

# Qualitative Assessment of NPSA Safer Surgery Checklist Practice:

## Phase one of a Quality Improvement project

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### Background

Surgery is an essential component of modern healthcare. The impact of surgical care on public health systems will grow, as the incidences of traumatic injuries, cancers and cardiovascular disease rise<sup>1</sup>.

There were over 9 million surgical operations and procedures in England in 2009/2010<sup>2</sup>. Surgical processes are inherently risky, and unsafe surgical care can cause substantial harm. A systematic review has suggested that around one in ten hospital patients in industrialized countries experiences an adverse event, and about 60% of those patients are cared for by surgical teams<sup>3</sup>.

'Never events' are serious, largely preventable patient safety incidents. Surgical never events, including wrong site surgery and retained foreign object post operation, are the most commonly reported types of never event in the English NHS<sup>4</sup>.

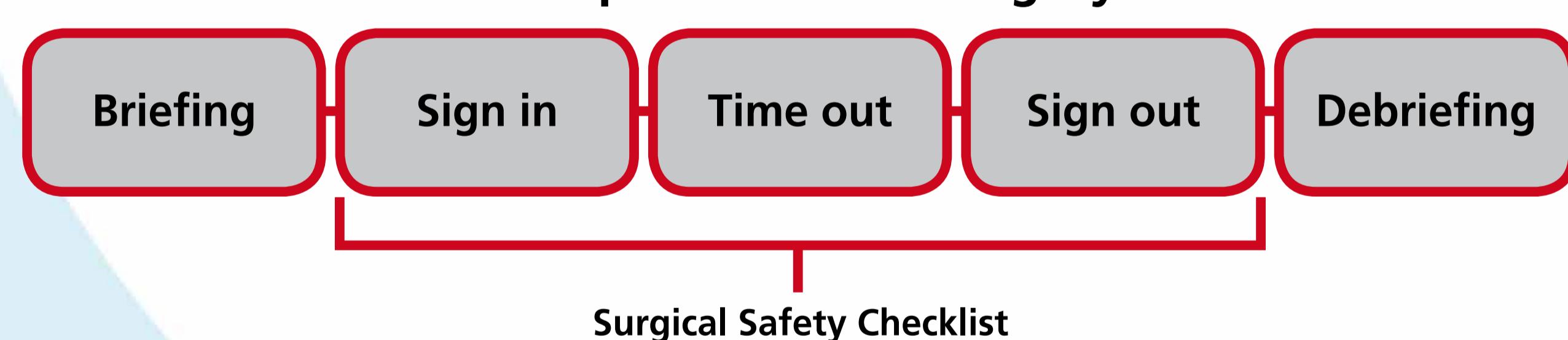
The World Health Organisation (WHO) Surgical Safety Checklist was launched in 2008. It comprised three steps intended to occur at safety critical time points during the patient's care

- sign in (before induction of anaesthesia)
- time out (before start of surgical intervention)
- sign out (before the team or patient leave the operating room)

A global pilot in 2009 demonstrated that the reliable implementation of the checklist was associated with statistically significant reductions in mortality (from 1.5% to 0.8%) and inpatient complications (from 11.0% to 7.0%)<sup>5</sup>.

The addition of team brief and debriefing sessions at the beginning and end of each theatre list are supported by the National Patient Safety Agency (NPSA) as vital adjuncts to the original WHO Surgical Safety Checklist. Effective teamwork and communication are fundamental for the reliable implementation of the National Patient Safety Agency Five Steps to Safer Surgery.

#### 5 steps for a safer surgery



Our aim was to observe and analyse team interactions and behaviours during these steps to identify practices which could be changed to improve patient safety at our organization.

### Methods

Fly-on-the-wall, real-time observations were made during theatre sessions. Observers used an assessment grid, developed in conjunction with our local Quality Improvement (QI) team, to qualitatively rate several domains for each of the five steps including:

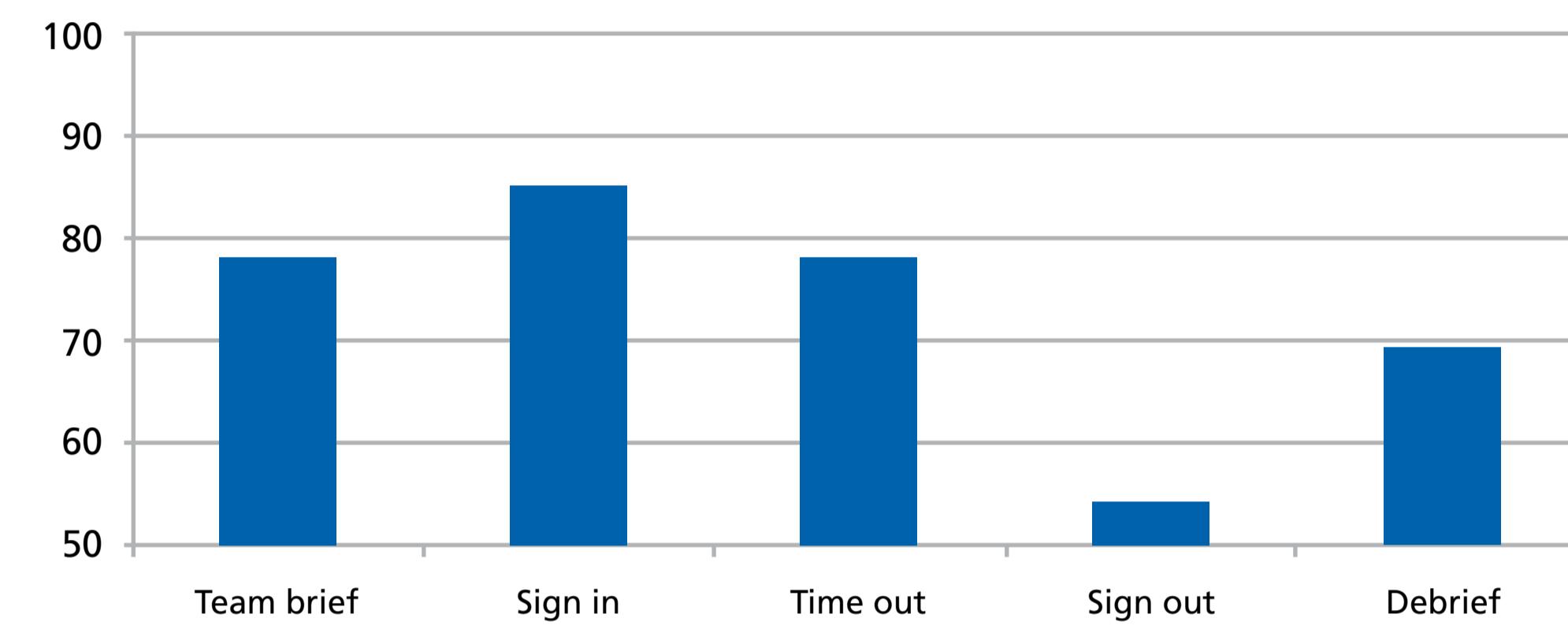
- Appropriate timing/environment
- Team members present
- Personnel maintain silent focus
- Open and respectful team interactions
- All essential elements discussed

Each domain was scored between 1 and 4. A score of 1 or 2 was unsatisfactory, a score of 3 or 4 satisfactory.

### Results

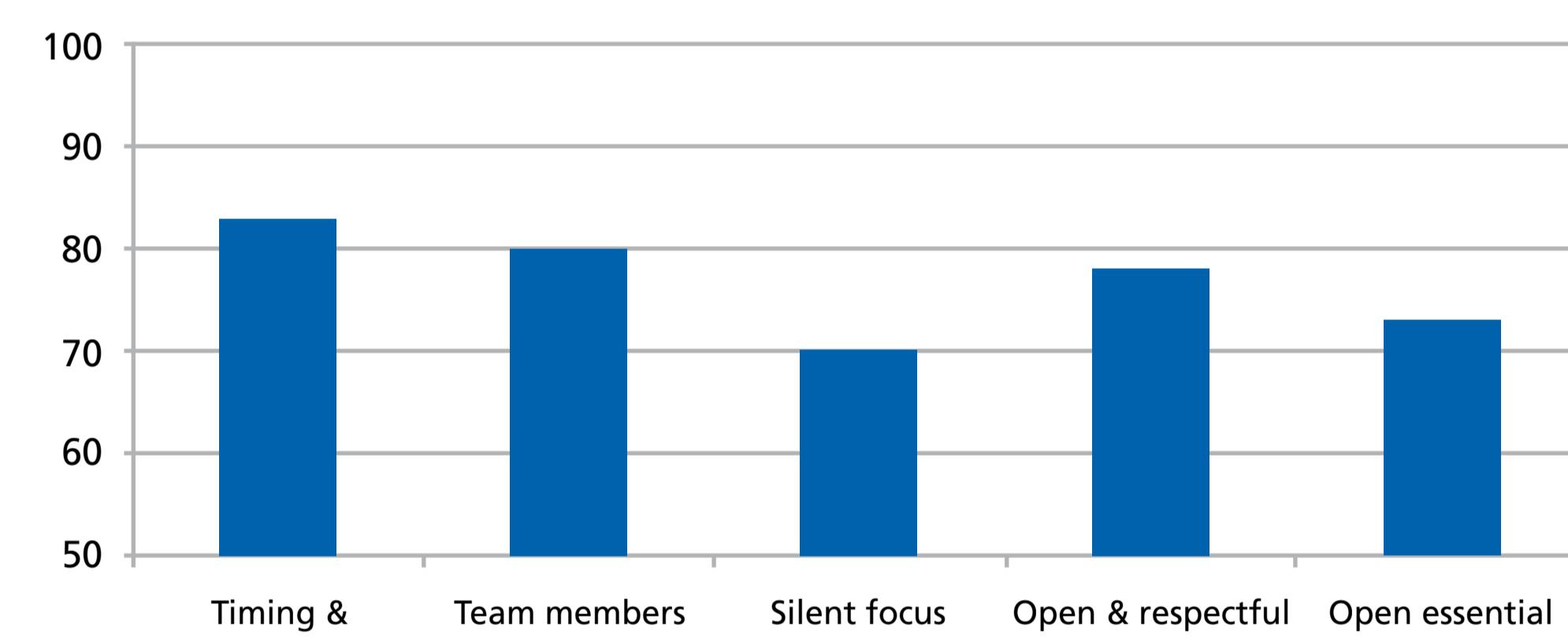
At our 6 month interim analysis, we have observed team interactions in 102 'steps' across 11 surgical specialities including elective and emergency lists, totalling 461 qualitative scores. We identified the worst performing 'step' as the 'sign-out', scoring an aggregated average score of 50% on our qualitative scale.

#### Average aggregate score (%)



The worst performing domain was 'silent focus', scoring an average of 70%.

#### Average domain score (%)



Any score under 50% was equivalent to an unsatisfactory score.

Analysis of descriptive data has revealed a number of recurring themes such as

- lack of engagement from particular groups of staff
- inconsistent use of checklist tools (whiteboard prompts and mnemonics)

### Conclusion

These findings inform our plans for phase 2 of the project where we will perform interventions to improve staff engagement and compliance with the Five Steps. This has begun with local presentation of our findings so far, which also allowed us to emphasise to staff the potential benefits of consistently applying the Safer Surgery Checklist. Identification of our worst performing step, 'sign-out', has provided an area of focus for maximal improvement. These interventions aim to achieve necessary culture shift to deliver the maximum safety benefits of the tool.

### References

1. Background to Safe Surgery Saves Lives, World Health Organisation. <http://www.who.int/patientsafety/safesurgery/issue/en/> Accessed 3rd November 2014
2. NHS Evidence, WHO Surgical Safety Checklist, August 2011
3. De Vries E, et al. (2008) The incidence and nature of in-hospital adverse events: a systematic review. *Quality & Safety in Health Care*; 17: 216–23
4. Report of the NHS England Never Events Taskforce, Patient Safety Domain, Feb 2014
5. Haynes et al (2009), A Surgical Safety Checklist to Reduce Morbidity and Mortality in a Global Population, *N Engl J Med* 2009; 360:491-499