

kinetik solutions



 **Lean Executives**

## Lean London Forum

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**21 September 2011**  
**Royal College of Surgeons**

For more information, please email [help@leanlondon.org.uk](mailto:help@leanlondon.org.uk) or telephone 0207 824 8448



## **We have some broad aims in the forum**

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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**
  - The QIPP agenda in reducing costs across the health system
  - Clinical Commissioning Groups that will redefine 'end to end' health systems processes
- **To network with colleagues and friends**



## Agenda

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- **1800 - 1810**    **Welcome and introductions**
- **1810 - 1835**    **Transforming Surgical Productivity**  
**Christopher Kennedy - Guy's and St Thomas' NHS Foundation Trust**
- **1835 - 1900**    **Transforming Treatment Rooms**  
**Dr. Rebecca Hewitson - The Whittington Hospital NHS Trust**
- **1900 - 1930**    **Hot - seat session**  
***Your chance to ask questions***
- **1930 - 2000**    **Networking and drinks**



# Introductions

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- **Your Name**
- **Your Role**
- **The one thing relating to Lean you are curious about?**



## 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**

# Transforming Surgical Productivity at Guy's and St. Thomas NHS Foundation Trust

Christopher Kennedy



showing  
we care

Guy's and St Thomas'  
NHS Foundation Trust



## Surgical Productivity

- Background and context
- The approach we developed
- What did this tell us
- What areas did we focus on
- What support did we provide surgical teams
- What we have achieved so far
- Questions

## Background and Context

- There are 41 operating theatres across 3 hospitals
  - Guy's – 12 main, 2 day surgery, 2 dental
  - St. Thomas' – 12 main, 4 day surgery, 2 eye, 2 modular
  - Evelina Children's Hospital – 3 main, 2 modular
  - Around 28 surgical specialties
- Around £1m per theatre per year to run
- A number of previous efforts had failed
- Couldn't afford not to try again and recent successes in Orthopaedics and Urology



## The approach

- The Surgical Pathway was well understood and had been process mapped on numerous occasions *but* did not quantify the waste
- Developed a model based on internal data to calculate the wasted time within theatres
- Waste was defined for the purpose of the model, as any time when the theatre was not being used for patient care
- Modelled across 28 separate specialities for elective work only

## An example of the model

-Total number of lists cancelled during 2010-11.  
 -Wasted time = no. of full lists x 8 + number of half lists x 4

Average case length for full or half day lists. Increasing case length could reflect increased complexity or increased inefficiency/turn around time.

Cumulative total amount of time (in hours) for 2010-11 of late starts and early finishes. Wasted time is sum of these.

	Spec X
<b>Cancelled Lists - Total for 2010-11</b>	
Full Day	25
Half Day	29
% Cancelled	17%
Wasted Time (hrs)*	316
<b>Throughput</b>	
<b>Average Cases Per Month</b>	
2009-10	138
2010-11	100
<b>Case Length (mins)</b>	
Full Day Average 2009-10	133
Full Day Average 2010-11	122
Half Day Average 2009-10	73
Half Day Average 2010-11	51
<b>Patient Cancellations - Total for 2010-11</b>	
Number from Full Day	21
Number from Half Day	112
Wasted Time (hrs)*	138.7
<b>Late Starts - Total for 2010-11</b>	
Full Day Lists (hrs)	25.8
Half Day Lists (hrs)	96.4
Wasted Time (hrs)*	122.2
<b>Early Finishes - Total for 2010-11</b>	
Full Day Lists (hrs)	38.7
Half Day Lists (hrs)	102.9

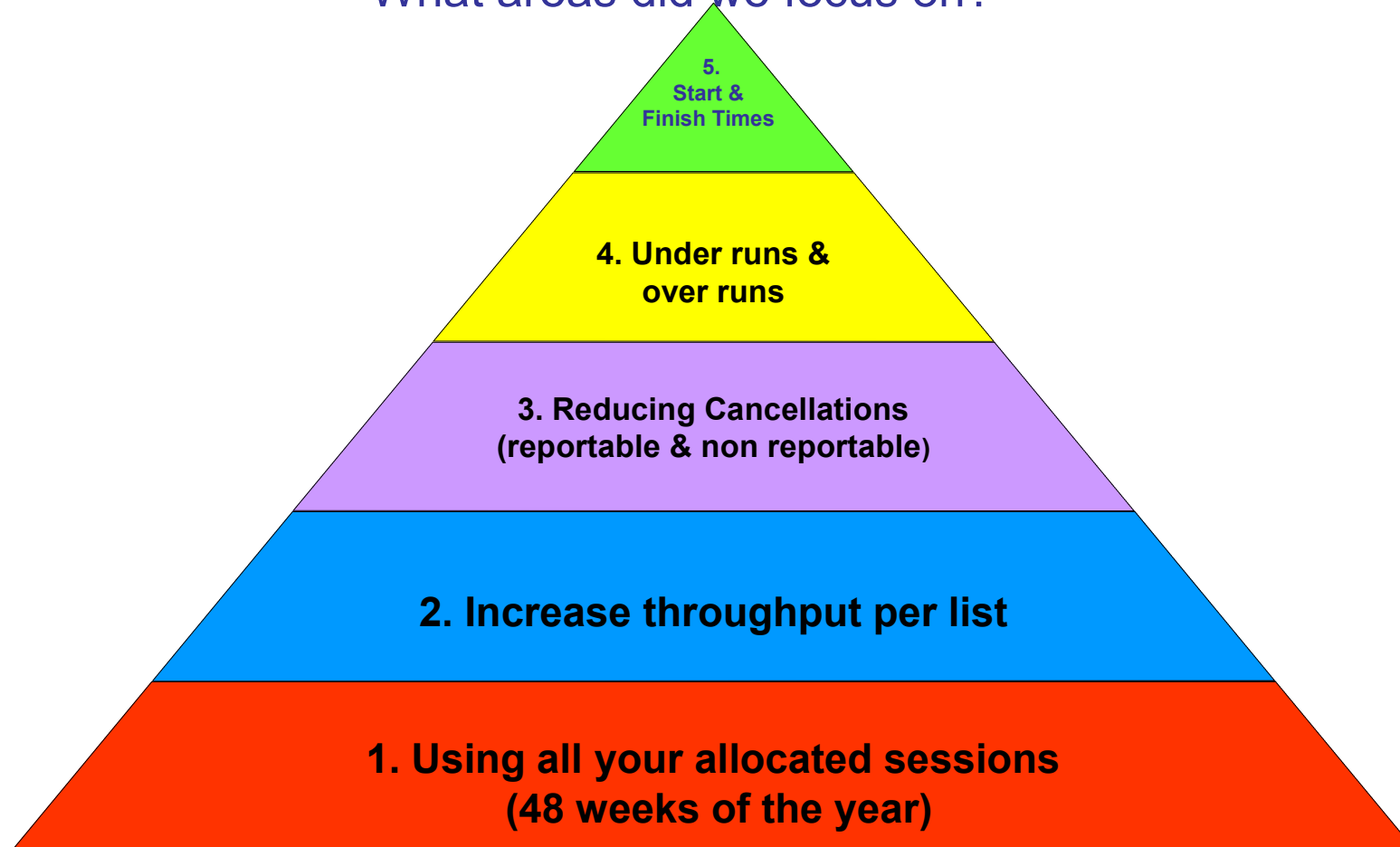
Average case through put per month

Total number of patients cancelled in 2010-11. Wasted Time is calculated by number of cancellations x average case length

## What did this show us?

- In 2010 - 11
  - 11% of lists were cancelled (around 1,500 lists)
  - Throughput was lower in most specialties
  - Considerable late starts and early finishes
  - Cancelled patients
  
- Identified significant savings across the systems

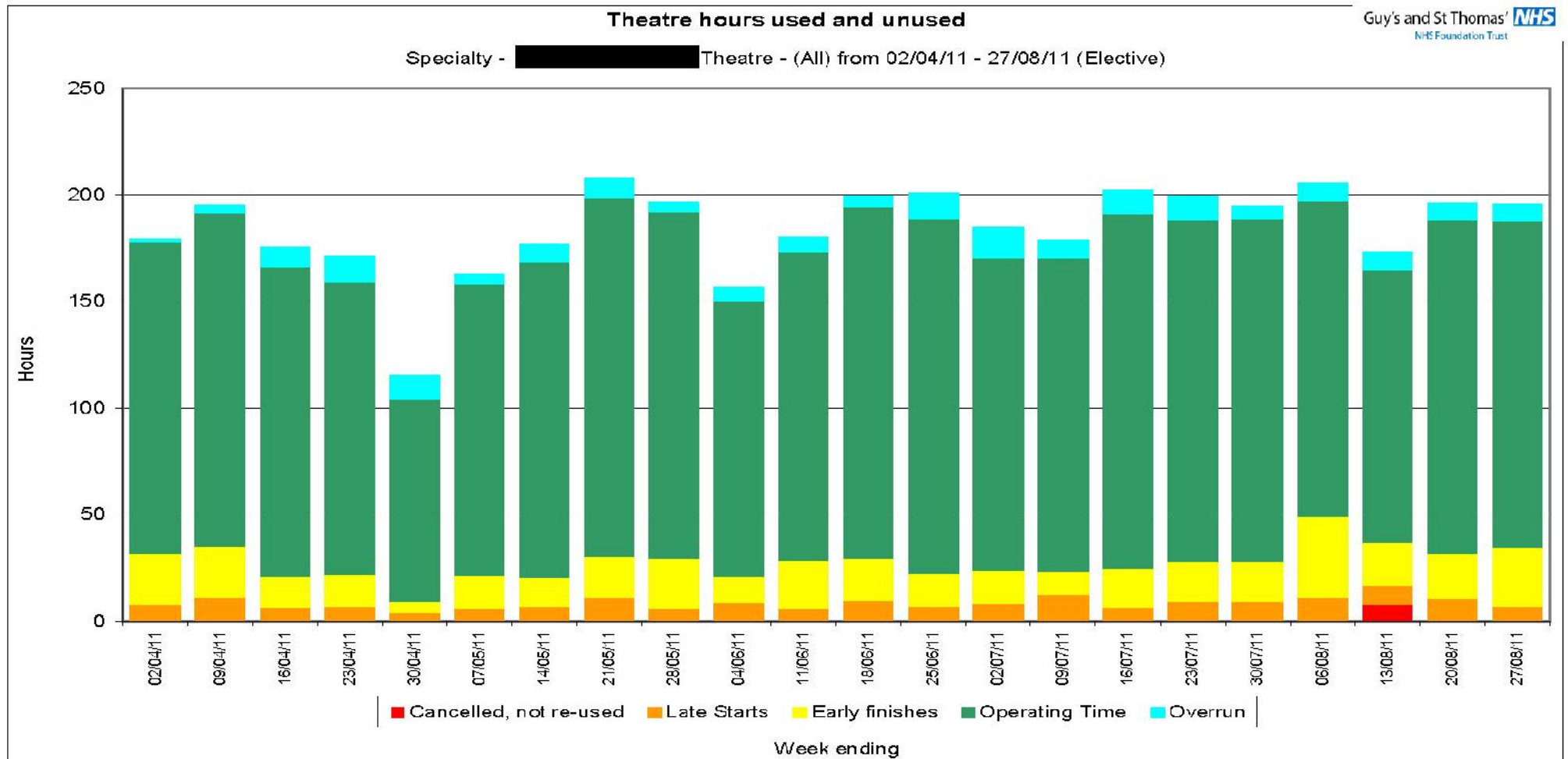
What areas did we focus on?



## What support did we provide surgical teams?

- Speciality specific data on the waste within their service
- Developed a range of reports to show:
  - Specialty run charts
  - Individual theatre run charts
  - Surgeon (team) level data
  - Updated weekly and displayed, available to all on the intranet
- A toolkit that was developed based on what had been shown to work in orthopaedics and urology
- Access to the Urology and Orthopaedic teams

## Example of the charts



## What did we ask of each surgical specialty?

- Initially all teams were asked to review their waste data to identify what their key areas for improvement and develop action plans based on the Toolkits they were supplied with
- Review their data on a weekly basis to drive improvement
- Roll out team briefings to all theatres and teams

## What have we achieved so far?

- Getting accurate weekly data to teams
- Lists are being given up by specialties
- Increased throughput in some specialities by 30%
- Improved percentage of on time starts from 14% to 65% in one theatre suite
- Rolling out Team Briefings to all theatres and teams



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 [www.guysandstthomas.nhs.uk](http://www.guysandstthomas.nhs.uk)

 [www.kingshealthpartners.org](http://www.kingshealthpartners.org)



showing  
we **care**

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# Standardising Treatment Room Layouts Using Lean Thinking

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Dr Rebecca Hewitson

Foundation Year 1 Trainee

Whittington Health



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# Background

- Surgical house officer
- Working on multiple wards
- Treatment room layouts chaotic
- Time-consuming
- Could lean thinking improve this?



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# Lean Thinking – 5S Pillars

- 1. Sort:** Remove unnecessary items
- 2. Set in Order:** Arrange items so they are easy to find and use  
Have clear labelling and visual cues
- 3. Shine:** Remove dirt, mess and clutter
- 4. Standardise:** Efficiency (not duplicating efforts)  
Effectiveness (anyone can find equipment quickly)
- 5. Sustain –** Work closely with key stakeholders to maintain



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# Objectives

- **1. Reduce waste and costs**
- **2. Improve safety**
- **3. Free up doctors' time**
- **4. Infection control**
- **5. Standardise practise**



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# 1. Sort



# Stock Check

- 1 spinal needle
- 2 ECG stickers
- 12 orange needles
- 1 stool sample bottle
- 3 orange bin bags
- 1 nasal swab
- 1 pair disposable forceps
- 1 vial Clindamycin
- 1 empty cardboard box for insulin needles



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# Stock Check Continued

- Red bungs (no longer used)
- Wrong dressings
- Blood tubes  
expire 06/2011
- 65 Grey Cannulae
- 18 Blue Cannulae





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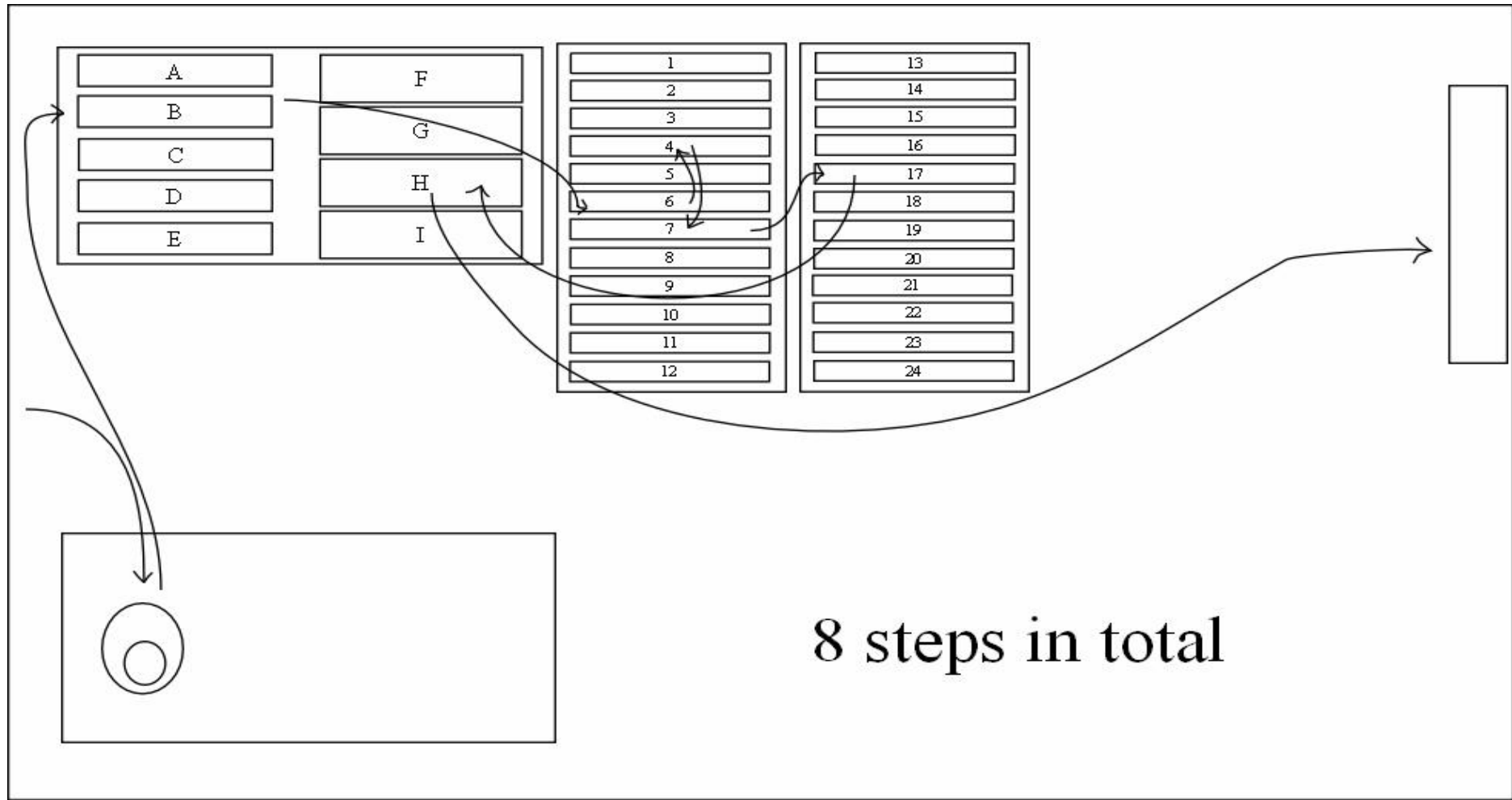
## 2. Set in Order

Arrange items so that they are easy to find and use



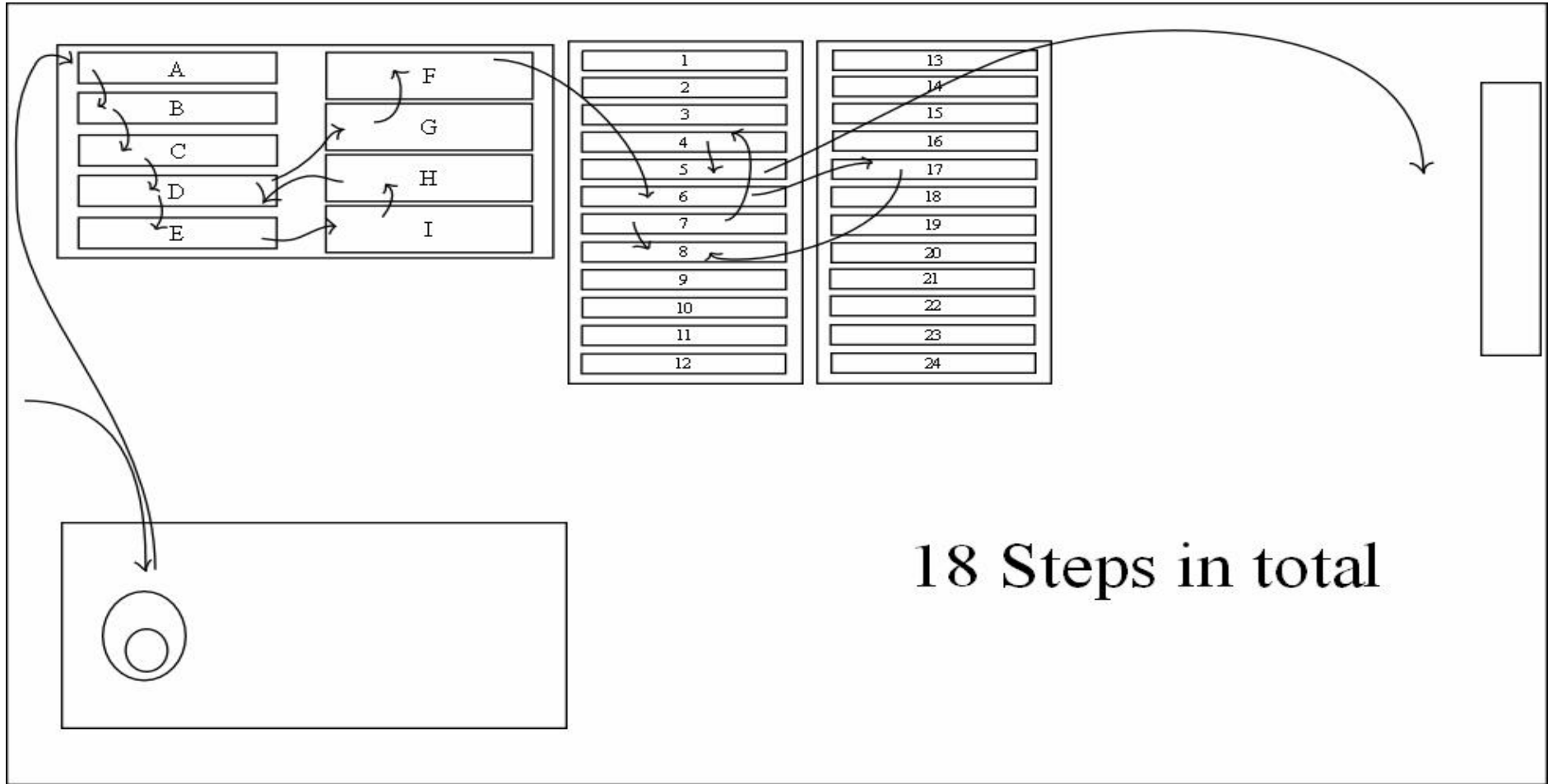
# Previous best case scenario was inefficient

Figure 1 – Collecting equipment for Cannulation, Victoria ward treatment room



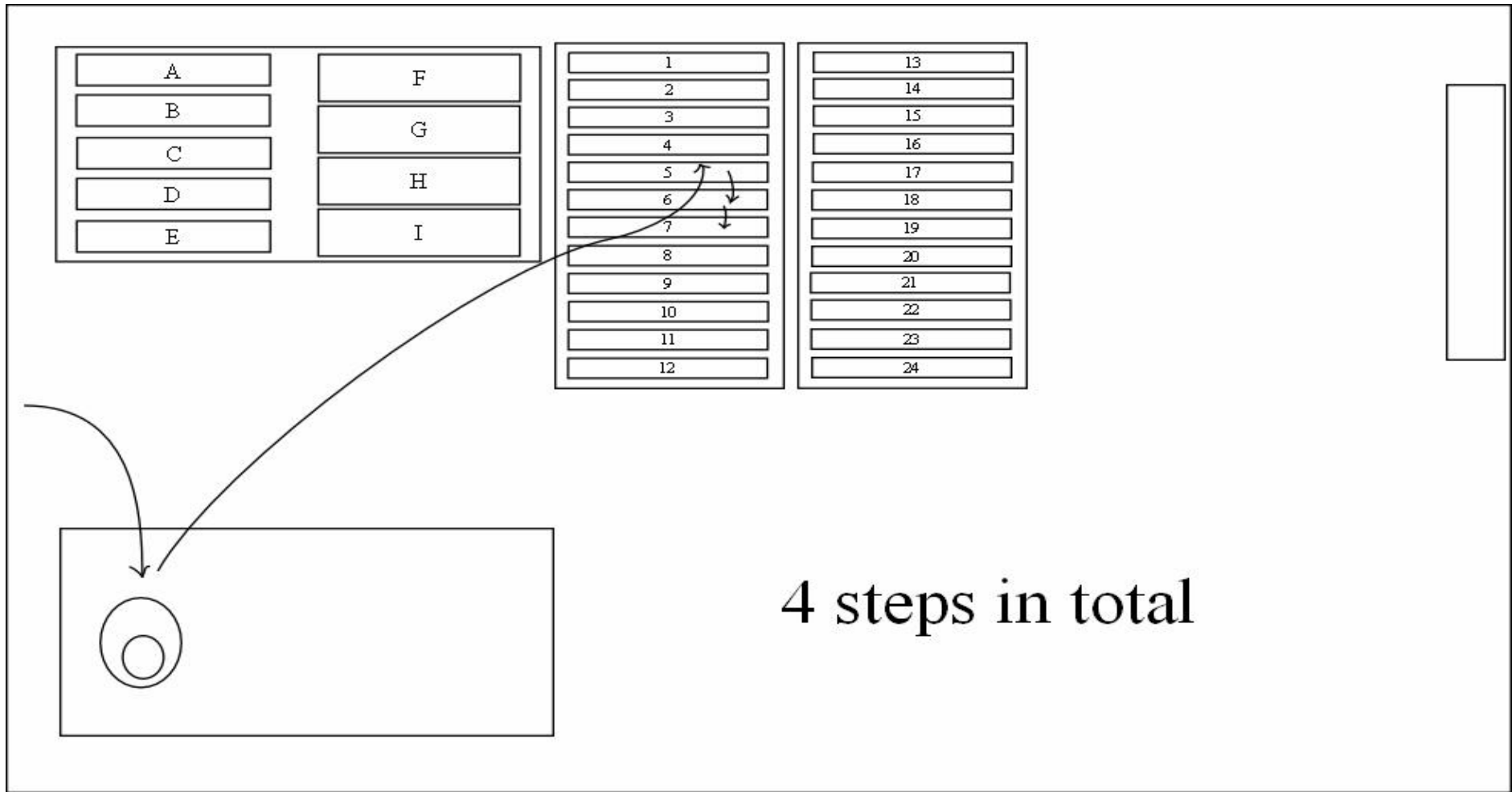
# Observed collection – even less efficient!

Figure 2 – Observation of FY1 collecting equipment for cannulation, Victoria Ward



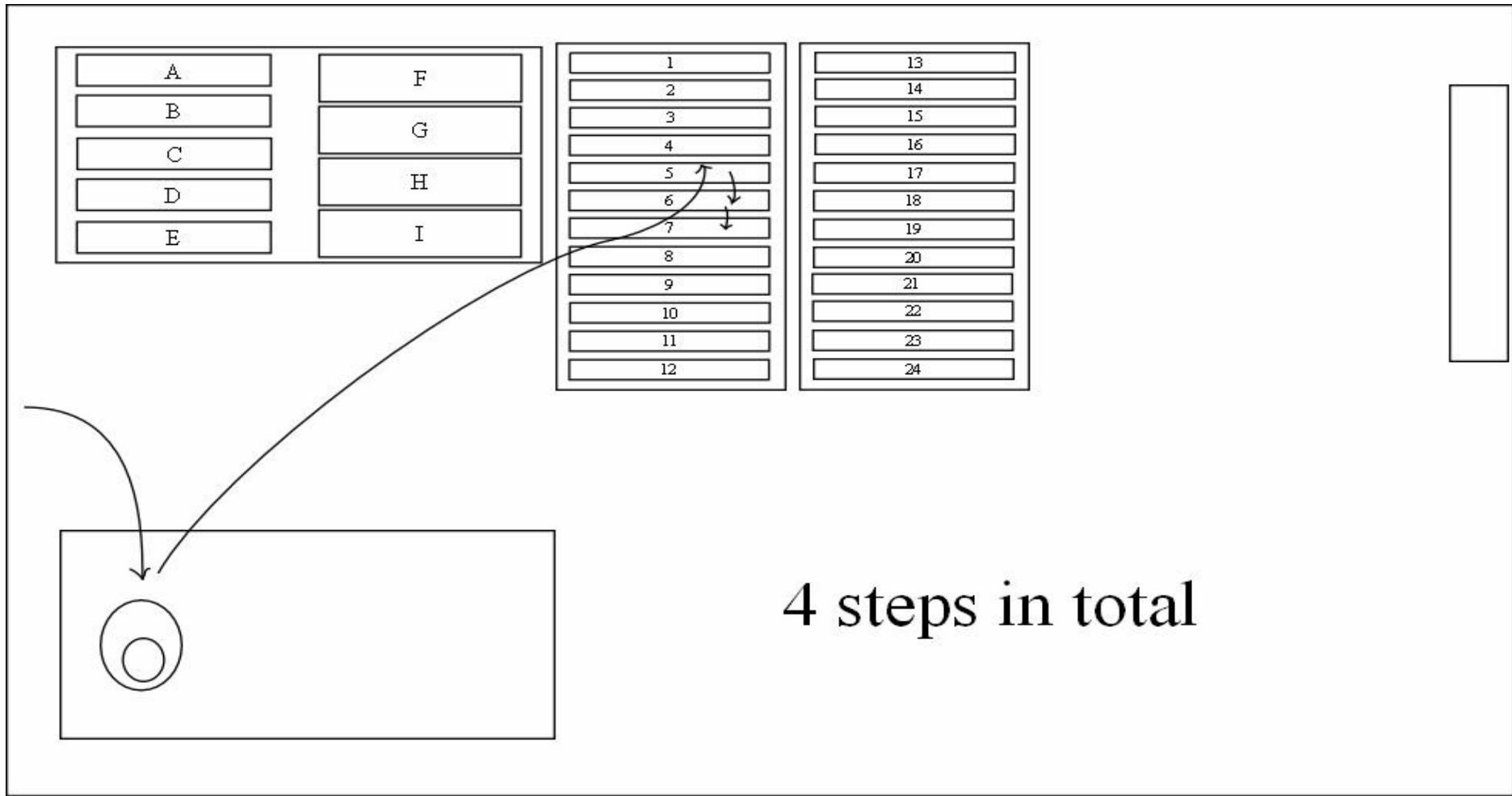
# New layout

Figure 3 – Collecting equipment for cannula, Victoria Ward treatment room



# New layout works!

Figure 4 - Observation of FY1 collecting equipment for cannulation, Victoria Ward



# Arrange by procedure











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## 2. Set in Order

Have clear labelling and visual cues



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# Labelling – Old System

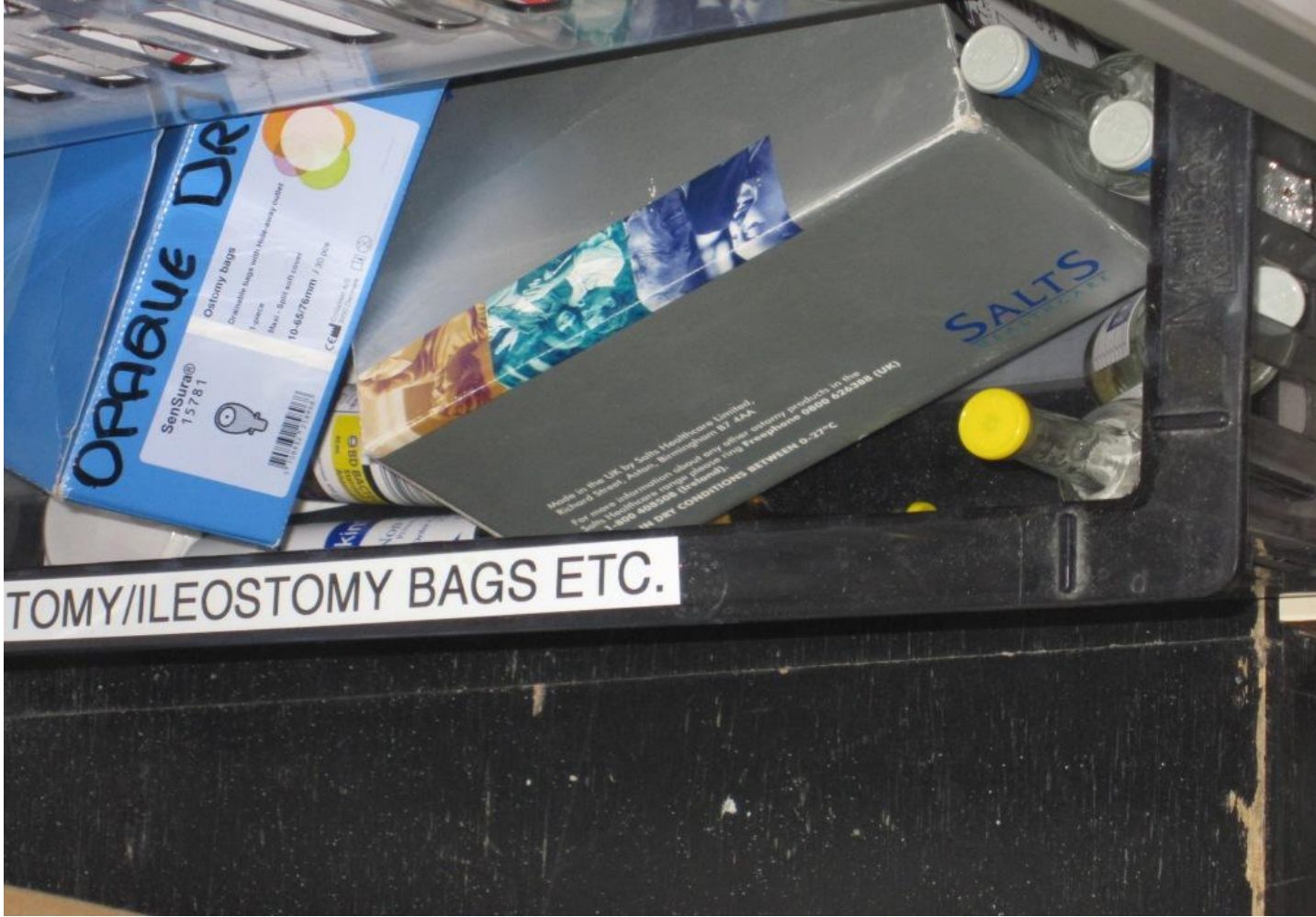


# Labelling – Old System



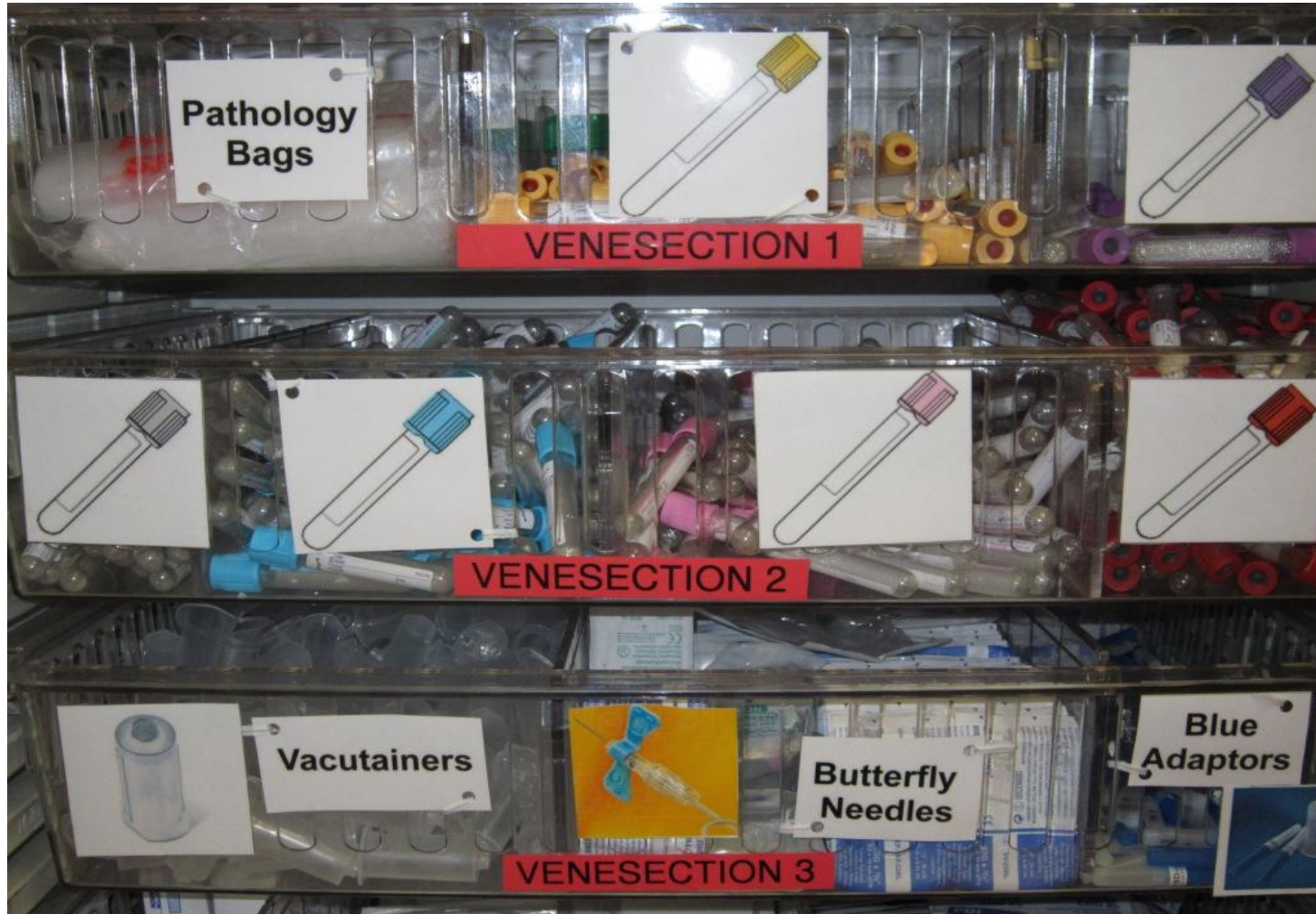








# Labelling – New System



# Visual Cues



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# 3. Shine







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# 4. Standardise



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Efficiency – avoid duplication of effort

Effectiveness – anyone can find equipment  
as same in each ward



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# Objectives

- 1. Reduce Waste and Costs
  - Reduce out of date equipment
  - Reduced amount of discarded equipment
  - ~ £3500 per year saving per 20 bed ward
  
- 2. Improve Safety
  - Removed items not suitable
  - Ensure all equipment available



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# Objectives

- 3. Free up doctor's time
  - Objective reduction – more than halved time
- 4. Infection Control
  - Clean drawers and remove clutter
- 5. Standardise Practise
  - Pilot study in 2 wards



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# Challenges

- Secret Stakeholders!
- Time limitations
- Taking on small section only
- Stock ordering system



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# Future Developments

- Applying principles to A&E resus room
- Roll-out to other wards in the hospital
- Sustainability:
  - Engagement of stakeholders
  - Champions of project on each ward





# Your Questions on Lean

**We have low morale and no one is willing to change, what can I do?**

**Can Lean fail?, and for what reason?**

**What the one thing that makes the biggest difference?**

**Why don't we succeed in our department?**



**We have no budget to start Lean – what can we do?**





## What's Next?

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- **Today's presentation and feedback survey sent out by email within 48 hours**
- **The Next Lean London Forum will be held in 21 March 2011.**
  - Register at [www.leanlondon.org.uk](http://www.leanlondon.org.uk)
  - We will send out reminders to all participants from today
  - We have a Lean Midland Forum on 13 December 2011 taking place in Birmingham. Register at [www.leanmidland.org.uk](http://www.leanmidland.org.uk)
  - We have a one day course – 'An introduction to Lean in the NHS' on 24 November 2011. Further details at [http://www.kinetik.uk.com/pdf/Course\\_Brochure\\_2011.\\_Birmingham.pdf](http://www.kinetik.uk.com/pdf/Course_Brochure_2011._Birmingham.pdf)
  - If you'd like to take up one our presentation slots, please do let us know. We are keen to hear from Community Trust and GP Groups

- **Find us on Linked In and Twitter @nNHS**





## **Big Thanks To Our Presenters**

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***Christopher Kennedy***

***Rebecca Hewitson***

***..and to you all for attending***





## Thanks to Our Sponsors

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