Compliance with the WHO Surgical Safety Checklist: A Case Study from Birmingham Children's Hospital

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1. Introduction

The WHO checklist identifies three phases of an operation, each corresponding to a specific period in the normal flow of work: before the induction of anaesthesia ("sign in"), before the incision of the skin ("time out") and before the patient leaves the operating room ("sign out"). Previous studies of the use of the WHO Checklist have found increased surgical efficiency; as well as, positive safety culture and improved safety and team communication. Other work has also identified a number of barriers to compliance (e.g., the checklist is sometimes perceived as time consuming and lack of team/management 'buy-in' may hamper its adoption – Russ et al., 2015). The present study describes a case study examining a set of barriers and enablers of compliance of the WHO checklist at a major hospital based in the West Midlands.

2. Methods

A mixed methods study design was adopted and involved the following data collection activities over a period of four months: observation of the use of the checklist in 7 operating theatres (a total of 44 operations lasting between 20 minutes to 4 hours); a set of interviews and a staff survey probing into the advantages and drawbacks of using the checklist (n=20, range of participants including scrub nurses, surgeons, anesthetists, and other theatre staff); a survey of safety climate (using the Safety Attitudes Questionnaire (SAQ) – 54 surveys were returned).

3. Findings

3.1 Briefings and debriefings

Both aspects of the WHO checklist proved difficult to implement within the hospital. Briefings only occurred in 7 out of 44 of the operations. Amongst the main problems were: theatre staff often were late on not present at the briefing session; some staff, in particular consultant surgeons, could not see the point of the briefing sessions and/or did not take them seriously or as important; distractions and theatre noise also made it difficult to hold the sessions. Despite these findings, 88% of staff (most of whom were drawn from nursing and ancillary theatre staff) reported that they found the briefing process was important for safety.

3.2 Time-out and Sign-in/Sign-out

Similar problems existed with the producers for WHO checklist time-outs and sign in/out. The main barrier was seen to be excessive levels of distraction and noise in theatre (e.g., staff walking in and out of theatre; use of mobile phones). The attitudes of

senior staff (consultants) also hindered these aspects of the WHO checklist (e.g., senior staff viewed time out and sign in/out as an inconvenience and nuisance). Part of the problem was pressure on staff to move patients on from theatre once an operation was opver and then to deal with the incoming patient. Only 10% of staff regarded 'sign out' as working well.

3.3 Safety climate

In many respects, the findings from the SAQ were more positive. Over 90% of staff reported being 'happy with their job' and/or 'proud to work at the hospital'. More problematic issues included: reported high levels of fatigue and workload; feedback about performance; familiarity with theatre teams members (e.g., knowing their names).

4. Discussion, conclusion and future work

In many respects the case study illustrates the complexities involved in implementing what might be regarded as a relatively simple safety intervention. In common with other research it also highlights the importance of wider cultural and sociocultural factors in determining checklist compliance (Catchpole and Russ, 2015). Further work is on-going and focuses on the role of distractions in surgery and the redesign of the checklist to fit 'local' needs.

References

Catchpole, K. and Russ, S. (2015), The problem with checklists. BMJ: Quality and Safety, 24, (9):545-9. doi: 10.1136/bmjqs-2015-004431

Russ, S. et al. (2015), A qualitative evaluation of the barriers and facilitators toward implementation of the WHO surgical safety checklist across hospitals in England: lessons from the "Surgical Checklist Implementation Project". Annals of Surgery, Jan 261(1):81-91. doi: 10.1097/SLA.00000000000793.