Safe surgery case study

Surgical safety interventions a success for Northland

Background

The use of evidence-based practices to improve teamwork and communication in theatre is something the Safe Surgery NZ programme of the Health Quality & Safety Commission actively encourages.

One improvement programme promoting such practices is the Productive Operating Theatre (TPOT) from the National Health Service in the UK. It helps theatre teams improve in four areas: patient experience and outcomes, teamwork and communication, safety and reliability of care and value and efficiency in theatre.

Context

Northland District Health Board (DHB) introduced TPOT in 2013 and the paperless checklist in January 2016. It is one of only a few DHBs where all operating theatres use briefing and debriefing alongside the paperless surgical safety checklist.

Northland is a medium-sized DHB covering an area from Te Hana in the south to Cape Reinga in the north. It serves a population of more than 150,000 and employs around 2550 staff across four hospitals: Whangarei, Dargaville, Kawakawa and Kaitaia with surgical theatres at Whangarei and Kaitaia.

Initially some specialties at the DHB objected to the use of briefing and debriefing procedures, on the basis that professional, clinical experience and accountability would drive good communication as determined by that clinician and thus this was an unnecessary adjunct adding time to the process.

Method

After introducing TPOT, two team members attended the *First, Do No Harm* campaign's Improvement Science in Action training, to learn how to increase briefing and debriefing in orthopaedic theatres. The DHB successfully increased briefing rates across all orthopaedic theatres, from 25 percent to 75 percent.

When the Commission's safe surgery interventions were rolled out in 2015, Northland DHB staff evaluated their current status and planned the introduction of the paperless surgical safety checklist. A multidisciplinary project steering group was formed to implement the changes.

Each surgical specialty nominated a lead clinician to be involved in the project and lead their team during the paperless checklist introduction, alongside the project steering group. The steering group, and many other surgical team members, attended a four-hour session run by the Commission in October 2015.

The focus was on engagement with the checklist, briefing and debriefing. The paperless checklist was first trialled by urology and gynaecology theatres. Wall posters were developed (sign in, time out, sign out) and the Commission's briefing poster was put up in the scrub bay.

Use of the checklist was introduced specialty-by-specialty and fully implemented at Whangarei Hospital by mid-April 2016.

The project steering group met with the clinical leads of each specialty, explained the process and gave them a copy of the 'good' example videos from the Commission to demonstrate the process. The clinical leads were responsible for working with their team to decide on an implementation date and feed back on any particular supports their department would need in implementing this. . The process was implemented one step at a time, specialty-by-specialty (or theatre-by-theatre), with a lead clinician championing the work working alongside the project steering group.

The Commission's videos were put on a USB with a luggage label attached, which everyone signed once they'd watched the videos. This process was developed when roll out in one specialty didn't go well, because information had not been shared across the whole team. Educational videos are also shown at team meetings. To demonstrate and reinforce the concept of engagement, staff were also shown the Commission's videos of 'poor' examples of engagement. This helped staff understand what good engagement looks like.

Persistence has been a key motivator, for example, the project steering group continuing to point out the benefits to staff. The steering group met fortnightly to maintain momentum and keep the work front-of-mind. In some instances, the process was challenged but these instances were resolved by reminding staff of the DHB's values and persisting with education and encouragement. The list will not start until a briefing has been done; often staff will ring the surgeon to make sure they are coming and let them know staff are waiting for the briefing to start. The briefing usually takes place in the scrub bay.

The first step was getting on board the lead clinician, which was different for each specialty. Personal knowledge of each person's motivation has been invaluable. One clinician only came on board after an incident occurred; another just had to observe someone else doing a briefing to see how easy and beneficial it was. Competitiveness between staff and teams has also helped motivate change.

Each theatre completed a pre-implementation audit and the results were shared with the project team. Post-implementation audits were also completed and the results reviewed.

Results

In Northland DHB, the day starts with an overall briefing of theatre operational matters such as the size and complexity of the lists, any staffing or equipment issues, and radiographer availability. This operational briefing is attended by the associate clinical nurse managers, nurse manager, central sterilising unit manager, clinical nurse manager PACU/SAU (post-anaesthetic care unit/surgical admission unit), anaesthetic supervisor and charge anaesthetic technician.

Each theatre then does its own surgical list briefing. Briefing saves time over the course of the day and allows greater lead-in time for planning, preparation and communication, so the operating list runs smoothly. This has made staff happier and more productive as stress levels have been reduced.

Briefing has improved staff confidence in speaking up. Visitors to theatre have commented on the ability of all staff to speak up. Some quieter staff are noticeably speaking up and asking that the team pays attention. This came about through a combination of team conversations about having each other's back – 'I need to know that you would speak up if you saw me doing something wrong' – and giving staff the words to use when they need to speak up, a script.

A key difference made by briefing is that everyone now knows what is happening and what is required for the day. The most common reason for late starts is late surgeons who are still

doing their ward rounds or attending radiology meetings. Staff will not start briefing without the surgeon.

Lessons

The leadership and enthusiasm of senior clinicians and clinical leads were invaluable for the success of the project and made implementation easier than expected.

It was an advantage that the registrars from Auckland had experience of the paperless checklist, and they made a positive contribution to implementation.

Staff have learnt that if the day changes, they need to re-do briefing during the day so that everyone is aware of the changes.

Evaluation

The methodology used by the Northland DHB team has proven successful. Key to this success was working closely with the surgical lead of each team (specialty). This involved discussing the project, planning the implementation date together and the clinical lead having the responsibility to share the project with their team.

Briefing is well supported by all staff. This is demonstrated by the fact that theatre does not start until briefing has taken place. The uptake of debriefing is increasing as staff see the benefits to solve any issues that arose during the day. Engagement in the three parts of the surgical safety checklist is also improving. The surgical team has moved from one team member to two team members being involved in the sign in process. All project outcomes have been met except for the ongoing work to embed debriefing at the end of the list.

Next steps

The project steering group is developing an auditing plan and the gold auditors are training more staff as auditors.

The project team is formalising the briefing, debriefing and paperless checklist processes in Kaitaia Hospital, followed by Kensington Private Surgical Hospital. This should be straightforward because:

- the Kaitaia team is a stable workforce and already works well together
- Kaitaia is staffed by the same surgeons and anaesthetists as Whangarei Hospital and they are committed to the success of implementation
- Kensington Private Surgical Hospital has a large overlap of public surgeons and anaesthetists.