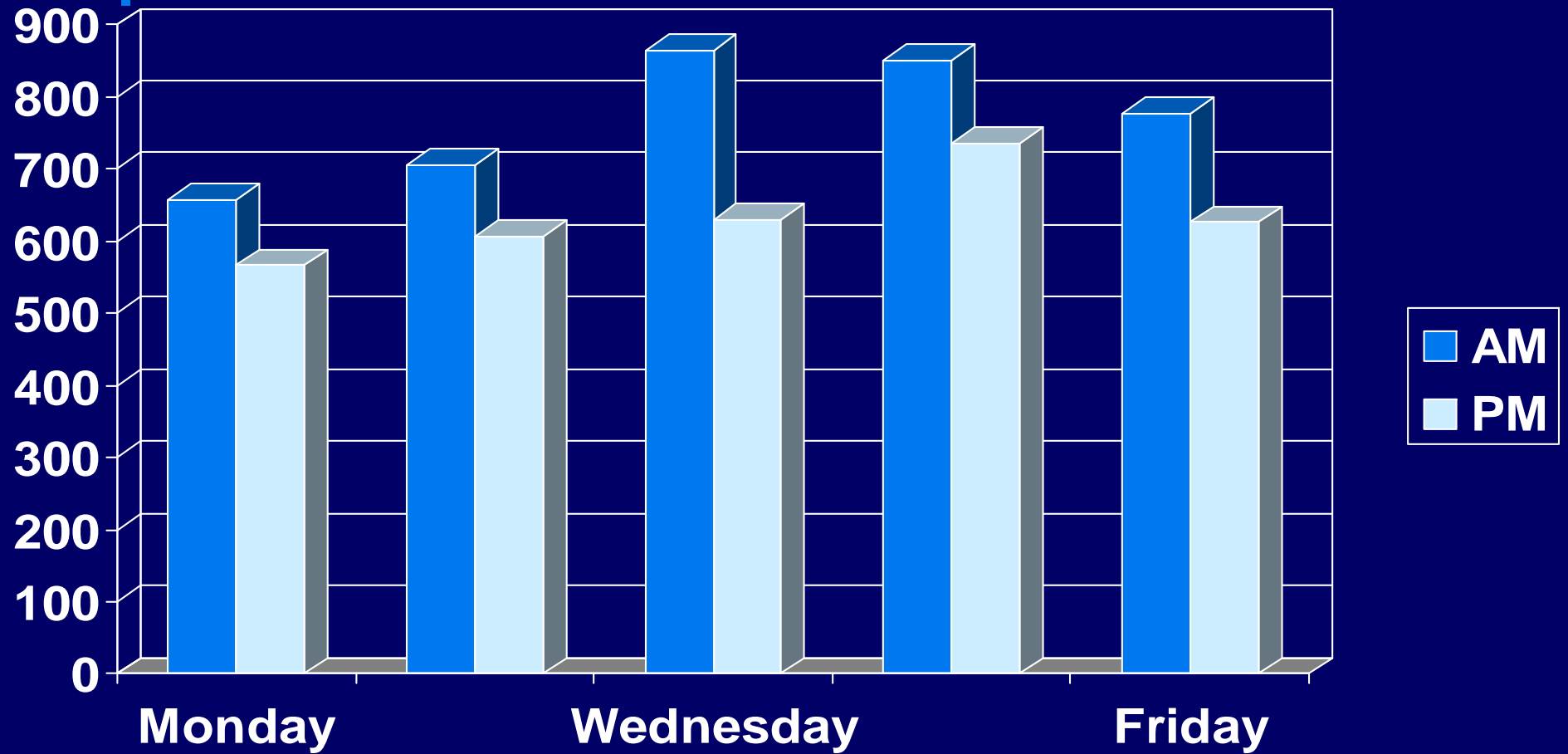
## □ Before

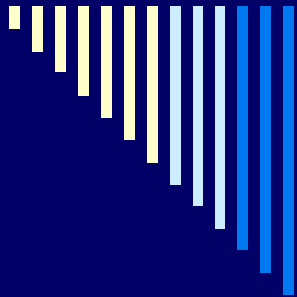
- No Deliveries Mon/Tue
- Order day Tue
- Deliveries Wed/Thur
- Wholesalers 2 orders a day

## □ After

- Deliveries every day
- Majority before 1pm
- Wholesalers 1 delivery a day

# Orders and Deliveries 08 – 09





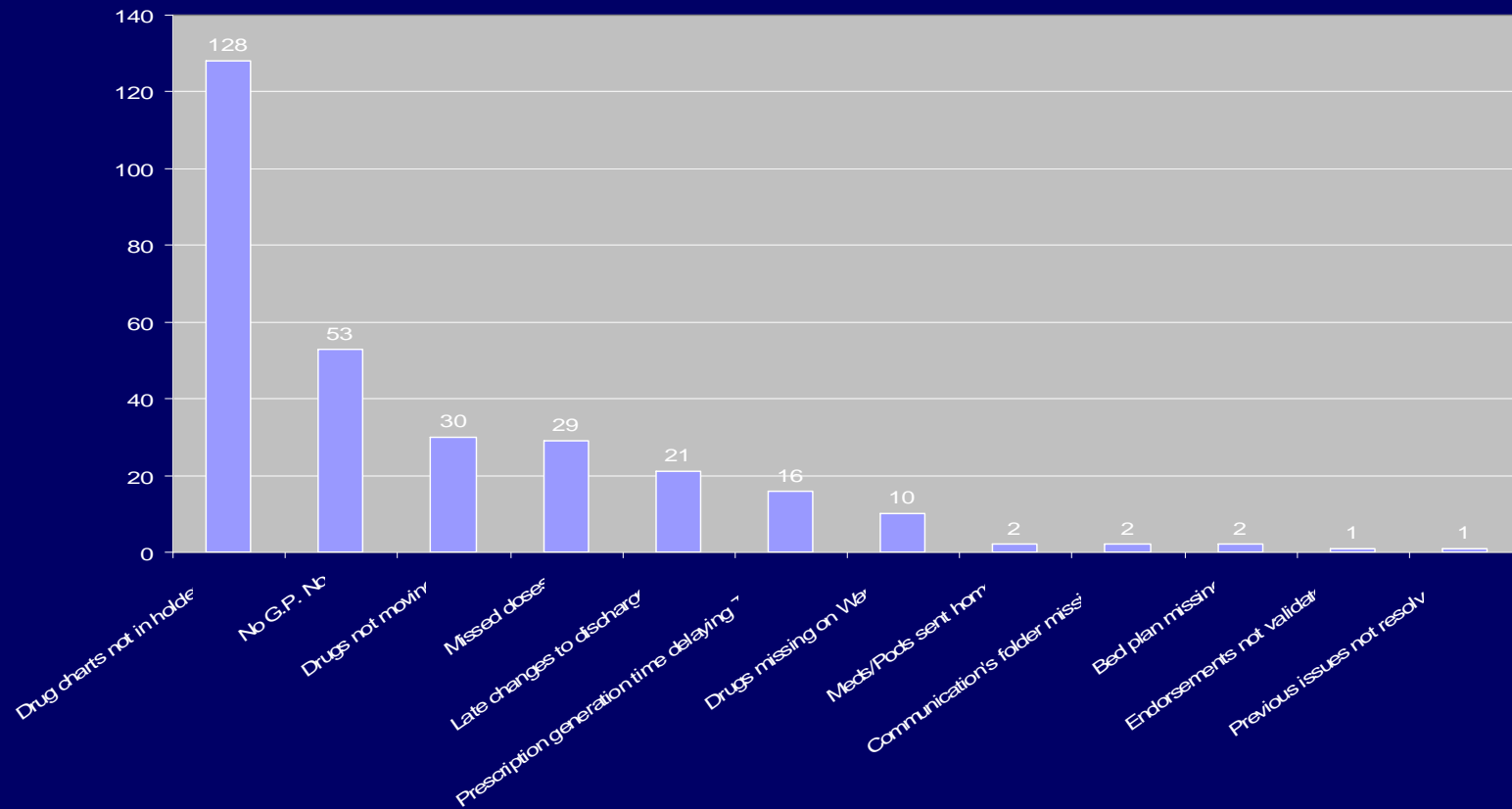
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# Lean in Clinical Pharmacy

- Delays
  - Barriers / problems
  - Improvements – Productive ward
  - Medicines management
  - Discharge process
-

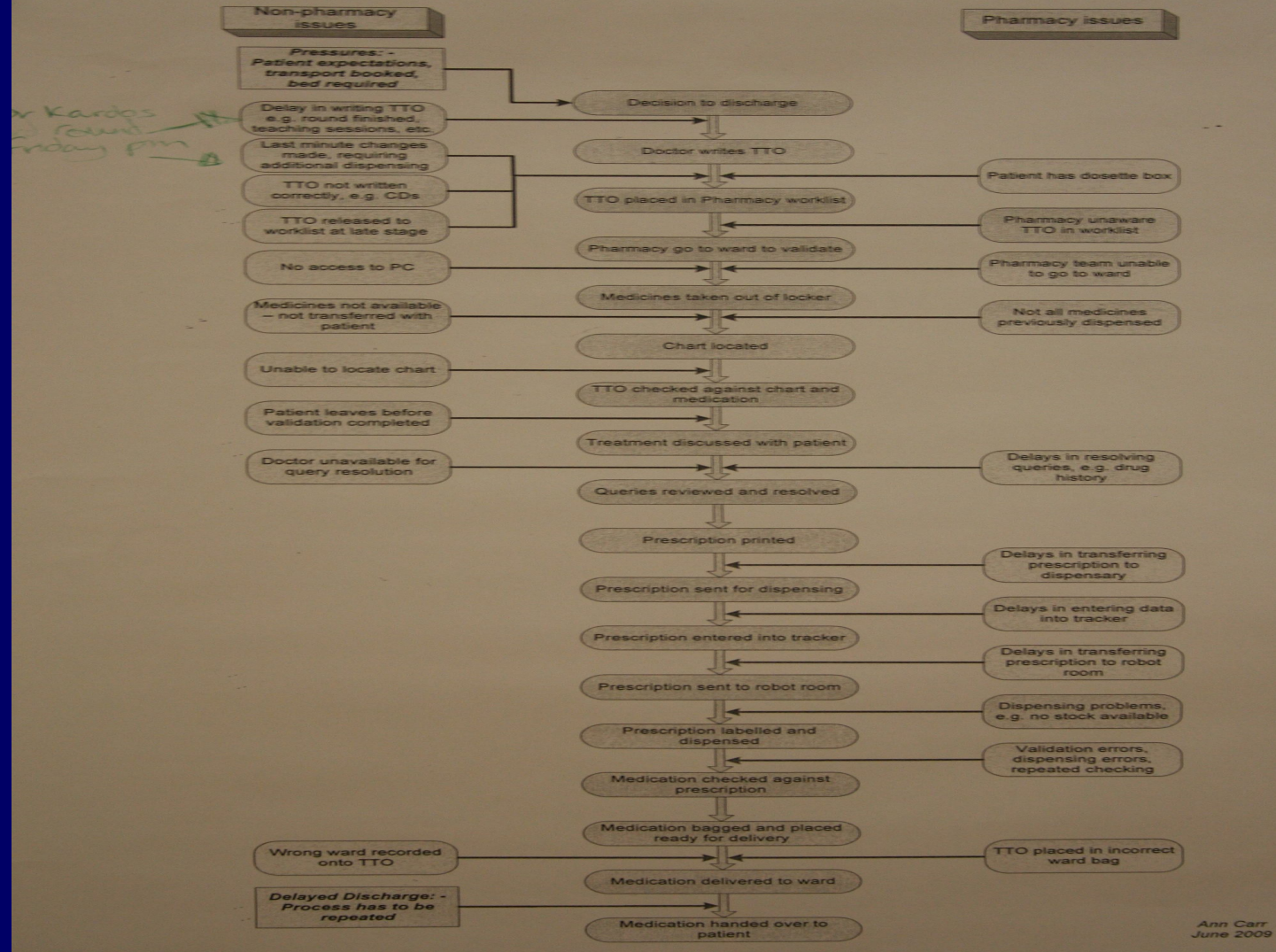
# Interruptions to Clinical Pharmacy

Delays identified on Pharmacy Rounds





## Lean approach to discharge process



# Minimise Batching – Discharge Process (After)



Ward rounds



First patient is discharged at about **10am**



Activities happening together

1

Doctor does discharge summary



Porter

2

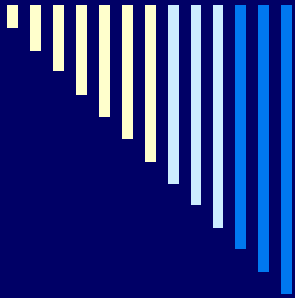
Pharmacy receives prescriptions & packs medication

3

Patients receive medication & get discharged



Nurse

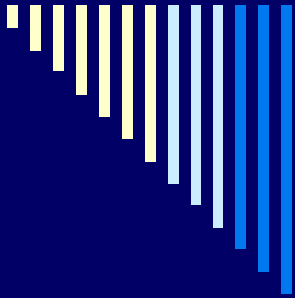


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# Continuous Improvement

- ❑ One off projects
  - ❑ Way of thinking
  - ❑ Review all processes
  - ❑ Small improvements
  - ❑ Suggestion schemes
  - ❑ Setting up pilots
  - ❑ Evaluating changes
  - ❑ Acceptance by staff
-





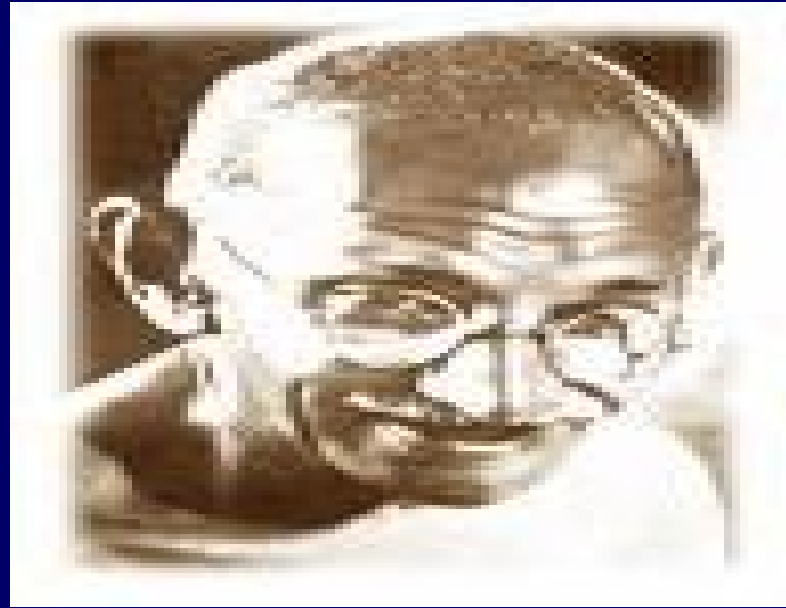
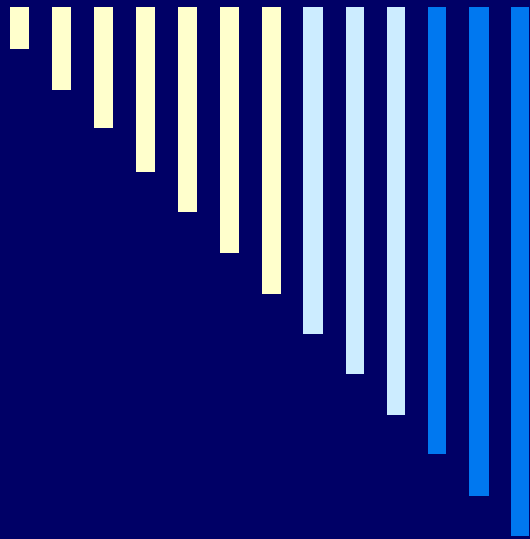
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## Lessons Learnt

- Involve staff at all stages
  - Give plenty of feedback
  - Asking the relevant questions
  - Barriers
  - Test solutions
  - Do not be afraid of failure
-

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# 'First Change Myself'





## What's Next?

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- **Today's presentation and feedback survey sent out by email within 24 hours**
- **The Next Lean London Form will be on Tuesday, 25<sup>th</sup> May 2010**
  - We will send out reminders to all participants from today
  - If you'd like to take up one our presentation slots, please do let us know. We are keen to hear from Ambulance trusts and Mental Health Trusts.
- **Kinetik solutions is running a one day 'introduction to lean course' on 10<sup>th</sup> March – for further details pleas see [http://www.kinetik.uk.com/pdf/Course\\_March10.pdf](http://www.kinetik.uk.com/pdf/Course_March10.pdf) or contact [kvaria@kinetik.uk.com](mailto:kvaria@kinetik.uk.com)**



## Final Thanks to Our Sponsors

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in the health sector and beyond**

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