Archwilydd Cyffredinol Cymru Auditor General for Wales



Operating theatres follow-up Cwm Taf University Health Board

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Operating theatres follow-up

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.
- 2. The Wales Audit Office review in 2011 said that although there had been a strong focus on improving theatres, utilisation in Cwm Taf was comparatively poor. There needed to be a more co-ordinated approach, better communication between staff and management, and improved use of performance management information.
- 3. The Wales Audit Office is following up theatres in Cwm Taf and all other health boards, except Powys, in response to requests from Audit Committees, executives and others and recognition that theatre performance in many areas across Wales remains suboptimal.
- **4.** We sought to answer the following question: *Is the Health Board building on our previous recommendations and delivering high-quality and efficient theatre services?*

Key findings

5. The table below summarises our key findings. Detailed findings are set out in the slides attached to this summary.

Overall conclusion: Theatres remain a priority for the Health Board and improvements have been made, particularly in promoting greater focus on patient safety. Nevertheless 'end utilisation' remains low and there are barriers that require joint action from theatres and theatre users.

- **Part 1:** Theatres' improvement has remained a priority and the Health Board has made good progress in some areas.
- **Part 2:** There are some very positive aspects of safety culture and there is appetite within theatres to take the next steps in mainstreaming the use of briefings and the checklist.
- Part 3: Theatre 'end utilisation' was comparatively low in 2011 and has changed little since then.
- **Part 4:** There are remaining barriers that are not isolated to theatres but relate to various parts of the patient's surgical pathway.

Recommendations

1. Five Steps to Safer Surgery:

- a. Continue with roll out of the new surgical checklist and repeat the covert audit on both sites in 12 months.
- b. Take a decision on the importance of post-list briefings. If the Health Board deems these important they must be promoted, in particular by the clinical directors who should lead by example.
- Begin reporting compliance with the five steps alongside efficiency/productivity metrics to ensure more holistic review of performance, quality and safety.
 Recommendation heading

2. Patient experience:

- a. Monitor surgical patient experience at least every six months.
- b. Audit the process of doctor validation to assess whether patient surveys are sufficiently independent of the doctor in question. Recommendation heading

3. Analysis of incidents:

- a. Access help and tools from Public Health Wales to enhance the trend analysis of theatre incidents and use SPC charts.
- b. Analyse the reasons for the significant increase in incidents during 2012.
- c. Set an objective of increasing incident reporting and monitor the ratio of lowharm incidents to all incidents at least every six months.
- 4. List planning: Review the effectiveness and safety issues associated with list planning, particularly at Royal Glamorgan. Change the process to ensure theatre staff are fully involved in the quality assurance of lists.
- **5. Annual leave**: Enforce compliance with the six weeks leave rule for consultants. Monitor compliance at least every six months.

6. Preoperative processes:

- Deliver a project to improve performance management of preoperative assessment. The Health Board needs to know more about its effectiveness and its impact on cancellations.
- b. Analyse by specialty/surgeon, where day of surgery admission (DOSA) rates are low. Work with these specialties/surgeons to understand/overcome the barriers to increasing DOSA rates.
- c. Address the patient experience issues on SEAL units revealed by the recent patient survey and the Wales Audit Office audit.

7. Short-stay surgery:

- a. Formally nominate surgeons on each hospital site to act as champions for short stay surgery.
- b. The champions should lead a project with the aim of increasing short-stay surgery rates within the next 12 months.

8. Driving efficiency by generating greater shared ownership:

- a. Reintroduce optimisation charts to reinvigorate the focus on efficiency (without sacrificing quality and safety).
- b. One of the clinical directors should lead a project to increase awareness and use of the theatre performance dashboard. The project should seek to understand and address any barriers relating to clinicians not owning the clinician-level efficiency data.
- c. Share learning by clinical directors annually peer reviewing theatre data and observing performance in different specialties. Feed this into job planning, revalidation and appraisals.
- d. Inform theatre staff by publicising minutes of Band 7 meetings and summarising the key issues in posters/leaflets or emails.
- **9.** In six months, assess whether the bed management role of senior theatre nurses is having a negative impact on their role in theatres.

Further information can be obtained from Stephen Lisle, Performance Specialist (Tel: 029 2032 0500/stephen.lisle@wao.gov.uk).

Appendix 1

Slides outlining detailed findings from the report





Contents



- Background
- 2. Aims of the audit
- Our approach
- 4. Main conclusion
- Sub conclusions
- Detailed findings
- 7. Recommendations

Theatres follow-up



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 2011 said that although there had been a strong focus on improving theatres, utilisation in Cwm Taf University Health Board (the Health Board) was comparatively poor. There needed to be a more co-ordinated approach, better communication between staff and management, and improved use of performance management information.
- 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 recognition that theatre performance in many areas across Wales remains suboptimal.



Aims of the audit



The follow-up work has three focus areas:

Progress since 2011

- High-level review against our recommendations.
- Focus on barriers to improvement.

Theatre efficiency

- Measure aspects of theatre efficiency.
- Compare performance with benchmarks.

Quality and safety

- Review a small number of quality and safety issues.
- Focus on the WHO checklist, briefings and incidents.
- Main study question Is the Health Board building on our previous recommendations and delivering high-quality and efficient theatre services?



Our approach



- Self assessment against previous recommendations.
- Document review.
- Analysis of nationally available data on incidents and efficiency.
- Data collection: efficiency and quality information for October/November 2013.
- Staff survey: 241 responses (47 surgeons and 49 anaesthetists)
- Interviews with 30 staff (Board members, senior managers, surgeons, anaesthetists and theatre staff)
- Discussions with:
 - Welsh Government's Delivery Unit;
 - Welsh Risk Pool Services; and
 - National Leadership and Innovation Agency for Healthcare.

Theatres follow-up



Main conclusion



Theatres remain a priority for the Health Board and improvements have been made, particularly in promoting greater focus on patient safety.

Nevertheless, 'end utilisation' remains low and there are barriers that require joint action from theatres and theatre users.

Theatres follow-up



Sub conclusions



- Part 1: Theatres' improvement has remained a priority and the Health Board has made good progress in some areas.
- Part 2: There are some very positive aspects of safety culture and there is appetite within theatres to take the next steps in mainstreaming the use of briefings and the checklist.
- Part 3: Theatre 'end utilisation' was comparatively low in 2011 and has changed little since then.
- Part 4: There are remaining barriers that are not isolated to theatres but relate to various parts of the patient's surgical pathway.

Theatres follow-up



Part 1: Theatres' improvement has remained a priority and the Health Board has made good progress in some areas



The Health Board continues to consider theatres as a priority and there have been some good aspects of leadership and strategic planning for improvement.

- Theatres improvement feels like a priority at a senior level.
- Theatres are one of the key aspects in the Scheduled Care Plan.
- Direct involvement from the Chief Operating Officer.
- Interest in theatres within Audit Committee and the Finance and Performance (F&P) Committee.

Two quotes from our interviews

Theatres follow-up

Things have moved in the past year...There was not the impetus before.

an 'expensive

resource that

needs to be maximised.



Part 1: Theatres' improvement has remained a priority and the Health Board has made good progress in some areas



The Health Board has made good progress in implementing some of our previous recommendations.

- Consultant anaesthetist vacancies have been filled.
- Better reported compliance with mandatory training.
- Better reported compliance with theatre staff appraisals.
- Theatre policies have been updated and CT scored 100 per cent in the Welsh Risk Pool's Operating Department Services assessment 2013.
- There has been progress in standardising preoperative assessment but further improvement is required.

Theatres follow up



[Focus on Preoperative Assessment (POA)]



- A July 2013 presentation to F&P highlighted common cancellations due to 'Clinically unfit', 'DNA'
 and 'Op not necessary'. Suggests scope to improve preoperative processes to ensure operations
 are required and information provision helps as much as possible in preventing DNAs.
- POA recognised as an issue and brought into ACT. POA has been a focus over the past year.
- Progress with standardisation (but this work is not yet complete).
- Introduction of screening questionnaire is a good step.
- Increased anaesthetist involvement in POA.
- Further work planned in ACT over the next year to understand reasons for cancellations.

However:

- Mixed staff views on POA effectiveness.
- POA mentioned 41 times by staff when asked in the survey 'what should be the top three priorities?'
- Effectiveness of standalone POA in Ophthalmology recognised as an issue and needs to be kept under review.
- Latex allergies recorded in a small number of incidents despite questions about allergies in the screening questionnaire.

There is an effective patient screening and pre-assessment process.





Part 2: There are some very positive aspects of safety culture and there is appetite within theatres to take the next steps in mainstreaming the use of briefings and the checklist



There are aspects of good practice in the Health Board's approach to encouraging the use of safety briefings and the surgical safety checklist:

- (The 5 Steps to Safer Surgery includes: a pre-list team briefing, the three steps of the World Health Organisation (WHO) checklist (Sign-in, Time-out, Sign-out) and a post-list team debriefing).
- The Health Board's covert audit of checklist use is good practice and demonstrates commitment to fully implementing the five steps.
- Clear project approach to introducing a revised checklist. This will increase the detail of the pre-list briefing and reduce the detail in the checklist used for each patient.
- Positive views about introduction of pre-list briefings.
- Positive views expressed in staff survey about checklists.

Theatres follow up



Part 2: There are some very positive aspects of safety culture and there is appetite within theatres to take the next steps in mainstreaming the use of briefings and the checklist

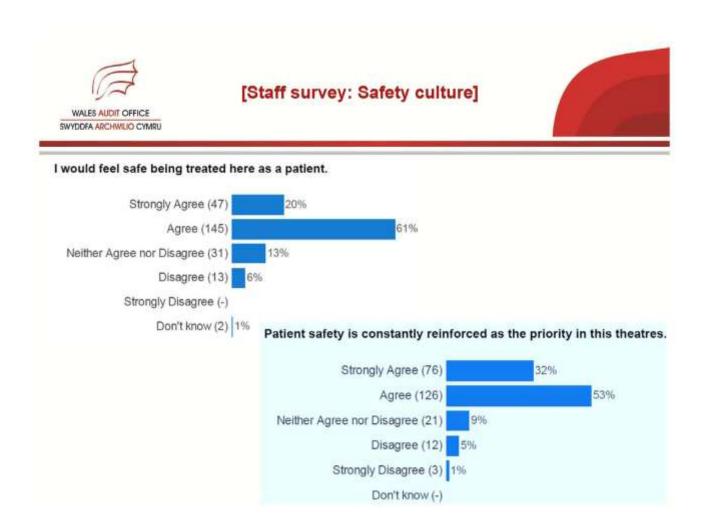


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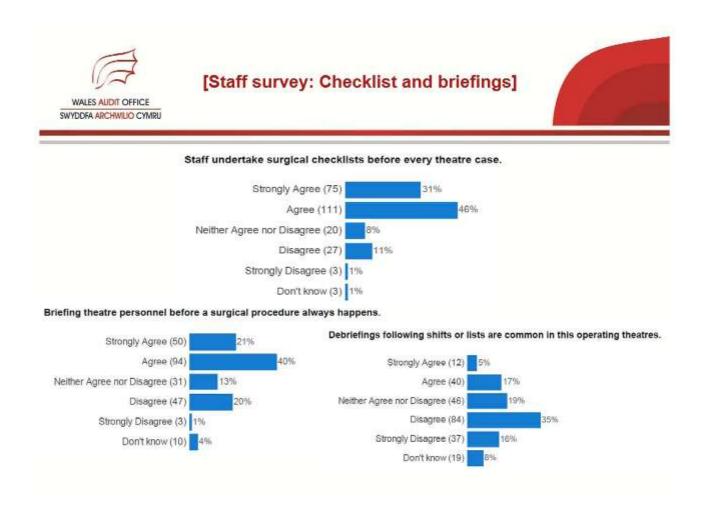
However:

- Post-list team debriefings are rare.
- The Health Board reports 100 per cent compliance with the WHO checklist to Welsh Government, but real compliance is less.
- Covert audit shows pre-list briefing is done in 63 per cent of cases, 'Sign-in' is done in 94 per cent of cases, but 'Time-out' is done in 21 per cent and 'Sign-out' is done in just nine per cent.

Theatres follow up









[Staff views on how to improve checklist/briefing use]



Category	Mentions
Training and education	21
Encourage everyone to participate	21
One named person to lead the process	18
Make it a prerequisite of cases beginning	12
Debriefings need to happen	11
Nothing, they are already effective	9
Tailor the form to local needs	8
Make time to carry out the checklist/briefings	8
Leadership and support from senior staff	7
Audit compliance	6

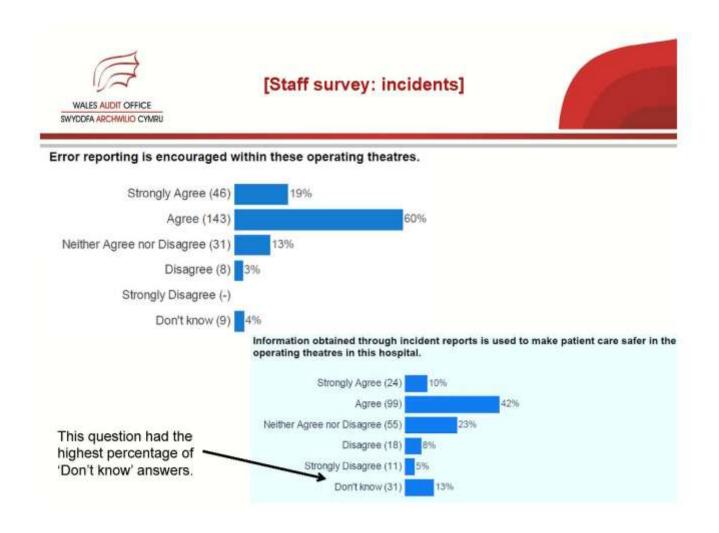


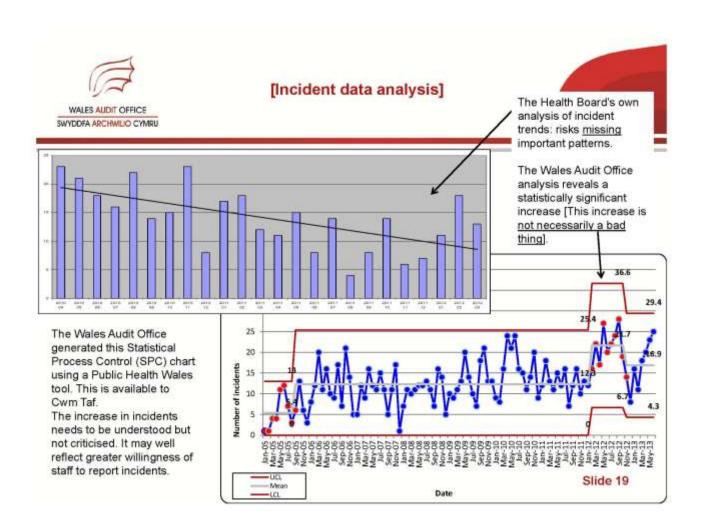
Part 2: There are some very positive aspects of safety culture and there is appetite within theatres to take the next steps in mainstreaming the use of briefings and the checklist



Arrangements are in place for incident reporting although there is scope to improve feedback and the analysis of incident rates.

- 79 per cent of staff said error reporting is encouraged and generally positive views about reporting processes.
- Incident data/themes are considered weekly by theatre managers, at Band 7 meetings, Quality Steering Group, directorate meetings and Acute Services Governance meetings.
- Learning from incidents appears to happen down to Band 7 level but there is scope to spread the learning to staff below Band 7. Some views that individuals are not given feedback.
- There is scope to use more sophisticated statistics to analyse trends in theatre incidents as current methods risk missing important lessons (see slide 19).







Part 2: There are some very positive aspects of safety culture and there is appetite within theatres to take the next steps in mainstreaming the use of briefings and the checklist



The Health Board has taken some positive steps to improve the monitoring of quality and safety and the next steps are around routinely assessing patient experience and tying together the various sources of information.

- Surgical patient experience is not routinely measured although the recent survey in PCH is a welcome development.
- Doctor revalidation requires a survey of patients but this process is not sufficiently independent of the doctor seeking revalidation.
- Clinical Business Meetings have been changed to focus on quality and safety as well as performance and finance.
- The Terms of Reference of the Theatre Quality Improvement Team (TQIT) include a specific focus on quality.
- There are several sources of quality information but these need to be brought together better and considered holistically.



Part 3: Theatre 'end utilisation' was comparatively low in 2011 and has changed little since then



The Health Board has taken some specific actions in an attempt to improve utilisation but performance remains low.

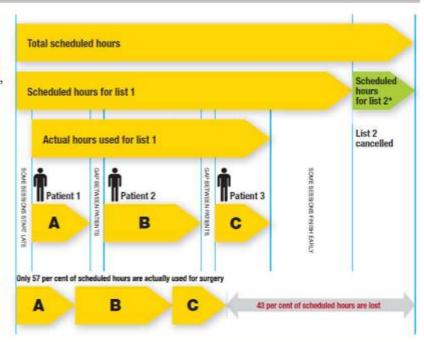
- Actions to improve utilisation include:
 - Internal analysis of utilisation data/issues.
 - Improvement work with Delivery Unit and NLIAH.
 - Some increases in staffing on some busy lists.
 - Introduction of some all-day lists.
 - Recognition of efficiency issues in Ophthalmology and specific actions taken to address them.
 - Introduction of points system for compiling cataracts lists.
- 'End utilisation' (see next slide) remains comparatively low due to various reasons set out in part 4.
- The Health Board now needs to build on this analysis to understand theatre efficiency more holistically.



[How time can be lost from theatre lists]



This slide shows how time can be lost from theatre lists through lists being cancelled, lists starting late and finishing early, and gaps between patients.





[Definitions of utilisation measures]



We recognise that utilisation of theatre time is only one aspect of theatre efficiency. The Health Board should consider our analysis of utilisation alongside a broader analysis of productivity and efficiency.

- Planned list utilisation: This indicator focuses on the hours lost due to cancelled theatre sessions. [(Planned hours of sessions used/Planned hours of planned sessions)*100].
- Run time utilisation: This focuses on lists that overrun and under-run. [(Actual run time of lists/Planned hours of lists)*100].
- Operating hours utilisation: This focuses on the gaps between patients. [(Patient operation hours/Anaesthetic and surgical hours)*100].
- End utilisation: This indicator gives an overall impression of the proportion of original planned hours that was used for operating. [(Patient operation hours/Total planned hours)*100].



Part 3: Theatre 'end utilisation' was comparatively low in 2011 and has changed little since then

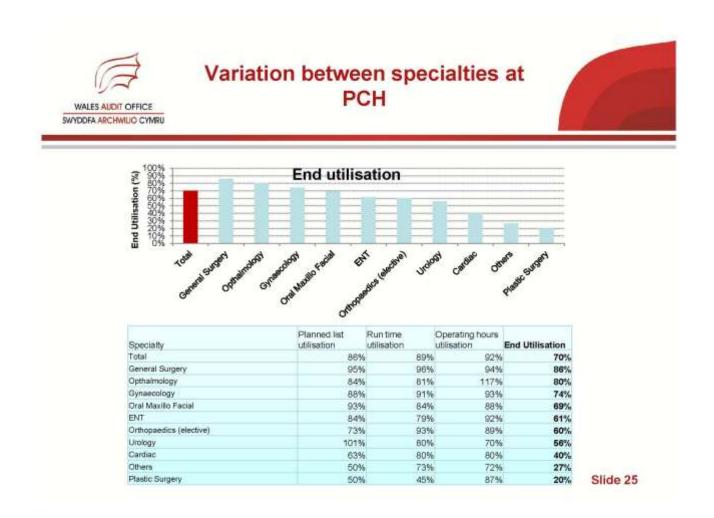


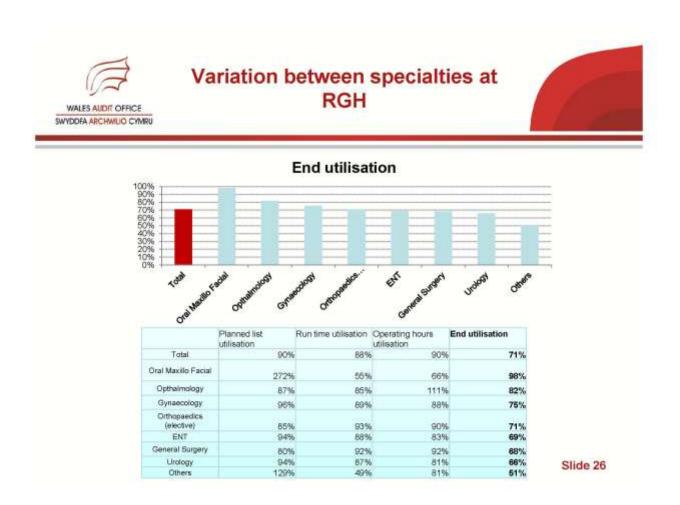
 End utilisation has decreased slightly in Royal Glamorgan Hospital (RGH) and improved slightly in Prince Charles Hospital (PCH).

Theatre Suite	Planned list utilisation	Run time utilisation	Operating hours utilisation	End utilisation
RGH (2011)	88.9	.90.8	88.2	71.2
RGH (2013)	89.5	88.3	89.6	70.8
PCH (2011)	75.9	93.5	94.7	67.2
PCH (2013)	85.8	89.1	91.7	70.1

[Source: Wales Audit Office data collection. Sample period – October and November 2013, when USC pressures had eased slightly.]

Theatres follow up







[Staff views on how to improve utilisation]



Category	Mentions	
Increased staffing levels	81	
Greater availability of beds	66	
More focus/facilities for day case and 23:59	44	
Better list planning	42	
Better preoperative assessment	41	
More/better equipment	26	
Dedicated emergency theatre/lists	22	
Better communication	21	
Improved admission processes	19	



Part 4: There are remaining barriers that are not isolated to theatres but relate to various parts of the patient's surgical pathway



The following slides describe barriers in relation to the following:

- Performance management.
- Theatre scheduling arrangements.
- Short-stay surgery.
- Unscheduled care pressures.
- Day of surgery admission (DOSA).
- Joint ownership of the issues between theatre staff, surgeons and anaesthetists.
- Communications across various staff groups.

Theatres follow-up



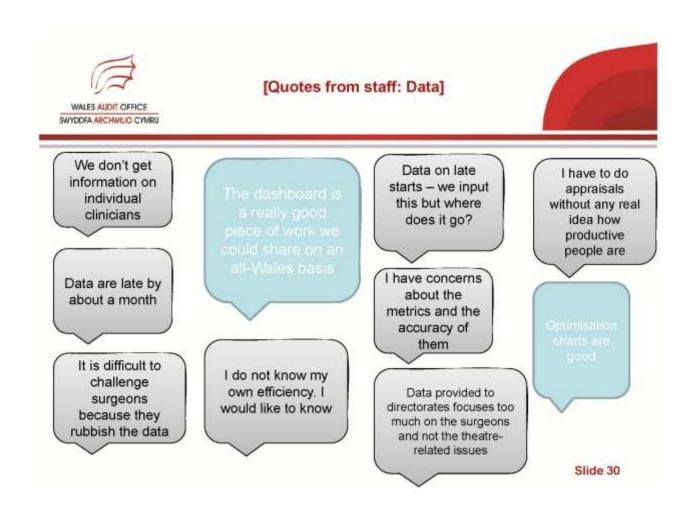
Part 4: There are remaining barriers that are not isolated to theatres but relate to various parts of the patient's surgical pathway



Whilst there have been some positive actions to improve performance management, clinical directors have doubts about some theatres' data and information is not yet being used optimally to drive improvement.

- Development of optimisation charts is a good step. Minimal impact so far, bed availability has overshadowed efficiency.
- The new dashboard of theatre performance is a positive development. It is in its infancy and is not yet widely used.
- Positive views about the theatre system and it is a positive step that turnaround times are measured in all specialties.
- CDs and directorate managers said they do not have always have the right data to be able to understand/manage individual clinicians' performance. Some said the data tells them the opposite of what they know to be true.

Theatres follow-up

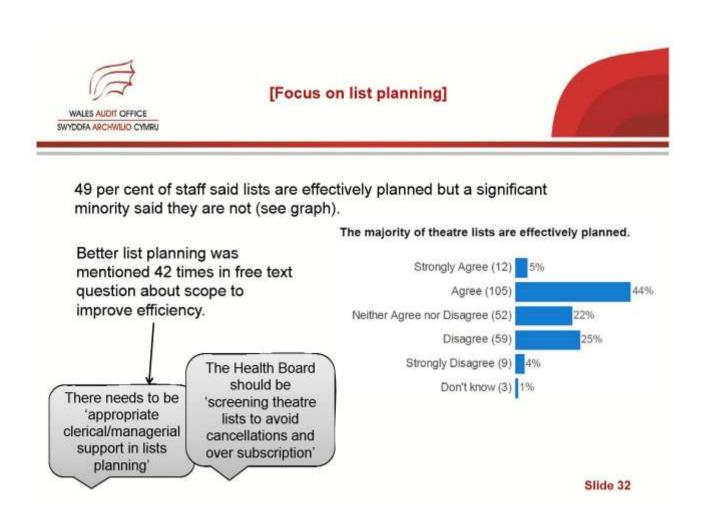






Theatre scheduling arrangements present some risks to patient safety and there are problems caused by poor compliance with the rule for surgeons to give six weeks' notice of leave.

- List planning at RGH has changed to match the process at PCH but the change has been problematic and is not supported by all.
- Several theatre staff said they wanted more input into list compilation and improve communications with those putting lists together. Some concerns about overambitious lists and inaccurate information being put on the system.
- Patient safety report shows seven near misses regarding correct site surgery (January to November 2013).
- The Health Board's response suggests only 14 out of 45 consultants are consistently meeting the six-week leave rule. In October to November there were five cases cancelled due to surgeon leave (all at PCH Ophthalmology) and 0 cancellations due to anaesthetist leave.







The Health Board has taken several actions to promote short stay surgery and whilst the day-case (DC) rate improved during 2013 it remains comparatively low.

- Two consultants have been named leads for day surgery within anaesthetics but there is no formalised clinical champion for day surgery.
- 'Deep dive' analysis by the Health Board has highlighted the need for more short-stay surgery beds.
- In the process of increasing 23:59 trolleys at PCH.
- Introduced a 23:59 ward at PCH and a 23:59/day-case ward at RGH (but it is vulnerable to outliers).

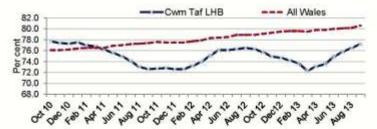
Theatres follow-up





The Health Board has taken several actions to promote short-stay surgery and whilst the day-case (DC) rate improved during 2013 it remains comparatively low.

- The DC rate improved in 2013 but remains low compared to Wales (but we recognise that average length of stay is also comparatively low).
- Staff survey: 44 mentions of short-stay surgery (need to improve use of or introduce dedicated facilities) to improve efficiency.
- Lack of a dedicated facility at RGH was mentioned frequently as a key barrier.



Theatres follow-up





Unscheduled care pressures have been a huge barrier to improvement and have demotivated staff from focusing on efficiency.

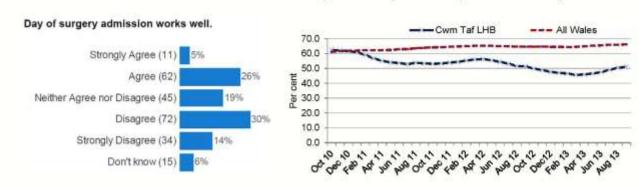
- Lack of beds has caused numerous list cancellations and 'theatres lying fallow'.
- Staff survey: bed availability was mentioned 66 times in relation to the priorities for improving efficiency.
- Surgical patients are spread all over the hospital and there are delays to lists because patients can't be found.
- Pressures have been 'unprecedented' and have demotivated staff so other aspects of inefficiency seem insignificant.
- Unscheduled care pressure has eased recently, due to seasonal issues and a more proactive approach to bed management involving senior theatre nurses. These nurses have had a positive impact although there is a risk because their bed management role means they spend less time in theatres.

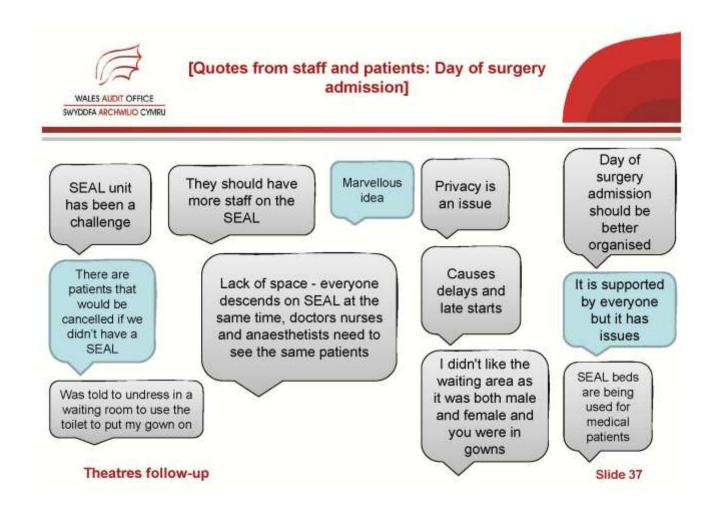




Day of surgery admission (DOSA) performance is the lowest in Wales and whilst the introduction of admission lounges was well intended there are issues for patient experience.

- Mixed views from staff on DOSA.
- DOSA rate is the lowest in Wales.
- Surgical Elective Assessment Lounge (SEAL) introduction was well intended but there are issues for patient experience (see next slide).









Effective joint ownership of the issues by theatre staff, surgeons and anaesthetists is essential to further improvements.

- TQIT is a positive step for joint working between theatres and the surgical directorates.
- There is a range of meetings to raise the profile of theatre issues and drive change.
- TQIT is new, not everyone is aware of it and there are some concerns that this forum will not be enough to drive action in all surgical directorates.
- The previous theatre users' group faltered when attendance from surgical directorates waned. This is a future risk.

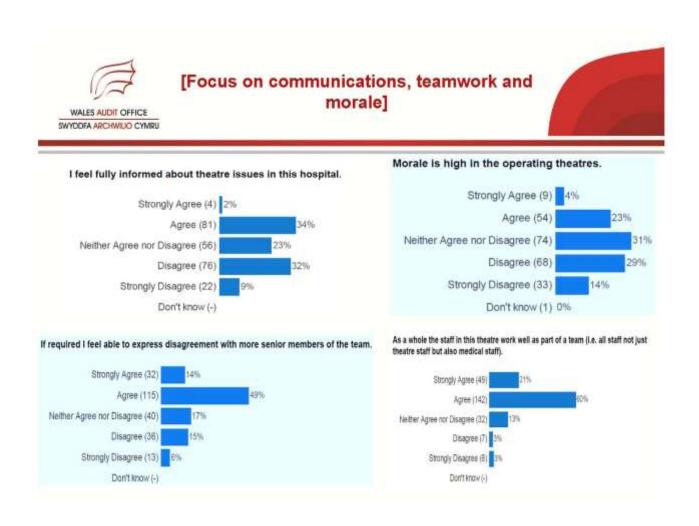
Theatres follow up





There is further scope to improve communications between various staff groups.

- Staff said there is scope to improve communications between:
 - management and operational staff;
 - wards and theatres;
 - those compiling theatre lists and theatre staff;
 - theatres and surgical directorates; and
 - members of the same operating team when surgery is ongoing.
- Staff had mixed views about the effectiveness of communications (see next slide).
- Communications down to Band 7 appear effective but there are no team meetings below Band 7.
- Minutes of meetings are made available to all staff but this does not appear sufficient to ensure everyone feels informed.
- Debriefings are rare. Important staff meet and learn as a team.







- Five Steps to Safer Surgery:
 - Continue with roll out of the new surgical checklist and repeat the covert audit on both sites in 12 months.
 - b. Take a decision on the importance of post-list briefings. If the Health Board deems these important they must be promoted, in particular by the clinical directors who should lead by example.
 - Begin reporting compliance with the five steps alongside efficiency/productivity metrics to ensure a more holistic review of performance, quality and safety.
- Patient experience:
 - a. Monitor surgical patient experience at least every six months.
 - Audit the process of doctor validation to assess whether patient surveys are sufficiently independent of the doctor in question.





Analysis of incidents:

- Access help and tools from Public Health Wales to enhance the trend analysis of theatre incidents and use SPC charts.
- Analyse the reasons for the significant increase in incidents during 2012.
- Set an objective of increasing incident reporting and monitor the ratio of low-harm incidents to all incidents at least every 6 months.
- List planning: Review the effectiveness and safety issues associated with list planning, particularly at RGH. Change the process to ensure theatre staff are fully involved in the quality assurance of lists.
- Annual leave: Enforce compliance with the six-week leave rule for consultants. Monitor compliance at least every six months.





Preoperative processes:

- Deliver a project to improve performance management of preoperative assessment. The Health Board needs to know more about its effectiveness and its impact on cancellations.
- Analyse by specialty/surgeon, where DOSA rates are low. Work with these specialties/surgeons to understand/overcome the barriers to increasing DOSA rates.
- Address the patient experience issues on SEAL units revealed by the recent patient survey and the Wales Audit Office audit.

Short-stay surgery:

- Formally nominate surgeons on each hospital site to act as champions for short-stay surgery.
- The champions should lead a project with the aim of increasing short-stay surgery rates within the next 12 months.





- 8. Driving efficiency by generating greater shared ownership:
 - Reintroduce optimisation charts to reinvigorate the focus on efficiency (without sacrificing quality and safety).
 - One of the clinical directors should lead a project to increase awareness and use of the theatre performance dashboard. The project should seek to understand and address any barriers relating to clinicians not owning the clinician-level efficiency data.
 - c. Share learning by clinical directors annually peer reviewing theatre data and observing performance in different specialties. Feed this into job planning, revalidation and appraisals.
 - Inform theatre staff by publicising minutes of Band 7 meetings and summarising the key issues in posters/leaflets or emails.
- In six months, assess whether the bed management role of senior theatre nurses is having a negative impact on their role in theatres.

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