**Empowering a clinical champion to ensure effective use of the World Health Organization surgical safety checklist**

**June 2017**

<table>
<thead>
<tr>
<th>Trust name</th>
<th>University Hospitals Bristol NHS Foundation Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider type</td>
<td>Teaching hospital</td>
</tr>
<tr>
<td>Site (if applicable)</td>
<td>Trust-wide</td>
</tr>
<tr>
<td>Core service</td>
<td>Surgery</td>
</tr>
<tr>
<td>CQC rating (SAFE)</td>
<td>Good</td>
</tr>
<tr>
<td>CQC rating (Overall)</td>
<td>Outstanding</td>
</tr>
</tbody>
</table>

**The challenge**

University Hospitals Bristol NHS Foundation Trust comprises eight hospitals and is one of the largest NHS trusts in the country. It is an acute teaching trust and became a foundation trust in June 2008. The trust has 899 beds and employs 7,745 full-time equivalent staff.

The trust provides services to three distinct populations: acute and emergency services to the local population of around 450,000 in south and central Bristol; specialist regional services across the region from Cornwall to Gloucestershire; and specialist services across the whole south west, South Wales and beyond. The surgical department provides general and specialist surgical services, including breast, orthopaedics, oral and maxillofacial, neurosurgery, ear, nose and throat (ENT), endocrine and thyroid, and bariatric surgery.

When the then National Patient Safety Agency (NPSA) recommended the introduction of the World Health Organization (WHO) surgical safety checklist in NHS Hospitals in 2009, University Hospitals Bristol immediately adopted it for use in the theatres. As with any major change, adoption was patchy and carried out in different ways in different teams and different theatre suites.

To address this, the trust initially tightened the compliance audit and embedded reporting all the way to the board. Data for the audit was generated from the paper checklists filed in patient notes, and presented as continual run-chart. Almost immediately there were high levels of compliance with the checklist.

However, Never Events continued to occur and it became increasingly clear that although the checklist data showed nearly 100% compliance, route cause analysis of Never Events
suggested it was a ‘tick box exercise’ rather than an effective safety tool. For example, team members were often multi-tasking, not present or otherwise not attentive for the key checks.

The solution

In 2014/15, the trust launched a three-year patient safety improvement programme, with the overarching aim of reducing avoidable harm by 50% and avoidable mortality by further 10% by 2018. The programme, which is chaired by the medical director, seeks to empower and support clinicians as safety champions, to help them develop improvement ideas and turn them into projects, eventually incorporating them into the trust’s governance and reporting processes to ensure improvement remains embedded in the organisation.

One area they focused on was the WHO surgical safety checklist and, more recently, the National Safety Standards for Invasive Procedures (NatSSIPs) and the locally generated versions (LocSSIPs). A consultant anaesthetist who had been around when the WHO checklist was introduced and was familiar with the challenges around it championed this work, having witnessed untoward Serious Incidents and recognising they could happen again. To gather evidence and raise awareness, the team introduced a new observational study in 2014, as part of which medical students lead yearly ‘undercover inspections’ as ‘mystery shoppers’.

At a time that is not announced in advance, they audit the behaviour of the theatre team during a variety of surgical procedures, against a set of standards that include:

- presence of the surgeon, anaesthetist, operating department practitioners during the sign-in/sign-out/check-out processes
- completion of each of the sign-in/sign-out/check-out processes
- quality of surgical site mark
- level of inattention of each theatre staff member during sign out – mild (tending equipment), moderate (speaking to another member of the team) and severe (scrubbing, on the phone or absent).

Whilst recognising that using ‘secret shoppers’ could be perceived as contentious as staff don’t like to be ‘spied on’, similar processes had already been used in the past, for example, during hand hygiene audits, without any real complaint from staff. This approach helped to overcome the ‘Hawthorne effect’, whereby staff might alter their behavior when being observed. To ensure that results could not be attributed to a particular individual, only aggregated results for each team and clinical specialty were presented. This helped to avoid complaints from individual staff members who might be concerned about exposure.

Results were presented at the appropriate governance meetings of the staff groups affected including anaesthetists, general surgeons, ENT, theatre nursing staff, orthopaedics doctors, maxillofacial doctors, paediatric anaesthetic team and thoracic surgeons to raise awareness and encourage discussion of solutions. These meetings are also an opportunity to educate teams about the best ways to engage with the checklist.
They also launched other initiatives over time:

- In line with WHO and NPSA guidelines, they adapted the checklist for local use, including:
  - reducing the word count by converting sentences into familiar key words
  - adapting it for different specialties including obstetrics, cardiology, paediatrics, general theatres (see resources)
  - adapting it for safety incidents safety events concerning missing or mislabelled specimens.

- They replaced paper checklists with coloured posters on the walls in all relevant operating theatre areas. The whole team now faces the poster and members concentrate and discuss their part of the process, without doing anything else at the same time.

- They involved patients in the audit process. This helped highlight how much patients value the appropriate completion, with many stating that this was ‘the least they would expect’ from the theatre team.

- Compliance with the WHO checklist is now confirmed through electronic sign-in, which generates compliance data reported all the way to the quality committee and the board. Whenever there is a drop in compliance, senior members in the leadership team immediately investigate. For example, when IT software was being replaced and there was a drop in compliance they discovered that the new system was showing as ‘non completed’ whenever a surgical procedure was cancelled or rescheduled. This was promptly addressed and compliance went back to 100%.

**Impact**

Over the years, these interventions have started to take effect. The ‘secret’ audits are valuable in several ways:

- for collecting information about the effectiveness of the checklist that would not be and encouraging appropriate behaviour in the theatre team
- as a valuable educational opportunity for medical students
- as a source of detailed information about effective use of the checklist.

As a result:

- Mean overall sign-in compliance across all surgical sites has improved from 86.7% in July 2014 to 95.46% in July 2016.
• In Obstetrics and Gynaecology, compliance with sign-in improved from 75% in July 2014, to 90% in July 2016 and time-out from 57% to 85% over the same period of time.

• Completion of time-out has improved from 98.6% to 100%, although there are still challenges in the correct timing of sign-out.

Enablers and challenges

The supportive leadership culture in the trust empowers clinicians as champions in specific areas of patient safety and this has been an important enabler. In fact, having someone who has seen the checklist from the moment it was introduced, observed all the challenges, is passionate about it and able to engage with his peer group and wider, has been crucial to the success of this initiative.

However, there are still challenges. Although ‘tick box’ compliance remains 100%, observational compliance has not reached that level and there is room for improvement in areas such as level of attention of certain staff groups and the quality of marking of surgical site.

Next steps and sustainability

Given the significant levels of overlap, the lead on the checklist has also now taken the lead on NatSSIPs and LocSSIPs. As part of this work, he has developed extra checklists for other invasive procedures, such as lumbar puncture, pleural aspirate and endoscopy procedures.

Want to know more?

Have a look at:

• trust-adapted checklists for obstetrics and gynaecology, cardiology, paediatrics and general theatres.

Contact:

• Dr Matt Molineux: mat.molyneux@uhbristol.nhs.uk
• Dr Sean O’Kelly: Sean.O’Kelly@UHBristol.nhs.uk

To see the other case studies in this series: visit the NHS Improvement website at: Improving quality and safety in healthcare.

0300 123 2257 enquiries@improvement.nhs.uk improvement.nhs.uk
© NHS Improvement June 2017 Publication code: SL 13/17