

**PGWC**

**Start time monitoring policy**



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# A complex system

- is a network of heterogeneous components that interact nonlinearly, to give rise to emergent behavior

# Indicator

- An indicator can be defined as:
  - “ something that helps us to understand where we are, where we are going and how far we are from the goal
  - “a variable, which purpose it is to measure change in a phenomena or process”

# Rationale

- Indicator of readiness
- This indicator tells you that the:
  - Patient is there on time
  - Nursing staff is there on time
  - Anaesthetist is there on time
  - Surgeon is there on time
  - Process functioning according to plan

# Policy purpose

- To have surgical preparation time begin before 08:00 on all scheduled operating lists
- To monitor daily theatre starting times as an indicator for theatre efficiency
- To assist in the optimal use of scarce theatre resources
- To define the indicator times

# Definitions

- **Start of anaesthetic**

Anaesthetist present and the standard anaesthetic monitoring is established

- **Start of surgical preparation**

The time at which the anaesthetic induction is sufficiently far advanced to allow surgical preparation to commence i.e. insertion of urinary catheters or the commencement of cleaning and draping or the start of positioning of the patient. It may not be necessary for anaesthetic preparation to be complete at this time, so that, for example, the anaesthetist may insert an arterial line or a central venous catheter after surgical preparation has commenced.

# Which lists and cases?

- All scheduled, emergency and urgent lists
- For the first case on each morning list
- These times are only required for weekdays (excluding public holidays)

# Recording

| <b>Room</b> | <b>Monday</b>                      | <b>Tuesday</b>                     | <b>Wednesday</b>                   | <b>Thursday</b>                    | <b>Friday</b>                      |
|-------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
|             | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline |
|             | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline |
|             | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline |

# How we use it....

| Room | Monday  | Tuesday                            | Wednesday                          |
|------|---|------------------------------------|------------------------------------|
|      | Anaes: <i>07.47</i><br>Surg Prep: <i>07.55</i><br>Discipline <i>EN7</i> | Anaes:<br>Surg Prep:<br>Discipline | Anaes:<br>Surg Prep:<br>Discipline |

If you would like to explain any delay which you feel was preventable, please identify it by date and theatre room and add comment.

| Date | Room | Comment |
|------|------|---------|
|      |      |         |
|      |      |         |

# Data use in practice

| TOTALS FOR THE MONTH OF APRIL 2009 BY THEATRE AREA |                 |    |    |   |    |
|--|-----------------|----|----|---|----|
| 5  | Number of lists | 29 | 27 | 4 | 39 |
| 5  | < 08.00         | 1  | 15 | 0 | 26 |
| 5  | 8.01-8.10       | 1  | 3  | 0 | 8  |
| 5  | 8.11-8.20       | 5  | 5  | 1 | 0  |
| 5  | 8.21-8.30       | 8  | 0  | 0 | 3  |
| 5  | >8.30           | 14 | 3  | 3 | 2  |
| 5  | Anaes > 8.00    | 13 | 4  | 3 | 2  |

# How Somerset use it

|                 | Totals for August |                                     |
|-----------------|-------------------|-------------------------------------|
| Number of lists | 42                |                                     |
| <08.00          | 17                | 40.5% on time                       |
| 8.01-8.10       | 15                | 76.2% start by 08.10                |
| 8.11-8.20       | 4                 | 85.6% start by 08.20                |
| 8.21-8.30       | 1                 |                                     |
| >8.30           | 4                 | 11.9% start after 08.20             |
| Anaes>8.00      | 4                 | 9.5% anaesthetic starts after 08.00 |
|                 |                   |                                     |

## New Somerset Hospital operating theatre Dashboard May 2011

**TOTAL CASES FOR 2<sup>nd</sup> AND 3<sup>rd</sup> FLOORS IS 539 CASES,**  
 324 SSCL completed, = **61.7%** (target is 100%)  
 30/538 cancellations = **5.6 %** (target is less than 16%) **TARGET ACHIEVED**  
 24/61 on-time starts before 08.00 = **39.3%** (target is 100% on time)

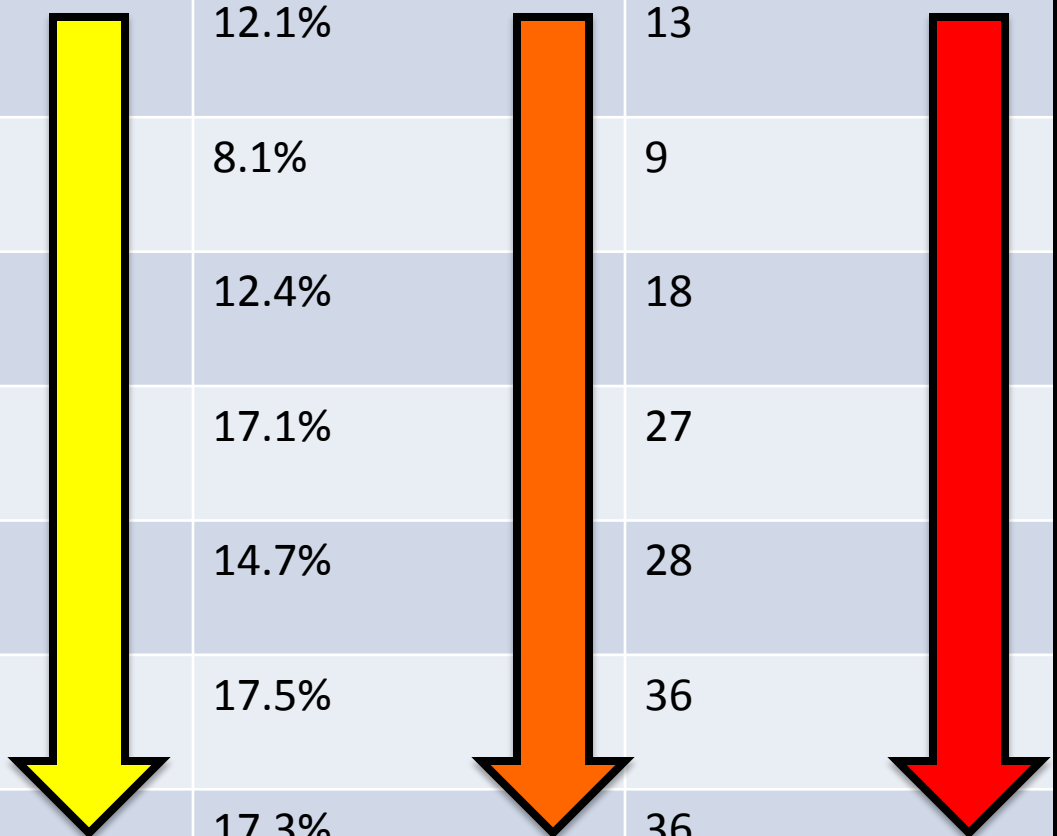
### New Somerset Hospital Start time analysis for May 2011

|                       | 2 <sup>nd</sup> Floor | 3 <sup>rd</sup> Floor  | Combined | Percentages           |
|-----------------------|-----------------------|------------------------|----------|-----------------------|
| <b>Lists planned</b>  | 40                    | 21                     | 61       |                       |
| <b>&lt;08.00</b>      | 17 (42.5%)            | 7 (33%)                | 24       | <b>39.3 % on time</b> |
| <b>08.01-8.10</b>     | 8 (62.5%)             | 4(19%)                 | 12       | 59.0 % by 08.10       |
| <b>08.11-8.20</b>     | 3(70%)                | 6(29%)                 | 9        | 73.7% by 08.20        |
| <b>08.21-8.30</b>     | 6                     | 1(4.8%)                | 7        | 21.3 % after 08.20    |
| <b>&gt;08.30</b>      | 5                     | 1 (4.8%)               | 6        |                       |
| <b>Anaes&gt;08.00</b> | 12                    | 10                     | 22       |                       |
| <b>Missing</b>        | 1 missing             | 2 days no<br>electives | 1        | 1.6% missing data     |
|                       |                       |                        |          |                       |

### New Somerset Hospital Late start reasons May 2011

# Used for improvement

| Month     | Number lists | On-time% | On time lists |
|-----------|--------------|----------|---------------|
| April     | 107          | 12.1%    | 13            |
| May       | 111          | 8.1%     | 9             |
| June      | 147          | 12.4%    | 18            |
| July      | 157          | 17.1%    | 27            |
| August    | 190          | 14.7%    | 28            |
| September | 205          | 17.5%    | 36            |
| October   | 207          | 17.3%    | 36            |
| November  | 224          | 16.1%    | 36            |



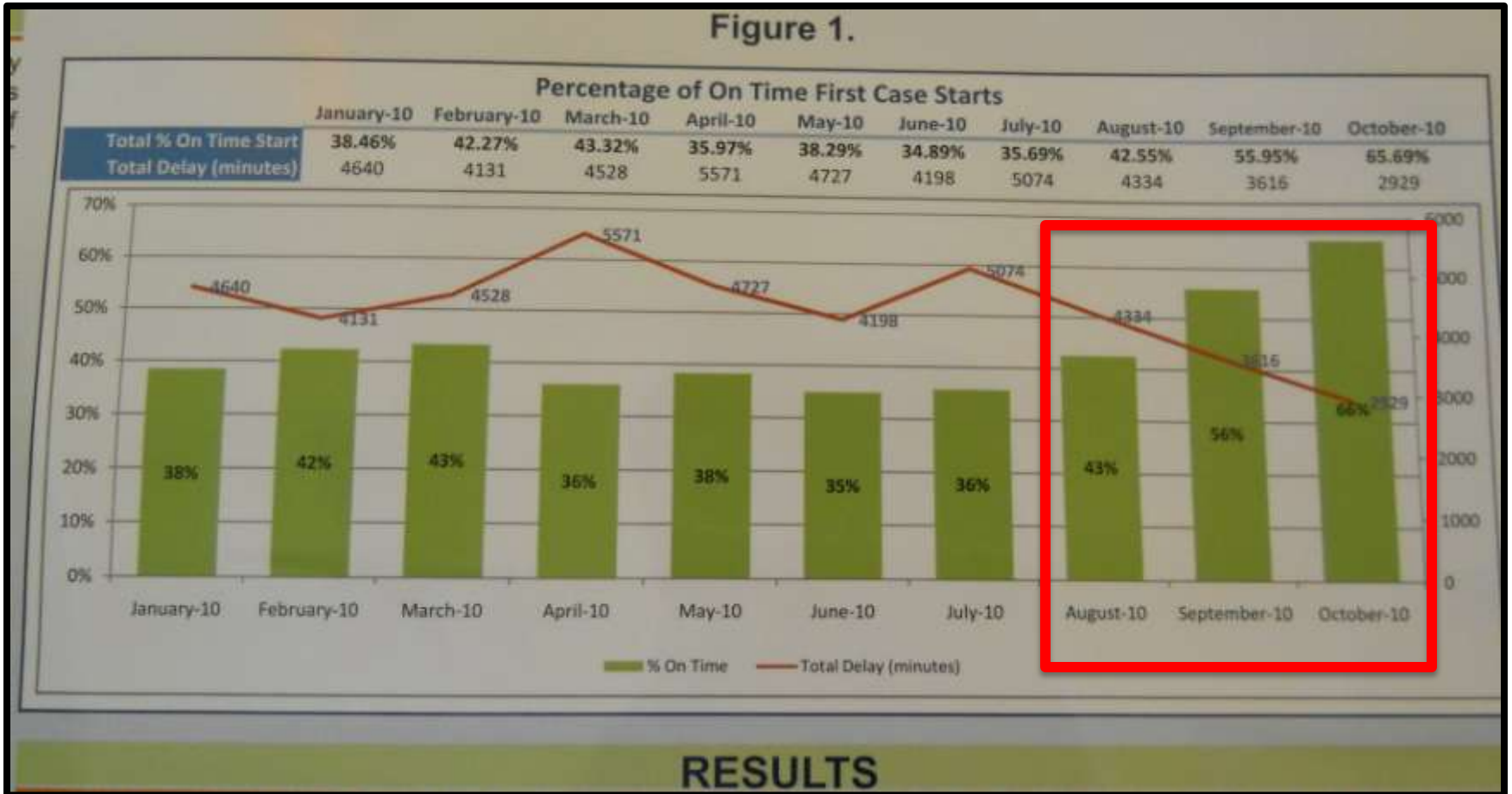
# International comparison

## % On-Time First Cases (ASC)

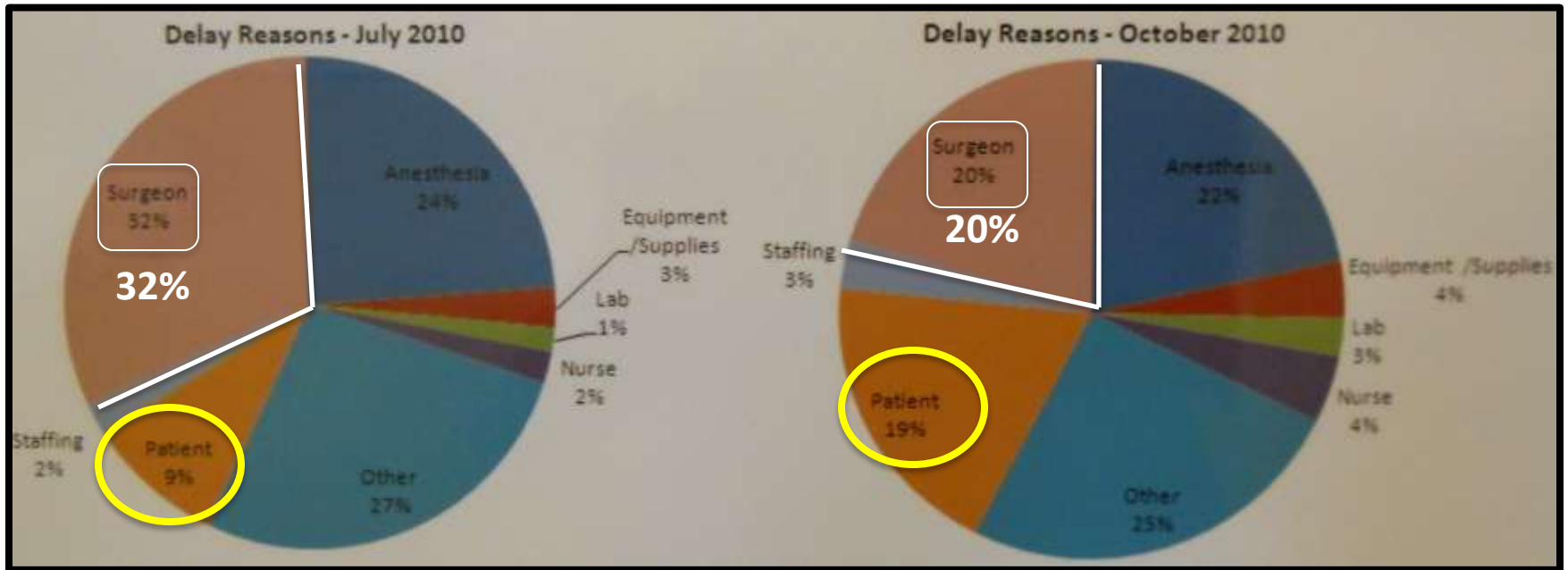
|      | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2008 | 32  | 40  | 20  | 36  | 33  | 35  | 34  | 36  | 38  | 49  | 34  | 35  |
| 2009 | 63  | 77  | 74  | 64  | 69  | 64  | 66  | 63  | 60  | 66  | 72  | 56  |
| 2010 | 65  | 69  | 58  | 59  | 58  | 61  | 67  | 64  |     |     |     |     |

# International comparison

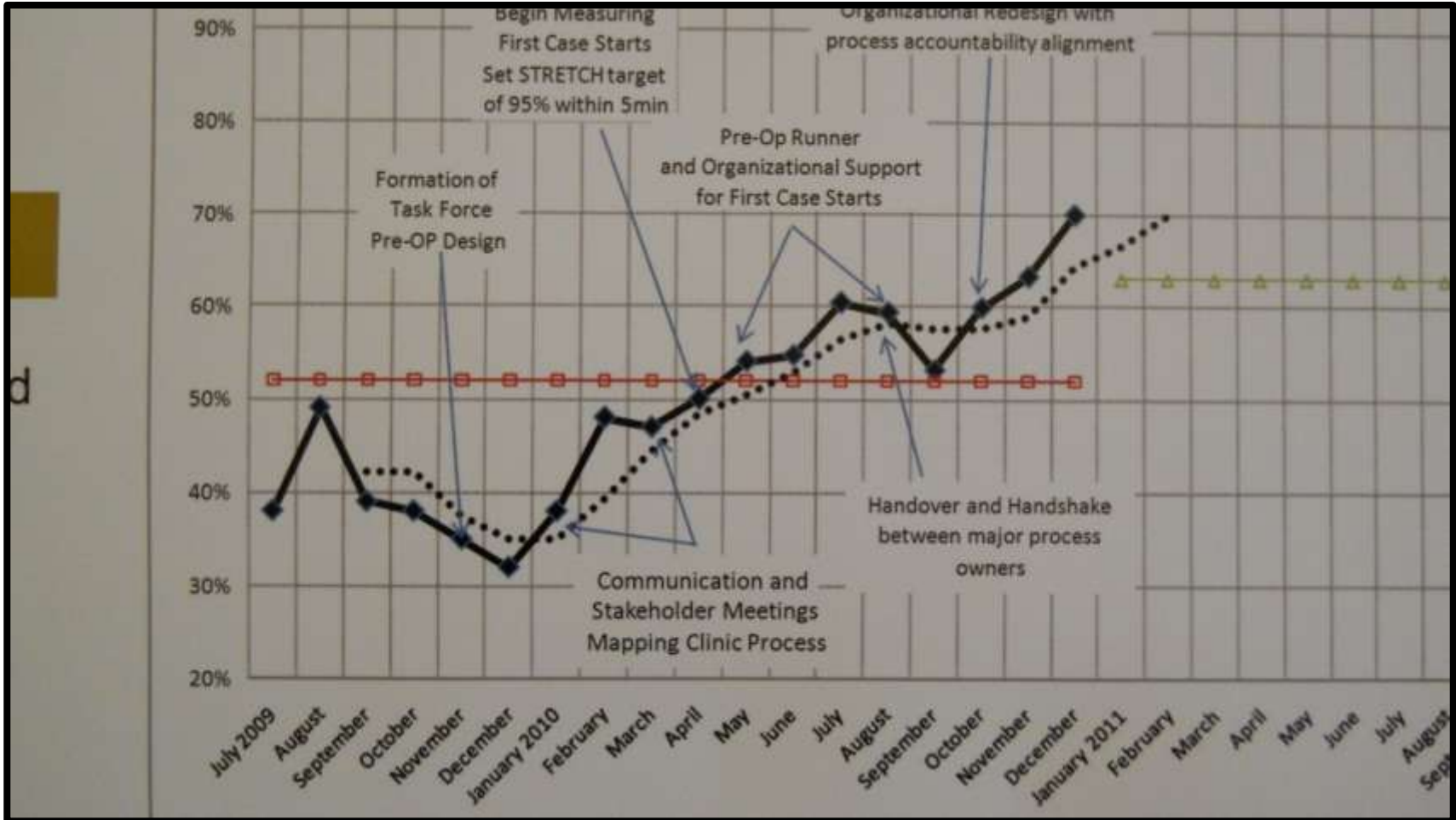
Figure 1.



# International comparison



# International comparison



# Summary of 234 late starts

## Top 6 reported causes

[accounting for 76.3% of all recorded reasons for late starts]

| Reasons | Number of cases | Percentage |
|---------|-----------------|------------|
|         | 66 cases        | 28.2%      |
|         | 41 cases        | 17.5%      |
|         | 40 cases        | 17.1%      |
|         | 12 cases        | 5.1%       |
|         | 10 cases        | 4.2%       |
|         | 10 cases        | 4.2%       |

# Summary of 234 late starts

## Top 6 reported causes

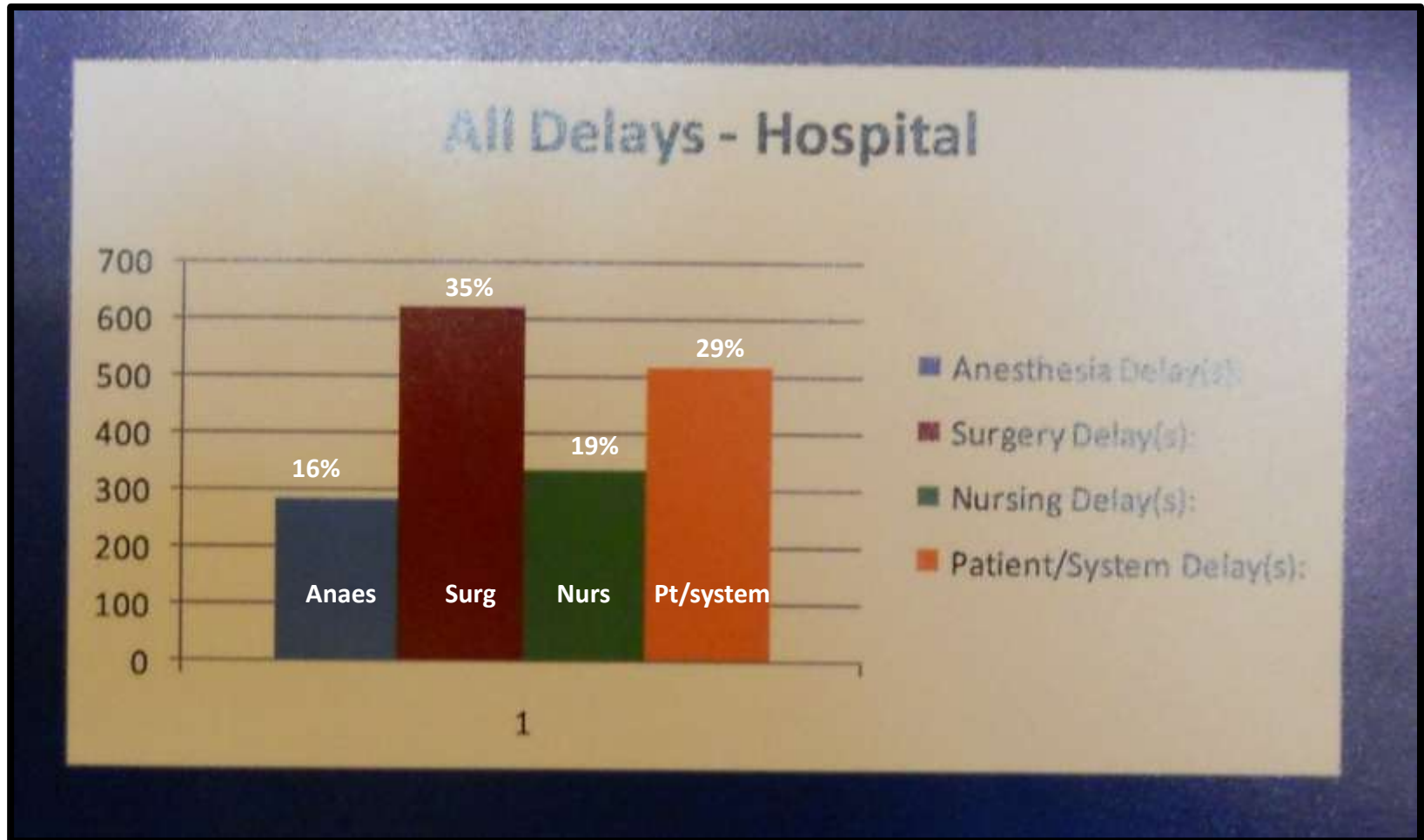
[accounting for 76.3% of all recorded reasons for late starts]

| Reasons                                    | Number of cases | Percentage |
|--|-----------------|------------|
| Surgeon late                               | 66 cases        | 28.2%      |
| Acceptable anaesthetic clinical difficulty | 41 cases        | 17.5%      |
| Patient late                               | 40 cases        | 17.1%      |
| Anaesthetic equipment problem              | 12 cases        | 5.1%       |
| Patient unwell                             | 10 cases        | 4.2%       |
| Communication/admin/org anisational error  | 10 cases        | 4.2%       |

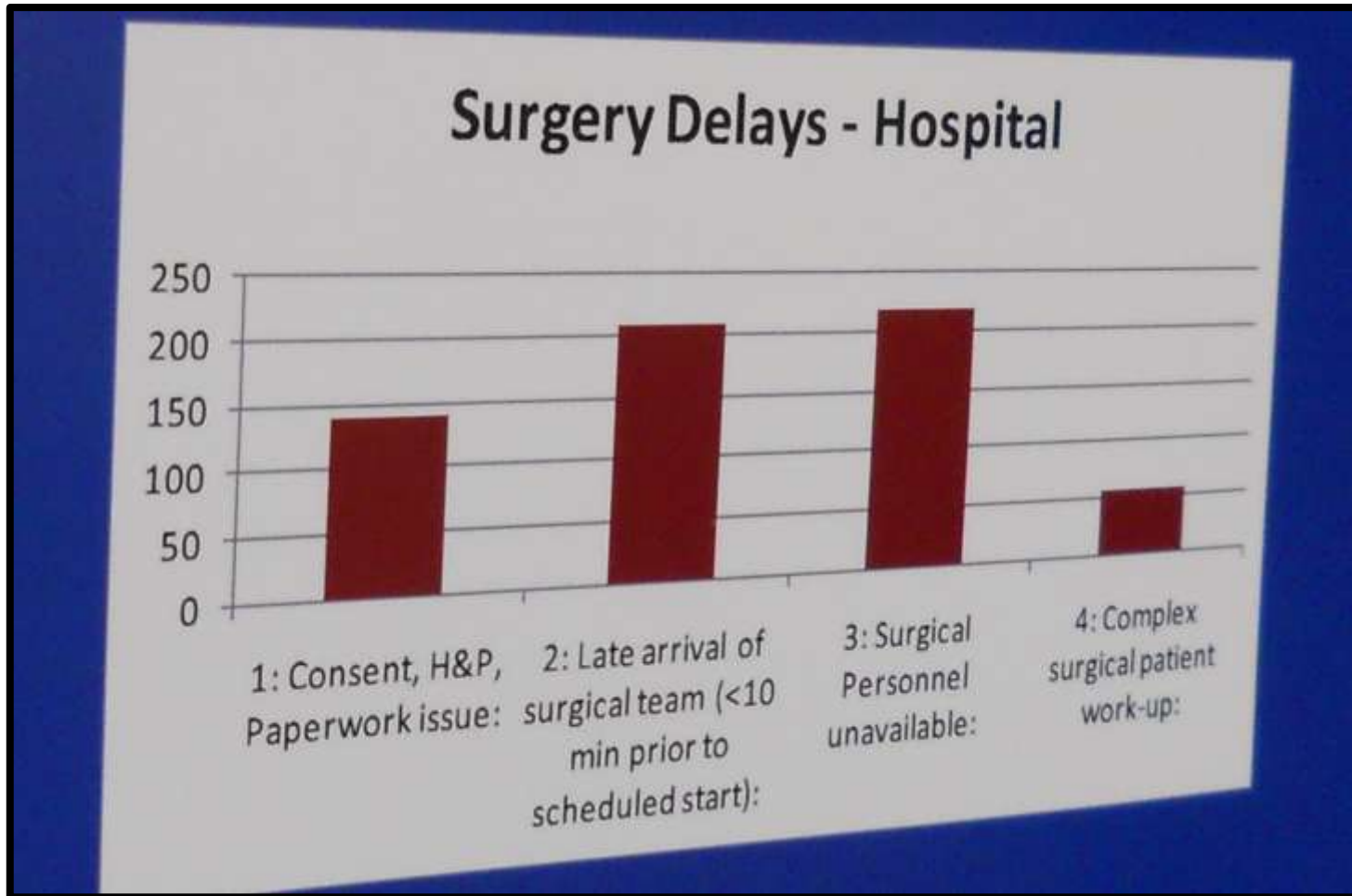
# International comparison

| Hospital Cases<br>n = 8748 | 2009 Data                    | ASC Cases<br>n = 6420    |
|----------------------------|------------------------------|--------------------------|
| 4680 (54%)<br>4068 (45%)   | On-time<br>Late              | 4414 (68%)<br>2006 (31%) |
| 1784 (44%)                 | Late Case + Cause Documented | 1021 (52%)               |
| 287 (16%)                  | Anesthesia                   | 193 (19%)                |
| 833 (35%)                  | Surgery                      | 384 (38%)                |
| 338 (13%)                  | Nursing                      | 132 (13%)                |
| 519 (29%)                  | Patient & System             | 291 (29%)                |

# International comparison



# International comparison



# Does it behave as an indicator?

Maybe it is acceptable to target 80% of operating lists having “surgical preparation” time before 08.20?

Then

What percentage need to have a start “surgical preparation” before 08.00 to achieve target?

# Does it behave as an indicator?

| <b>% on time</b> | <b>% by 20 past</b> |
|------------------|---------------------|
| 74               | 91.6                |
| 50               | 90                  |
| 21               | 60                  |
| 12               | 58                  |
| 6                | 46                  |
| 6                | 36                  |
| 5                | 30                  |
| 0                | 43                  |
| 0                | 0                   |
| 21               | 41                  |
|                  |                     |
| 74               | 82                  |
| 18               | 68                  |
| 11               | 70                  |
| 11               | 58                  |
| 4                | 37                  |
| 4                | 30                  |
| 0                | 71                  |
| 0                | 27                  |
| 18               | 56                  |

GSH April and May 2011

# Does it behave as an indicator?

| <b>% on time</b> | <b>% on time</b> |
|------------------|------------------|
|                  |                  |
| <b>60</b>        | <b>80</b>        |
| <b>48</b>        | <b>85</b>        |
| 40               | 74               |
| 36               | 76               |
| 36               | 72               |
| 25               | 77               |
| 25               | 71               |
| 25               | 77               |
| 24               | 66               |
| 22               | 72               |
|                  |                  |
|                  |                  |

NSH Sept 2010- May 2011

# Reflections

- Is it useful in terms of understanding efficiency?
- How do we know that hospitals are using it?
- Other benefits of counting first case starts?

