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WALES AUDIT OFFICE
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Operating Theatres Follow-Up

Abertawe Bro Morgannwg University Health Board

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Background

- Operating theatre services are an **essential part of patient care**. Theatres should be cost effective, support the achievement of waiting time targets and contribute to high-quality patient care.
- Theatres are highly **dependent on external factors**. If pre/post-operative processes are suboptimal, this will affect theatres.
- The Wales Audit Office **review in 2012** said: 'The Health Board has rightly focused significant efforts in putting in place the groundwork for improvements across theatre services. However, the impacts on performance have been disappointing so far and the Health Board should give priority to tackling some key, remaining barriers.'
- The **Wales Audit Office is following up** theatres in the Health Board (and all other health boards except Powys) in response to requests from audit committees, executives and others, and in recognition that theatre performance in many areas across Wales remains suboptimal.

Previous recommendations

Our 2012 recommendations focused on:

- Raising awareness of the Theatre Work Programme and Board
- Improving joint working across the directorates
- Improving staff communications
- Improving preoperative assessment
- Improving performance and performance monitoring
- Addressing issues with staff sickness and staffing levels
- Addressing issues with theatre stock and equipment

Aims of the audit

Is the Health Board building on our previous recommendations and delivering high-quality and efficient theatre services?

The follow-up work has three focus areas:

Progress since 2012	Barriers	Quality and safety
• High-level review against our previous recommendations • High-level review of trend in theatre performance	• Focus on barriers to improvement, particularly those that are within the Health Board's control but outside of theatres' direct control	• Review a small number of quality and safety issues • Focus on the WHO checklist, briefings and incidents

Our approach

- Self-assessment against previous recommendations
- Document review
- Discussions with other external inspectors/visitors to theatres
- Interviews with small number of staff
- Analysis of readily available data on incidents and efficiency
- Staff survey: 181 responses (including 16 surgeons and 14 anaesthetists)

Main conclusion

The Health Board has improved some aspects of the surgical pathway but there has been limited improvement in theatres and implementation of our recommendations has been patchy.

Theatre performance remains problematic although use of theatre safety checks has improved.

Sub-conclusions

Part 1: Implementation of recommendations has been patchy since the end of the Theatre Programme. New funding for theatre staff presents an important opportunity.

Part 2: Theatre performance remains suboptimal.

Part 3: The Health Board's pathway work is focusing on the barriers that lie outside theatres' direct control. There is a need to supplement this with specific work within theatres.

Part 4: Failings in the use of the surgical checklist sparked improvements in key safety interventions.

Part 1: Implementation of recommendations has been patchy since the end of the Theatre Programme. New funding for theatre staff presents an important opportunity.

a. Actions have been taken to prevent a repeat of safety issues with damaged and wet trays:

- Broad review undertaken of all surgical trays
- New baskets, drip trays, corner protectors, transit bags to protect trays from damage

b. The Health Board has taken some steps to improve staff communications:

- SharePoint site established to improve communications
- Dedicated audit sessions have been introduced
- Theatre user groups due to restart in the east
- Positive views from staff about teamwork in theatres
- However, 62 per cent of staff in our survey said they did not feel fully informed about theatre issues and 66 per cent said that morale was not high

Part 1: Implementation of recommendations has been patchy since the end of the Theatre Programme. New funding for theatre staff presents an important opportunity.

C. Disbanding the Theatre Work Programme and Theatre Board means there is no forum for driving theatre improvement. However, the Surgical Pathway Board has secured some broader improvements:

- Theatre Work Programme and Board were reinvented twice since our previous work. These were then disbanded so that the Surgical Pathway Board could focus on broader pathway improvements. These improvements are discussed in more detail in Part 3.
- Change to key senior personnel has been a factor in preventing progress.
- The manager overseeing theatres has taken on additional responsibilities as General Manager for Surgical Services. This has caused capacity constraints and has been a barrier to improvement.
- The action plan regarding our recommendations is no longer in use despite it not being fully implemented.

Part 1: Implementation of recommendations has been patchy since the end of the Theatre Programme. New funding for theatre staff presents an important opportunity.

d. Action is underway to strengthen performance monitoring but the Health Board is not yet driving improvement through the use of good-quality data:

- Data systems were unified across theatres in November 2014 but there have been problems in getting the TOMS system to report good information
- A new theatre dashboard is a promising development but more work is now required to mainstream its use in driving improvement
- Some benchmarking data has been made available via Albatross
- Some evidence of patient experience monitoring but not mainstreamed
- The Health Board did not provide performance data from the east
- Staff told us about numerous, varied reasons for inefficiency in theatres but the lack of good data means the Health Board is unable to dispel myths and quantify the true extent of problems and root causes

Part 1: Implementation of recommendations has been patchy since the end of the Theatre Programme. New funding for theatre staff presents an important opportunity.

e. Steps have been taken to improve preoperative assessment (POA) but we were told about remaining issues:

- Improvements have been driven by a POA project board with the aim of modernising and standardising practices across the Health Board
- Anaesthetist resource has been increased in Swansea and a consultant lead has been appointed
- Additional space has been created at Singleton
- An IT system has been developed to record the patient's POA pathway
- At the time of our audit, staff had mixed views about the effectiveness of POA (27 per cent of staff said there was an effective screening and pre-assessment process but 44 per cent said there was not)
- The Health Board recognises there is further improvement required and we were told about patients arriving for surgery without key aspects of the POA having been carried out

Part 1: Implementation of recommendations has been patchy since the end of the Theatre Programme. New funding for theatre staff presents an important opportunity.

f. **We found remaining issues about staffing and sickness staffing levels but new funding for theatre staff presents a big opportunity for improvement:**

- Perceptions of some under-resourcing in theatres despite using staff more flexibly across sites.
- Increasing staffing was the most common answer from staff when asked about the priorities for improving efficiency and productivity.
- Sickness increased in 2013-14 in three of the four theatre units, and in 2014-15, it has reached more than 10 per cent in NPT and Morriston.
- Maintaining mandatory training levels is difficult, particularly in Morriston.
- There is low compliance with performance reviews (nine per cent Morriston, 34 per cent overall).
- We were told about a lack of availability of anaesthetists causing disruption to lists. The Health Board has been working hard to recruit anaesthetists over the past two years but has had some difficulties in filling posts.
- £535,000 in funding has now been agreed for 26 WTE theatre staff. This will mean a 46-week theatre template will be funded (currently only funded for 42 weeks) and is an important opportunity to ease workload pressures.

Part 2: Theatre performance remains suboptimal

- There was general acceptance in our interviews that theatre efficiency is a problem. And the Surgical Services Mid Year Review lists utilisation as a key risk.
- Late starts and early finishes are typically double the target rate and are worse than at the time of our previous review:
  - 35 per cent to 45 per cent of sessions start late [target is 13.4 per cent, previous performance was 23 per cent]
  - 38 per cent to 45 per cent of sessions finish early [target is 20.6 per cent, previous performance was 32 per cent]
- Cancelled operations are frequent and can disrupt theatre lists:
  - The number of cancelled elective operations per month ranged from 179 to 346 (only main theatres, Morriston/Singleton, 2013-14)
  - Data were not available from NPT and PoW

Part 2: Theatre performance remains suboptimal

- Overall utilisation is calculated as follows: ‘total used time’ divided by ‘total planned time’, expressed as a percentage
- Overall utilisation has decreased slightly at Morriston and increased at Singleton (data were not available for NPT and PoW)

Previous audit

	July 2011 to June 2012	July 2013 to March 2014
Morriston main theatres	81%	79%
Singleton main theatres	69%	75%

Part 3: The Health Board's pathway work is focusing on the barriers that lie outside theatres' direct control. There is a need to supplement this with specific work within theatres.

Theatre performance is being impacted by a range of operational problems before, during and after surgery.

Before surgery	During surgery	After surgery
Poor list planning	Poor use of WHO checklist	Recovery delays
Poor staffing plans	Poor use of safety briefings	Critical care delays
Problems aligning resources	Portering delays	Flow problems
Lack of beds prevents admissions ▶ cancellations	Delays on the wards (preoperative Assessment problems, Staffing issues etc)	
DNA by patients	Theatre staffing issues	
Poor DOSA rates	HSDU delays	
	Equipment issues	

Part 3: The Health Board's pathway work is focusing on the barriers that lie outside theatres' direct control. There is a need to supplement this with specific work within theatres.

Patient flow and emergency demand are external factors that frequently impact on theatres:

- The Health Board is struggling to balance the competing demands of scheduled and unscheduled care. Additional emergency theatre sessions have now been funded at weekends.
- At the time of audit, there was daily list disruption due to beds not being available. The Health Board plans to introduce an area at Morriston for 18 day case patients before surgery. These patients have commonly been cancelled because a bed could not be found.
- Waiting times targets are consistently not met in some specialties.
- Day of surgery admission performance varies considerably by specialty with lowest in Oral and Maxillofacial Surgery and Ophthalmology. Mixed views from staff about the effectiveness of day of surgery admission processes.
- Bed pressures have driven improvements in achieving the overall BADS day case target but scope for significant improvement in some specialties.
- Delayed transfer of care numbers remain above target.

Part 3: The Health Board's pathway work is focusing on the barriers that lie outside theatres' direct control. There is a need to supplement this with specific work within theatres.

The staff survey suggested that increasing staffing levels and bed availability should be priorities for improving theatre efficiency and productivity.

Category	Number of mentions in staff survey
Staffing levels – mainly nursing	54
Bed availability, bed management and flow	42
List planning and backfilling	33
Preoperative assessment and preparing patients	25
Portering	21
Equipment	21
Day surgery and short stay surgery	18
Staff morale	15

Part 3: The Health Board's pathway work is focusing on the barriers that lie outside theatres' direct control. There is a need to supplement this with specific work within theatres.

The Surgical Pathway Board is focusing on many of the external barriers and has made some progress:

- The Health Board chose to move away from a specific focus on theatre utilisation and has instead focused on improving the surgical pathway
- The Surgical Pathway Board has focused on improving preoperative assessment, staffing issues and specialty specific initiatives, such as:
  - Merger of adult and paediatric ENT services will see the creation of step down beds, reducing the use of scarce critical care capacity
  - Investment in therapies support to reduce length of stay for vascular surgery patients
  - Piloting the use of surgical pathway assistants in orthopaedics to improve flow by portering patients, checking consent documents, and liaising between the ward and the surgeon
  - The transfer of the vasectomy service into primary care
  - Finalising a local agreement with theatre and perfusion staff to improve on-call arrangements in cardiac services

Part 3: The Health Board's pathway work is focusing on the barriers that lie outside theatres' direct control. There is a need to supplement this with specific work within theatres.

There are remaining strategic barriers to theatre improvement, including the lack of a structured programme in theatres:

- Whilst there is a Surgical Pathway Board, there is no structured programme for improvement in theatres.
- The new Clinical Director for Surgical Services (covering theatres) is an interim appointment due to an ongoing management restructure, so there is a risk of further change and disruption to theatres leadership.
- There needs to be a greater managerial and executive focus on theatre improvement.
- Theatre improvement cannot happen without shared ownership of the issues between theatres, anaesthetics and surgeons. Staff need to be empowered to identify and address specific problems, even if they originate outside the direct area of their responsibility.
- Lack of performance measurement and management is a major barrier.

World Health Organization

Part 4: Failings in the use of the surgical checklist sparked improvements in key safety interventions

Internal Audit highlighted failings in the use of the WHO checklist.

An Internal Audit report in May 2014 gave ‘no assurance’ overall and said:

- Recommendations from a 2012 improvement study had not been implemented.
- There were no policies/procedures providing guidance on use of the checklist. Responsibilities, training and monitoring are not formally documented.
- Checklist was not being used as intended (partially completed, retrospective).
- Instances of the checklist being incomplete but marked as complete on the theatre system.
- Four incidents of retained swabs despite checklist having been completed.

World Health Organization

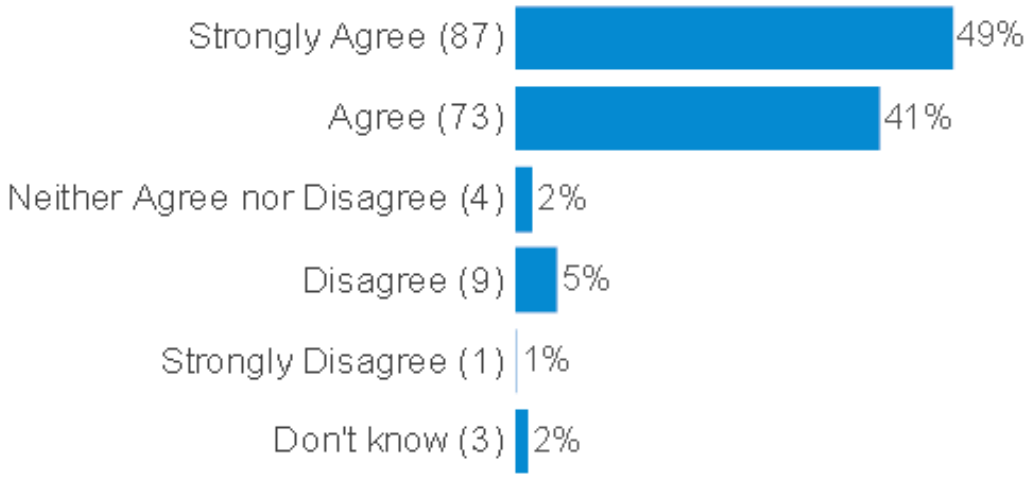
Part 4: Failings in the use of the surgical checklist sparked improvements in key safety interventions

We found evidence of some positive actions to improve use of the checklist:

- The Medical Director sent a letter to staff to clarify personal responsibilities for undertaking the checklist in all cases
- A standard operating procedure for the checklist has been written
- Theatres have carried out spot audits of checklist compliance and at least one specialty has carried out a covert audit to see if the checklist is being carried out properly
- The theatre data system and E-Datix are being configured so they have specific functionality aligned to the steps of the checklist
- Further improvement is possible by persuading more staff of the benefits of the checklist and spreading good practice

Staff survey results suggest checklists are now commonly used.

Staff undertake surgical checklists before every theatre case.

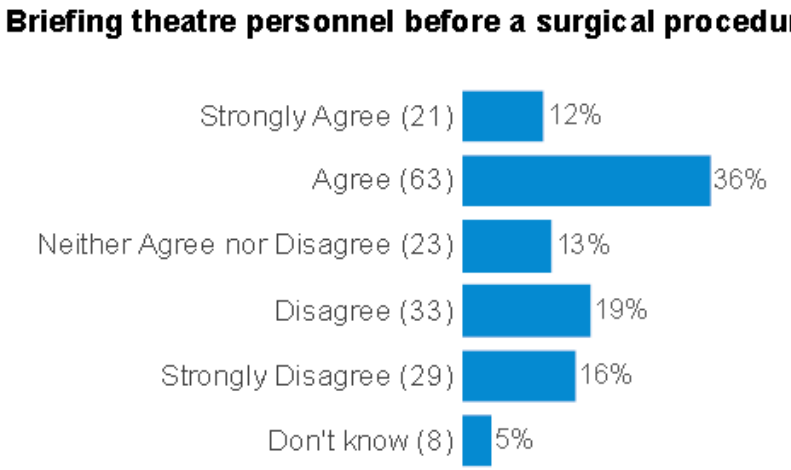


World Health Organization

Part 4: Failings in the use of the surgical checklist sparked improvements in key safety interventions

Team briefings are not yet mainstreamed in all theatres:

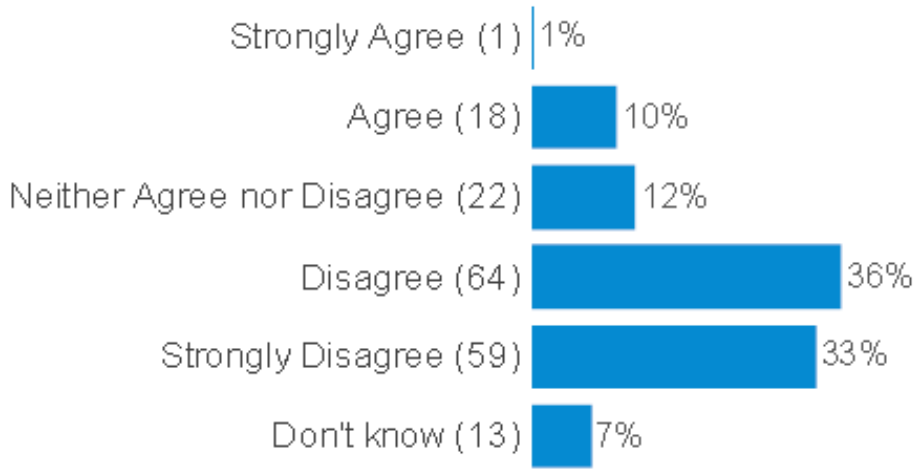
- The Health Board brought in new rules, making pre-list briefing mandatory from January 2015
- Briefings are becoming embedded in the east; they are used to some extent in Singleton but are not used in Moriston
- Some evidence of mixed clinical engagement with the briefings



Team briefings are not yet mainstreamed in all theatres:

- Post-list debriefings tend not to happen (in line with most of Wales)

Debriefings following shifts or lists are common in this operating theatres.



Quotes from staff about the WHO checklist and briefings

Compliance has increased a great deal

More pre-list briefings would have a positive effect on the whole department.

Adapt it to the needs of this hospital

Encourage medical staff to be more willing to take part in briefings so that it is not the theatre staff who have to go looking for them at the start of the list

There is a problem getting staff to be silent when completing the WHO checklist

All boxes are ticked regardless of the answers (since introduction of checklist on TOMS)

Make time for it on the lists

18 months in theatre, not once seen WHO briefing/debriefing taking place

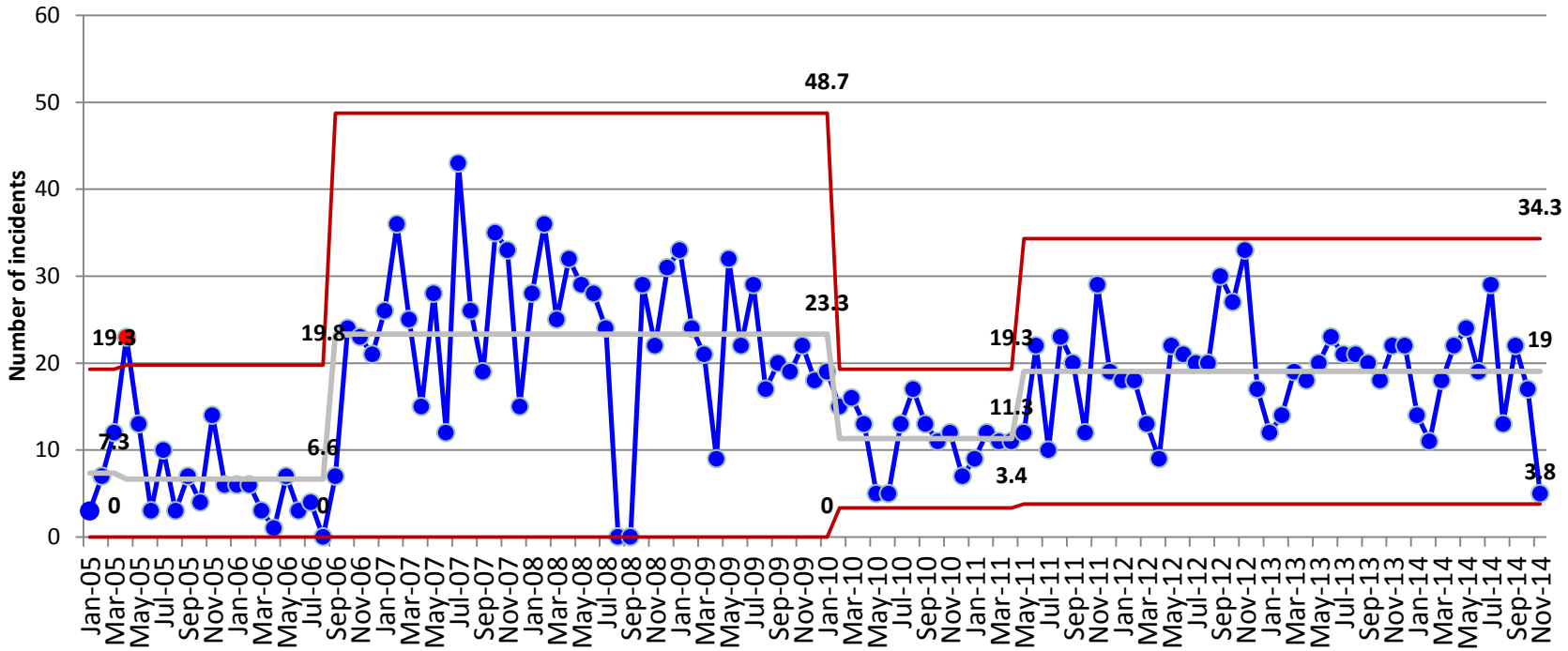
Demonstrate that it is worth doing

A complete waste of time

Efficiency, while important, is not the only priority. Quality of care is just as, if not more, important.

Part 4: Failings in the use of the surgical checklist sparked improvements in key safety interventions

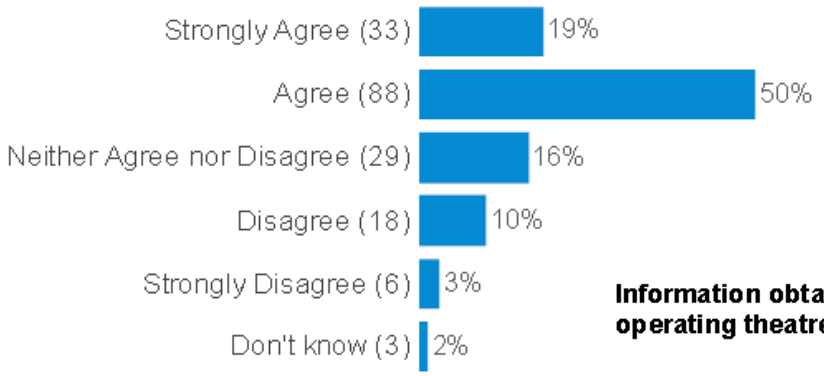
Incident data from theatres suggests a stable reporting culture in the Health Board since 2011.



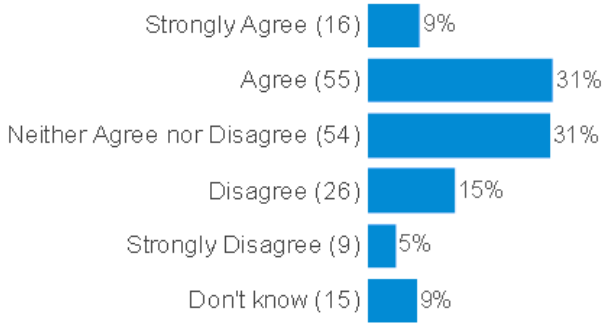
Part 4: Failings in the use of the surgical checklist sparked improvements in key safety interventions

The survey shows fairly positive views about incident reporting.

Error reporting is encouraged within these operating theatres.



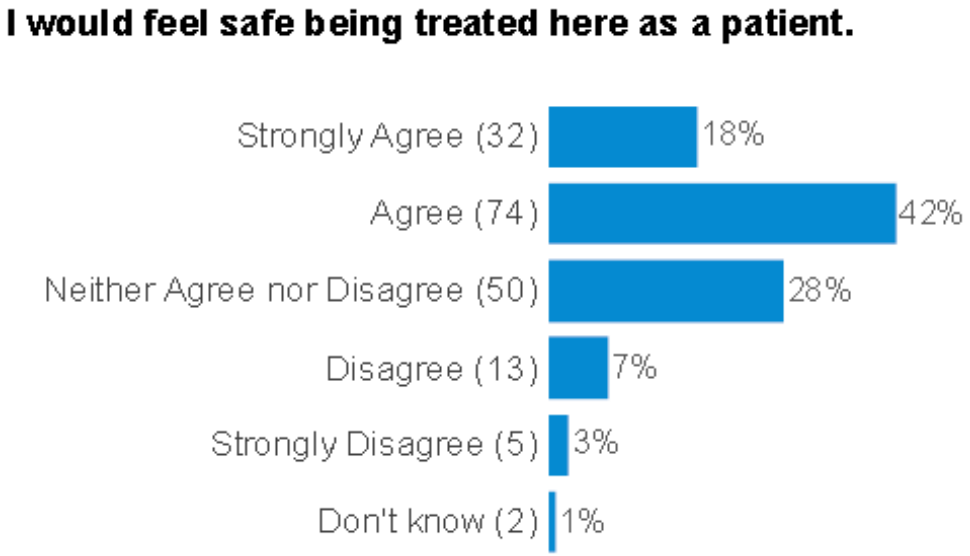
Information obtained through incident reports is used to make patient care safer in the operating theatres in this hospital.



World Health Organization

Part 4: Failings in the use of the surgical checklist sparked improvements in key safety interventions

The Health Board is in the early stages of further strengthening surgical safety by purchasing Surgical Procedure Management software. This involves implementing electronic, step-by-step guides to surgical procedures, as a means for training and standardisation.



Recommendations

We recommend that the Health Board should:

1. Reintroduce a structured programme for theatre improvement, possibly as a workstream within the Surgical Pathway Board
2. Introduce a mechanism to ensure more regular executive oversight of theatre efficiency, productivity and safety
3. Review the role of Clinical Director for theatres to ensure they are empowered to troubleshoot problems wherever they arise in the pathway
4. Develop an approach to performance management in theatres that ensures good-quality data is widely used to drive improvement
5. Draw on the expertise of the Health Board's Communications team to promote to staff the benefits of using the WHO checklist and briefings
6. Carry out further work to understand and manage down the high sickness absence rate in theatres