

Training Clinical Systems Engineers

The Osprey Programme

Kate Silvester BSc MBA FRCOphth

Lean Healthcare Summit
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Agenda:

- Why Osprey?
- What is a clinical systems engineer?
- How are we getting on?
 - Dr Steve Allder, Osprey Plymouth
- Where next?
 - Advice please!

The National Health Service

- 1947: free healthcare at the point of access
 - Emergency room (A&E)
 - General Practitioner (GP)
- Paid for out of taxation
 - £98 Billion budget
 - £860 / annum / UK citizen
- 1,000,000 employees
- Administered centrally
 - Department of Health through the NHS Executive
 - England, Scotland, Wales and Northern Ireland.
 - Local services now commissioned by Primary Care Trusts

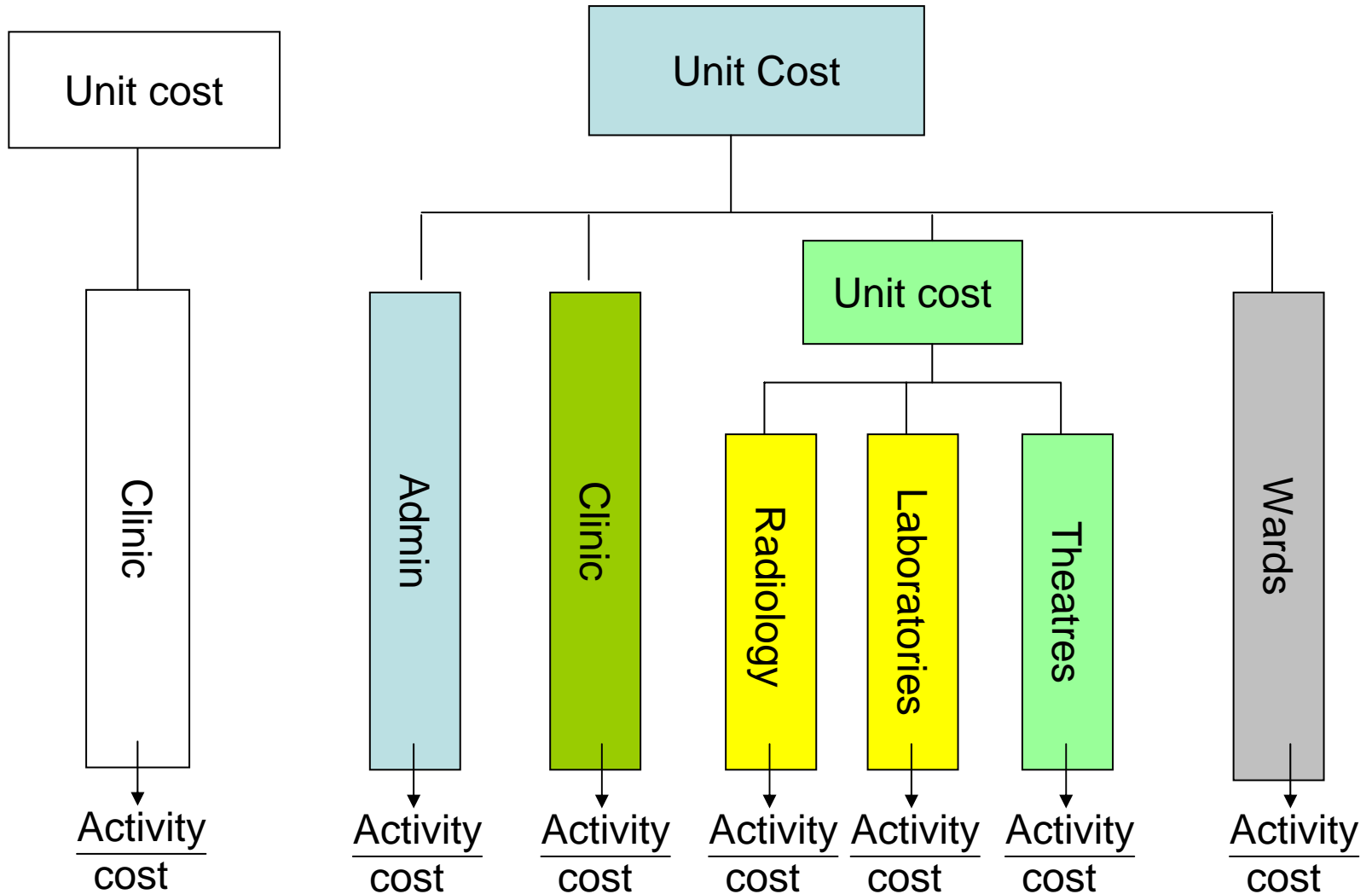
The NHS' Symptoms

- Long delays:
 - NHS is famous for 'waiting lists'
- 'Long waits because demand > capacity'
 - Increase in resource from £47B to £98 Billion
 - Output only increased by 3% (Economist 2004)
 - Patients will still wait 18 weeks by Dec 2008
- Wrong diagnosis !

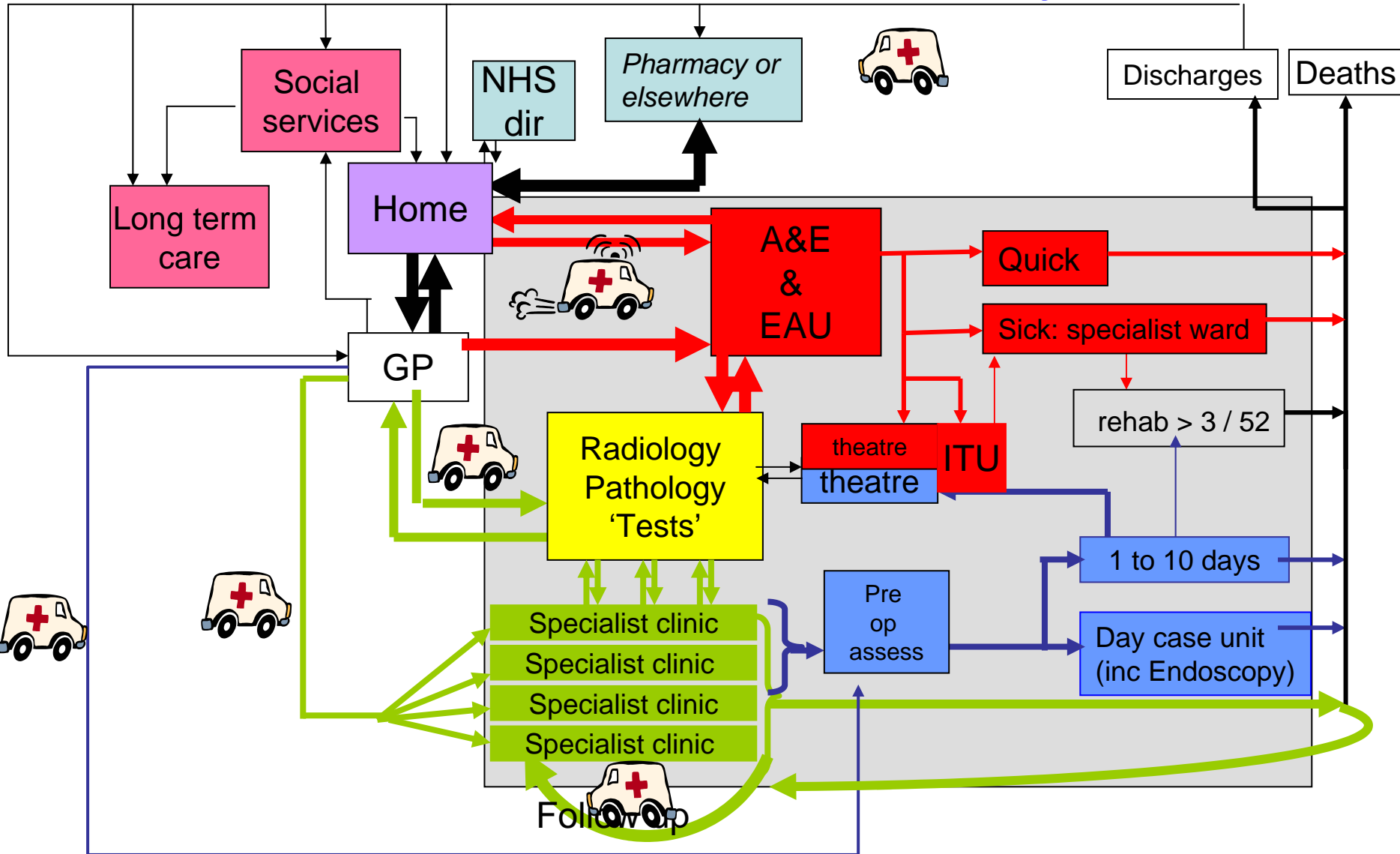
NHS has run out of excuses

- We need to understand:
 - the system.
 - the pathology of the system
 - how to put it right
 - convince others of what to do
 - lead by example
 - Peer to Peer
 - with statistical kosher evidence

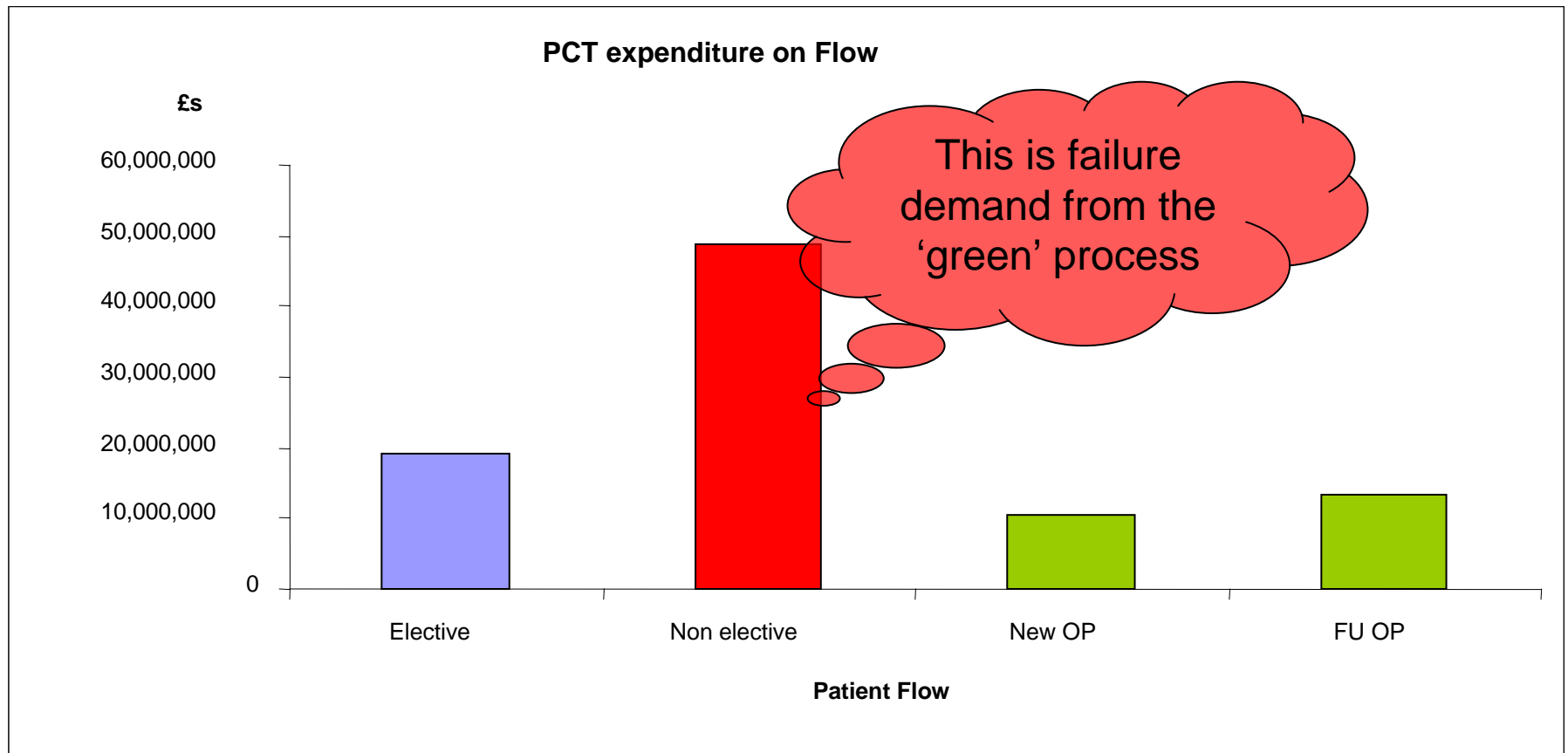
Traditional NHS Management



Flows in a Healthcare System



Primary Care Trust's Spend by flow through Hospital



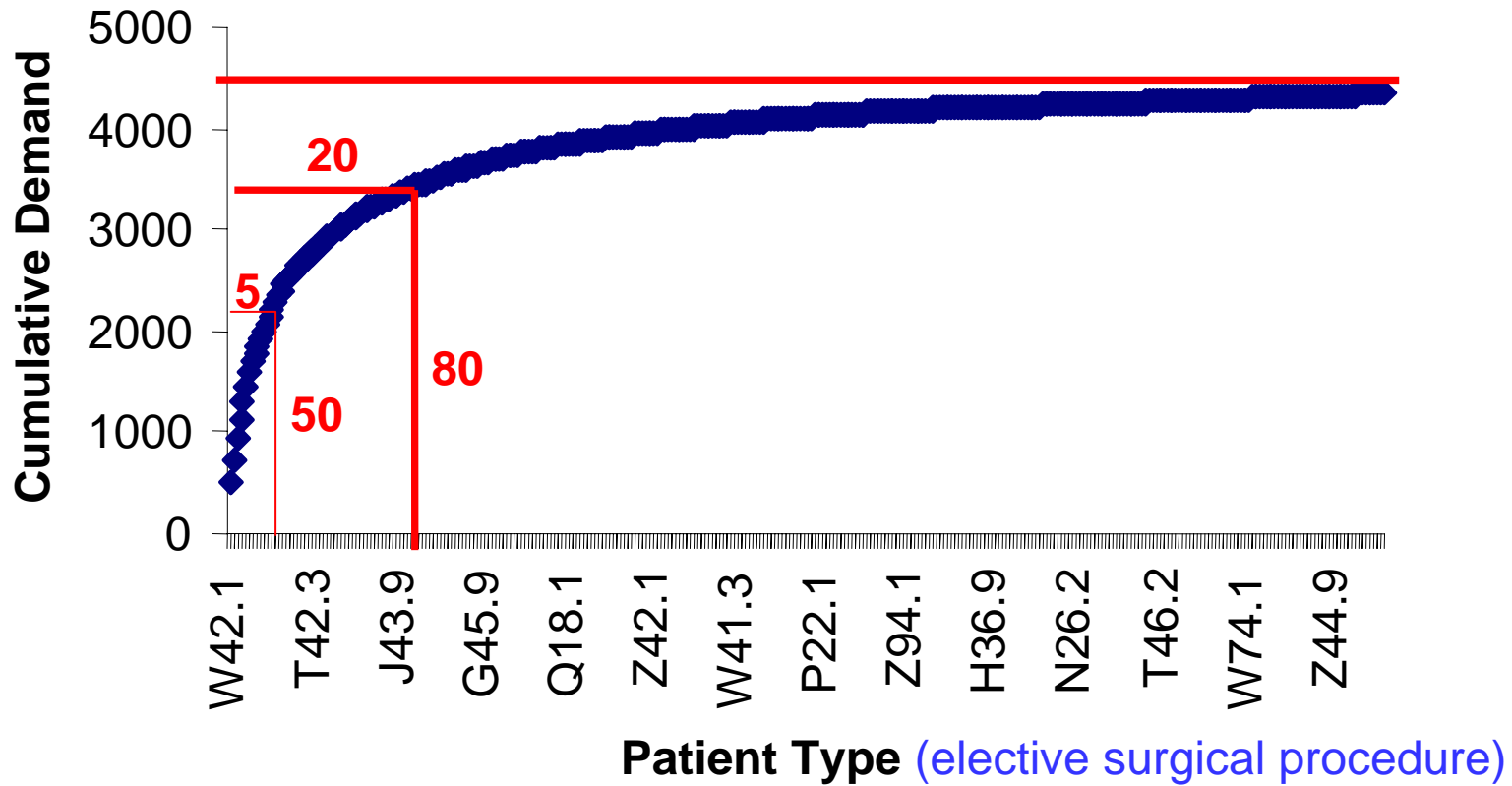
Grouping of diagnostic codes for top 50% of emergencies

| Groupings | Cumulative Total | Cumulative % |
|--|------------------|--------------|
| IHD/chest pain | 758 | 22.14% |
| Respiratory infection / disease | 1236 | 36.10% |
| Abdo pain/appendix | 1703 | 49.74% |
| Atrial Fibrillation and flutter | 1873 | 54.70% |
| Poisoning | 2029 | 59.26% |
| Localised swelling, mass, lump lower limb (DVT) | 2113 | 63.17% |
| # Neck of Femur | 2292 | 66.94% |
| Syncope & collapse | 2420 | 70.68% |
| Urinary Tract Infection site unspecified | 2544 | 74.30% |
| CVA Cerebral Vascular 'Attack' | 2660 | 77.69% |
| Cellulitis of other parts of limb -axilla, hip, shoulder | 2771 | 81.02% |
| Chole/pancreatitis | 2881 | 84.14% |
| Inf or Cx procedure | 2988 | 87.27% |
| Miscarriage | 3094 | 90.36% |
| Heart failure | 3188 | 93.11% |
| Asthma unspecified | 3263 | 95.30% |
| Head Injury | 3326 | 97.14% |
| Senility – 'off legs' old age | 3375 | 98.57% |
| # other parts lower leg - ankle | 3424 | 100.00% |

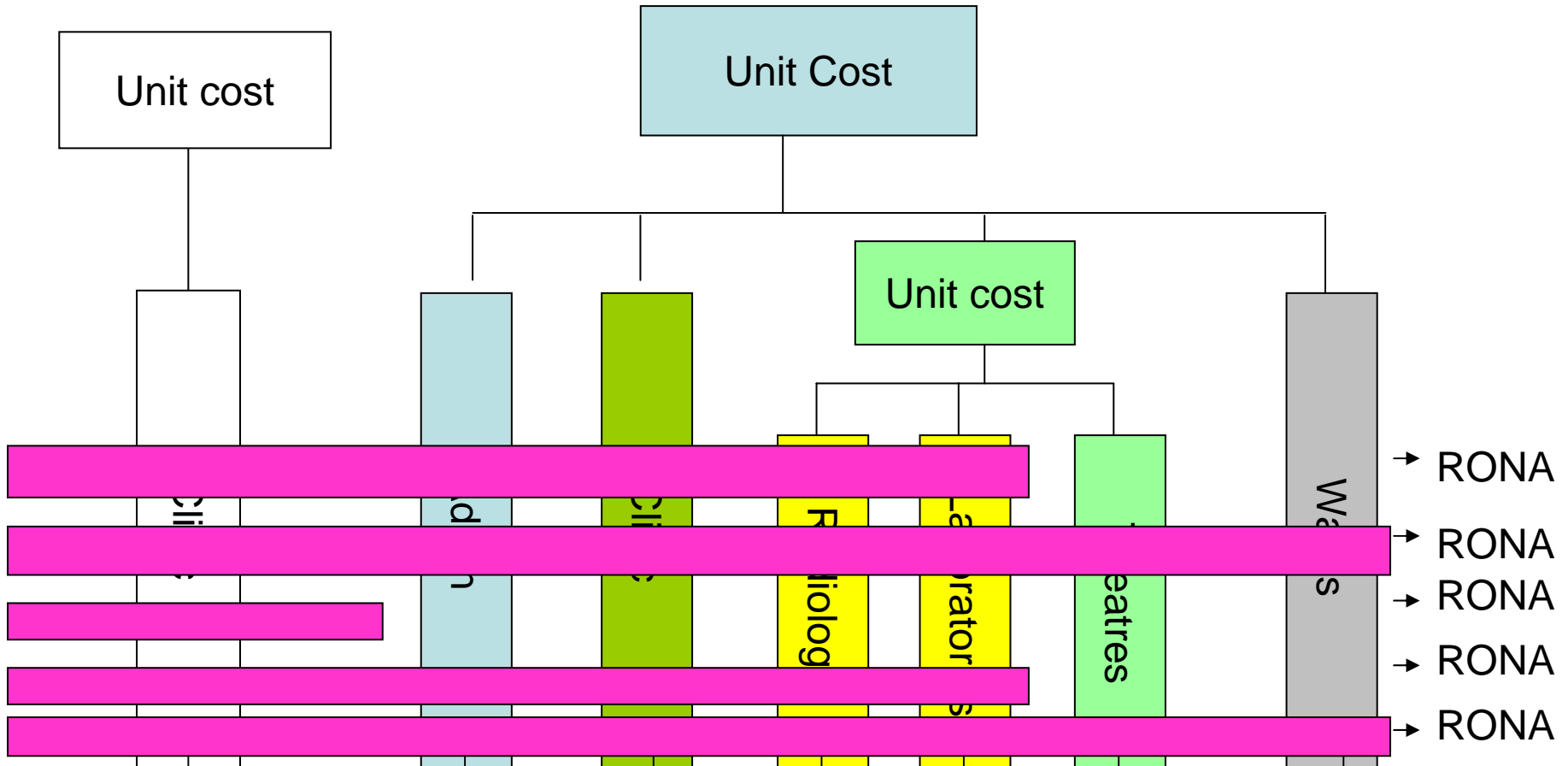
What is the process for these patients?

Pareto Analysis

Cumulative Demand: Pareto



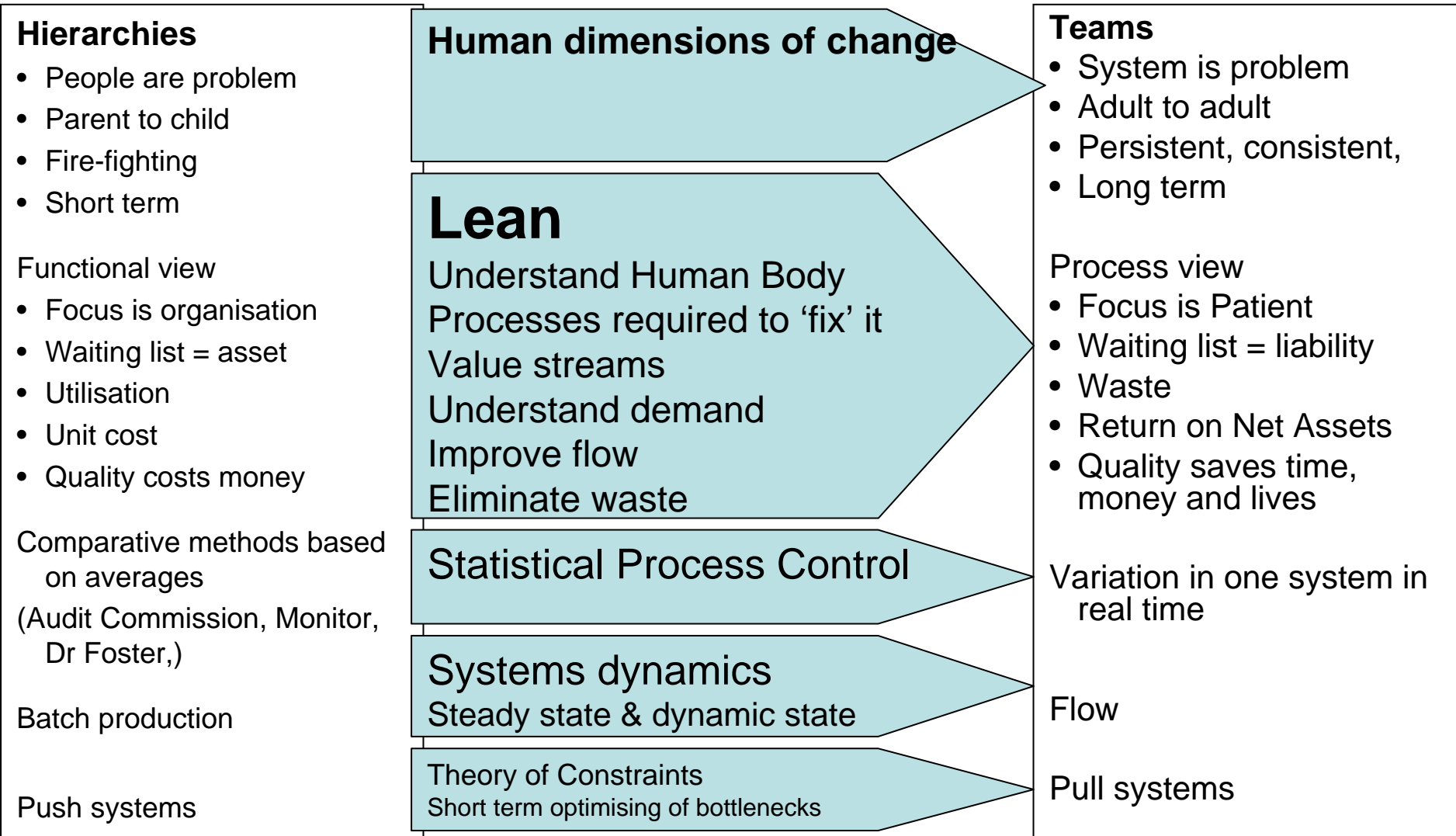
Value Stream Management



What is a Clinical Systems Engineer?

- Responsible for 'healthcare production line'
 - from presentation
 - to discharge & prevention (death)
- Meets demand
- Timeliness, cost and quality
- Chief Engineer?

What we need to do

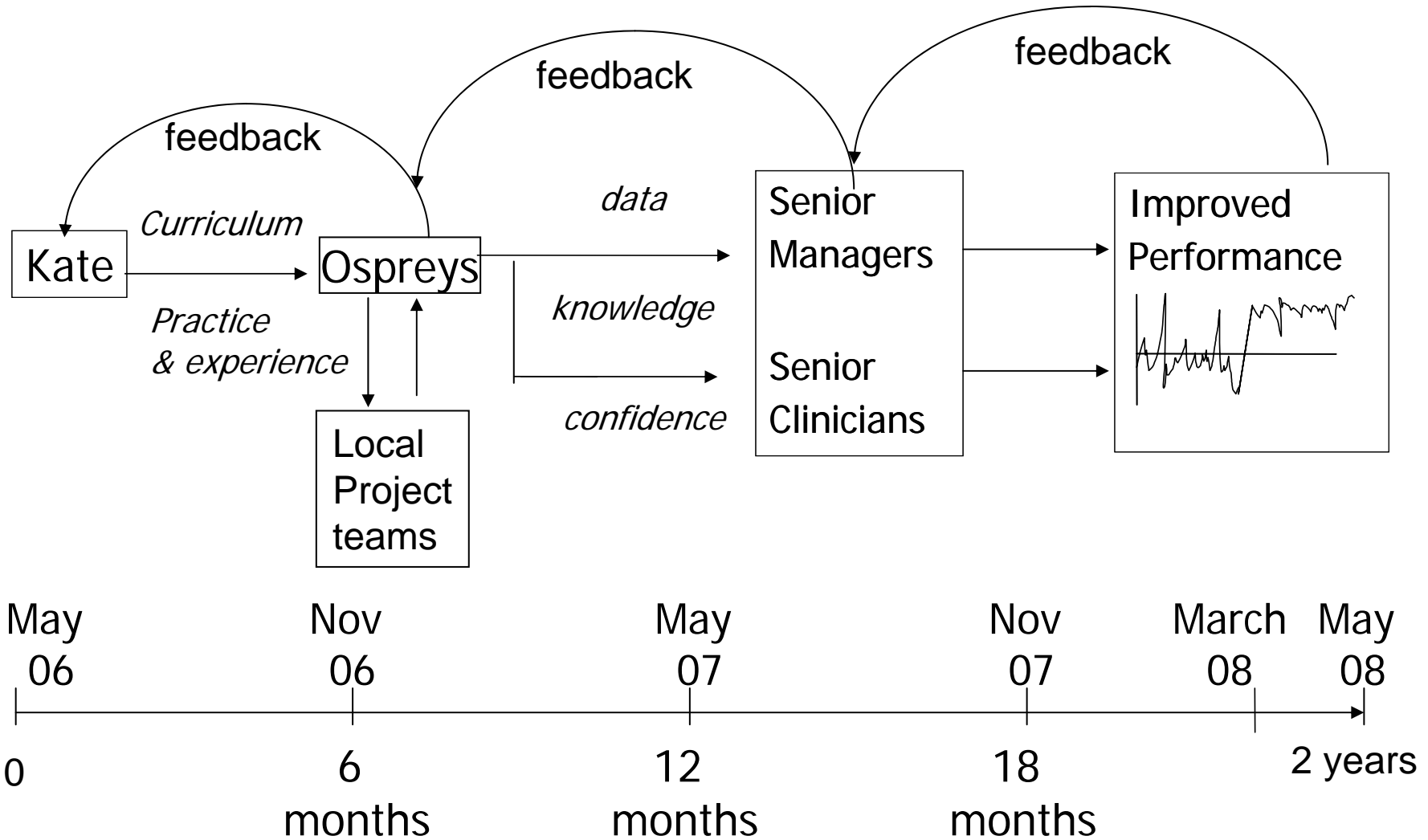


Leading by example

Who are we?

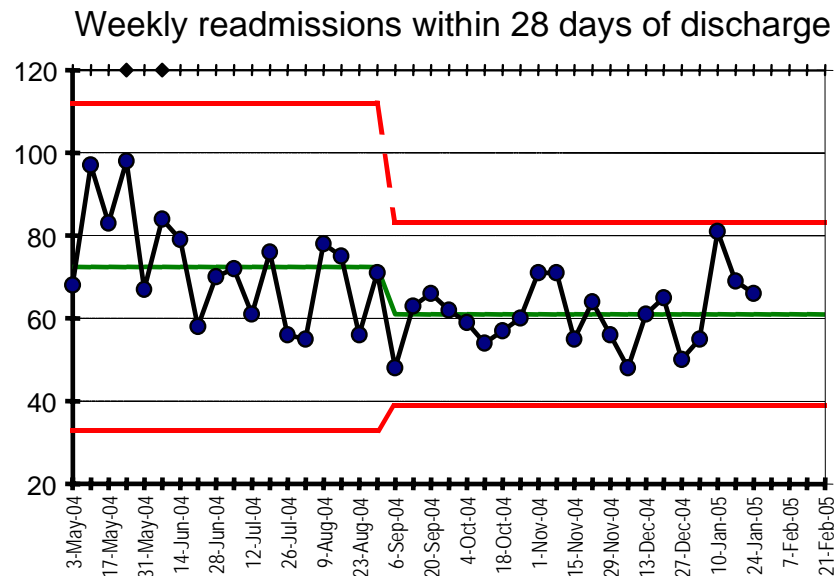
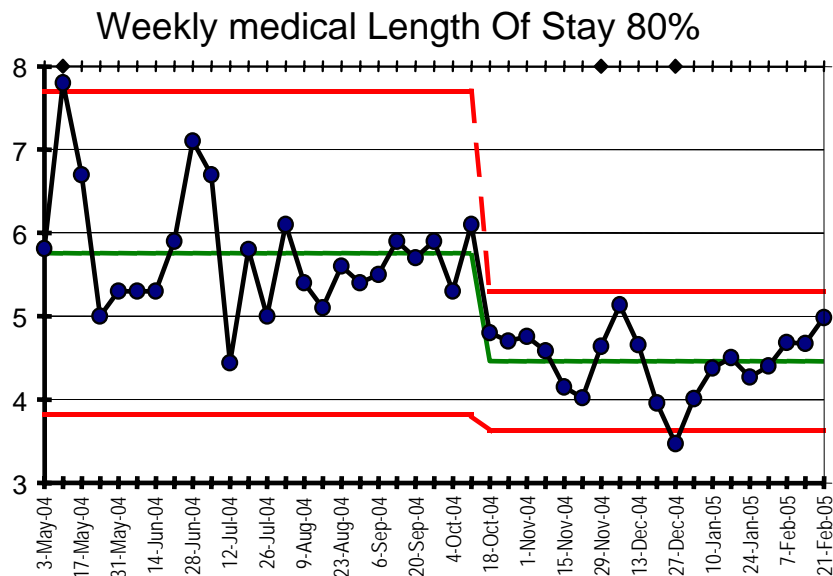
- Sponsored by 6 Strategic Health Authorities
 - ‘Clone Kate’
- 1st batch: 2004 - 06
 - 9 doctors:
 - General Practice (Primary Care),
 - Hospital care (Secondary care)
 - Mental Health
- 2nd batch : 2006 - 08
 - Mixture of healthcare professionals with clinical background

Osprey Plan



Queen Mary's Sidcup

Patients discharge from Hospital



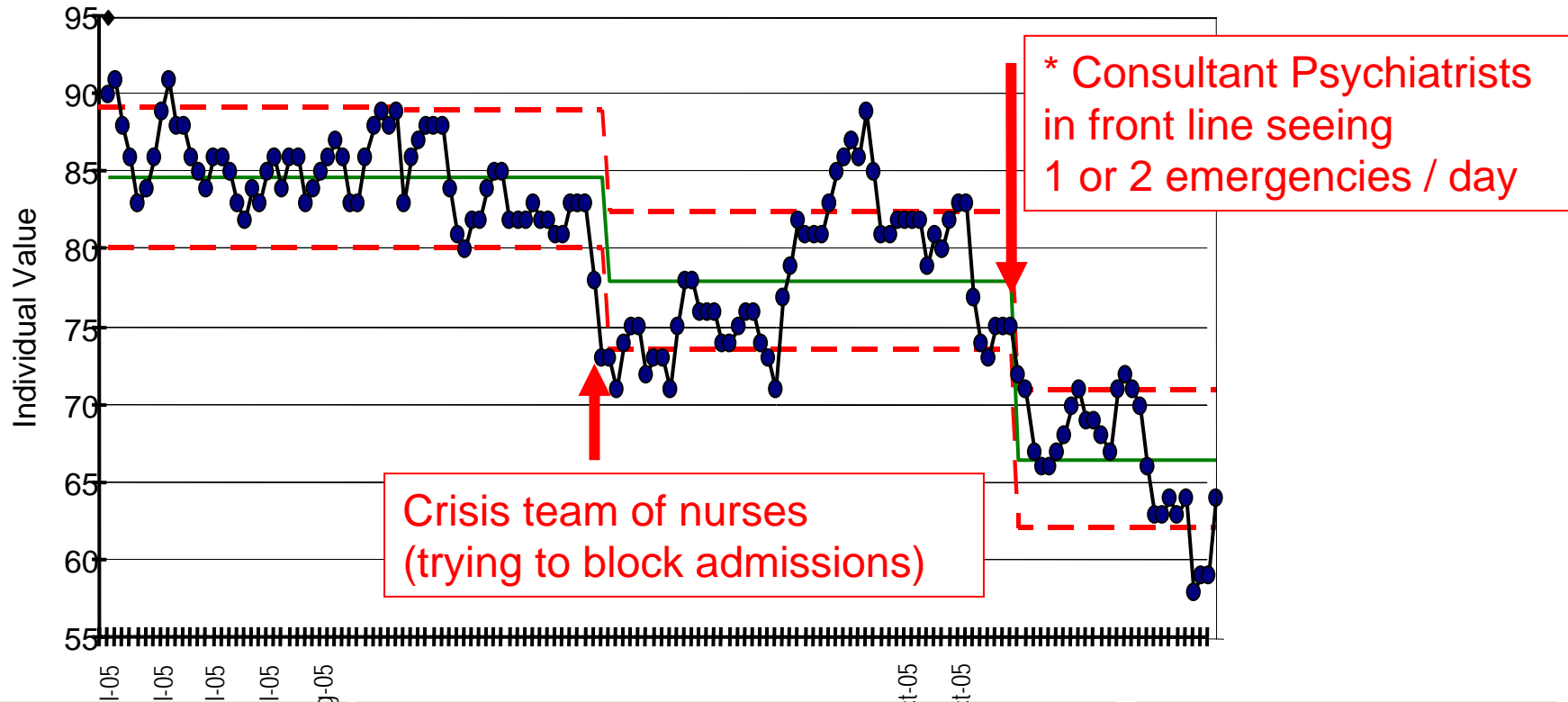
Time: average LOS for 80% of medical patients reduced by >1 day

Saving: £1,368,750 p.a. (based on 30 discharges per day and hotel costs £125/day)

Quality: better ?
No increase in readmissions

Mental Health: bed occupancy

Bed Occupancy %

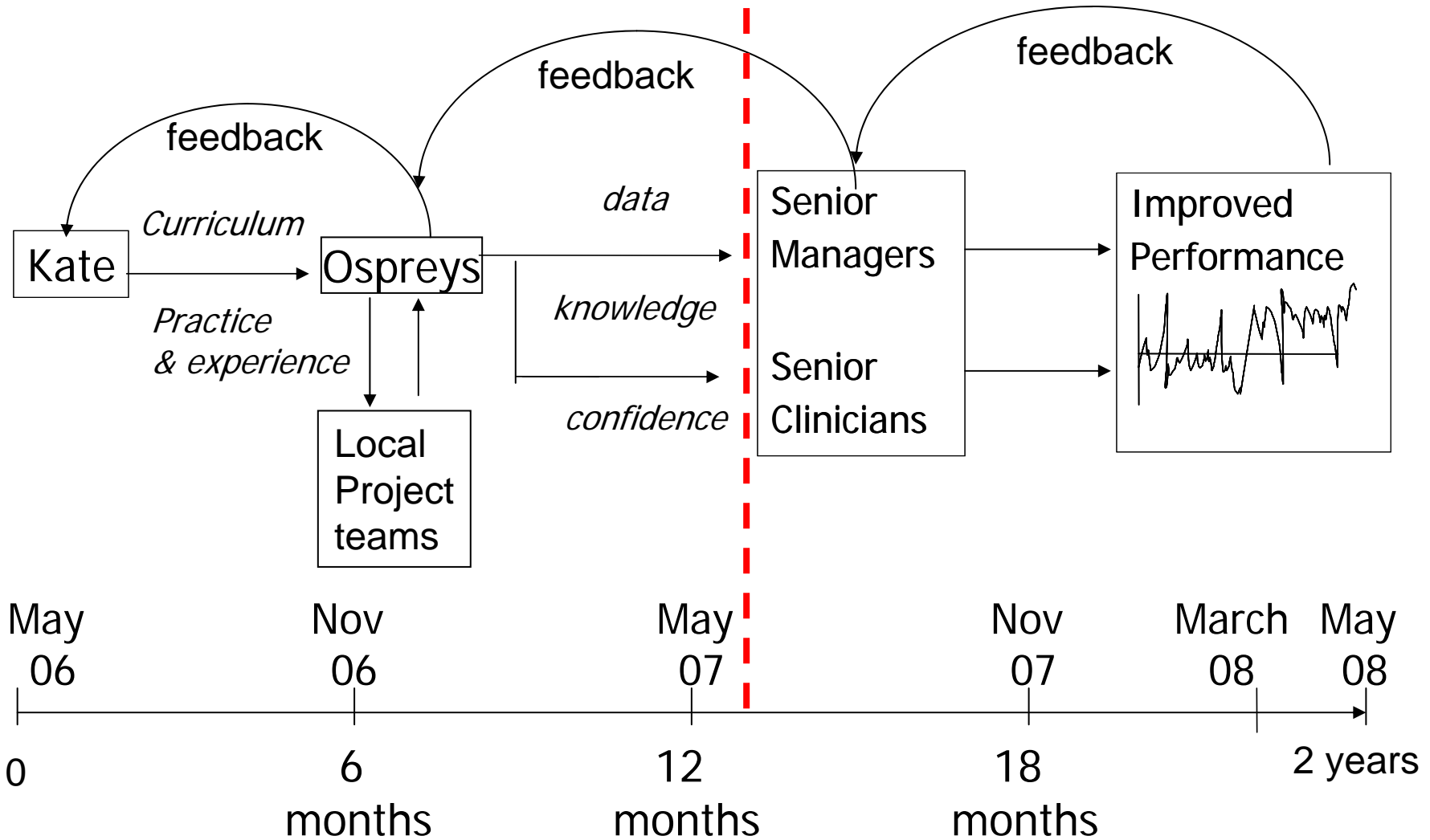


Time:
3 day wait to
same day assessment

Crisis Team cost ++
* Savings: some agency nurse costs,
+ Saved £2M on out of district
placements

Quality: no increase
in suicide rate.
Patients Delighted
Staff 'Thrilled'

Osprey Plan



Sorting the System

- Over to Dr. Steve Alder!
 - Osprey for Derriford Hospital, Plymouth

Summary: What is an Osprey?

| | | | | |
|--|-------------|--|---|----------------------|
| Systems Understanding: Complexity & Variation | High | <p>University Lecturer</p> <p>‘Its all very well in theory – but putting into practice is another matter!’</p> | <p>Clinical Systems Engineer</p> <p>I understand the system + target improvement interventions Measure time, cost & quality</p> | |
| | Low | <p>NHS (Project) Manager</p> <p>‘I’ve hit the target so what is the problem?’</p> | <p>Improvement Advisor: e.g. Lean / 6 Sigma</p> <p>‘I have never had to deal with such complexity before!’</p> | |
| | | Few tools | Application of Improvement Tools and Techniques | Lots of tools |

Batch 2008 -2010?

- University of Warwick Medical School
 - Osprey as post graduate programme
 - Lots of doctors interested but funding required
 - 5 NHS Organisations interested currently

- Advice please!