ABMU HEALTH BOARD

TOGETHER FOR HEALTH – A DELIVERY PLAN FOR THE CRITICALLY ILL

Progress Report May 2014 (Updated July2014)

In Wales, patients requiring critical care should receive the following:

- Appropriate discussion between patients and clinicians to agree appropriateness of critical care and level of escalation of care in time of need.
- Timely access to (where appropriate for their condition and needs) and discharge from critical care.
- To be cared for in the correct facility with highly qualified specialists.
- That they and their carers are involved in their care as they feel appropriate.
- That they receive care that is clinically effective.

This is ABM University Health Board's progress report on services for the critically ill. It presents an overview of how well the Health Board is performing in this area. All graphs contained within this report are derived from Welsh Government's Delivery & Performance Divison within the Department of Health & Social Services.

It also highlights the work that the Health Board has undertaken over the past 12 months to review our current service provision and to identify where service provision needs to change to meet demand and to meet the quality requirements set out in the Welsh Government's Delivery Plan for the critically ill.

The Importance of Critical Care

Critical care is a specialty that provides support for patients with acute life-threatening injuries and illnesses. Critically ill patients require organ support and close, constant attention by a team of specially-trained health professionals. Critical care is also often the most appropriate environment for preparation for organ retrieval from organ donors and for support of donor families. A lack of critical care capacity may be a constraint to maximising the retrieval of organs from potential organ donors. Demand for critical care is increasing and, as a result of changing demography, is projected to continue to grow at around 4-5% per year

When a critical care episode is complete, it is important that patients are moved on to an environment more appropriate for their needs and rehabilitation as soon as possible both clinically and to ensure best use of the scarce critical care resources available.

Critical Care Units in ABMU Health Board

There are good reasons for critical care to be a key priority area for ABM University Health Board and the rest of Wales. Patients requiring general critical care are relatively low in number but, when critical care is required, access needs to be timely and often rapid. By the very nature of the intensive therapy provided, critical care beds are amongst the most costly resource within a hospital.

The Health Board's general critical care unit admissions totalled 1217 Morriston / 517 POWH during the April 2013 - March 2014 period.

There are four Critical Care Units in ABMU Health Board, General ITU, Cardiac ITU, Burns ITU at Morriston Hospital and General ITU at the Princess of Wales Hospital.

There is also a four bedded HDU at Singleton Hospital which is able to admit level 2 patients sometimes has to manage level 3 patients requiring transfer, Neath Port Talbot hospital does not have HDU or ITU facilities.

The established beds and physical bed capacity is show in figure 1a beneath.
Figure 1a

ABMU Health Board – Critical Care Beds

Hospital	Physical Bed Space Capacity	Level 3 equivalent capacity
Morriston General ITU	28	22
Morriston Cardiac ITU	8	Details awaited
Morriston Burns ITU	10	Details awaited
POWH General ITU	9 (1 unfunded)	4
Singleton HDU	4	0
Total	61	26 (excluding Cardiac/Burns)

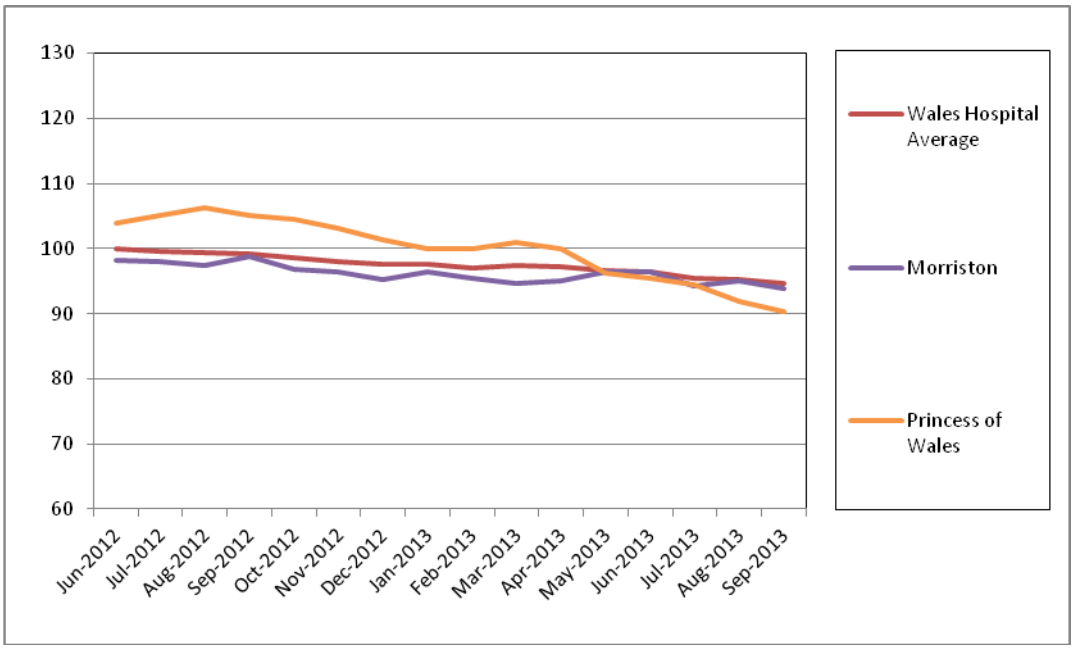
Morriston ITU currently is enacting a three year plan to bring Level 3 equivalent capacity up to a level where all 28 beds are commissioned with appropriate services and staffing levels provided.

Section 1: How well are we doing in ABM University Health Board on critical care?

We are using three outcome indicators to measure and track how well critical care services are doing over time. These are:

- Hospital Mortality - Risk Adjusted Mortality Index.
- Critical Care Mortality
- % Delayed Transfer of Care from Critical Care

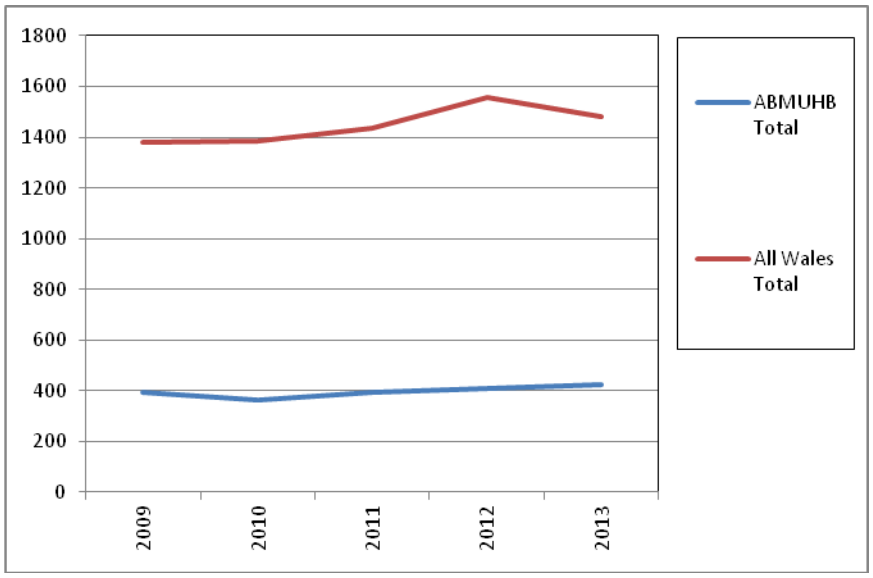
Outcome 1: Hospital Mortality - Risk Adjusted Mortality Index



The graph above demonstrates the downward trend in Hospital Mortality for Morriston and Princess of Wales Hospitals as in-keeping with the All Wales average hospital scores.

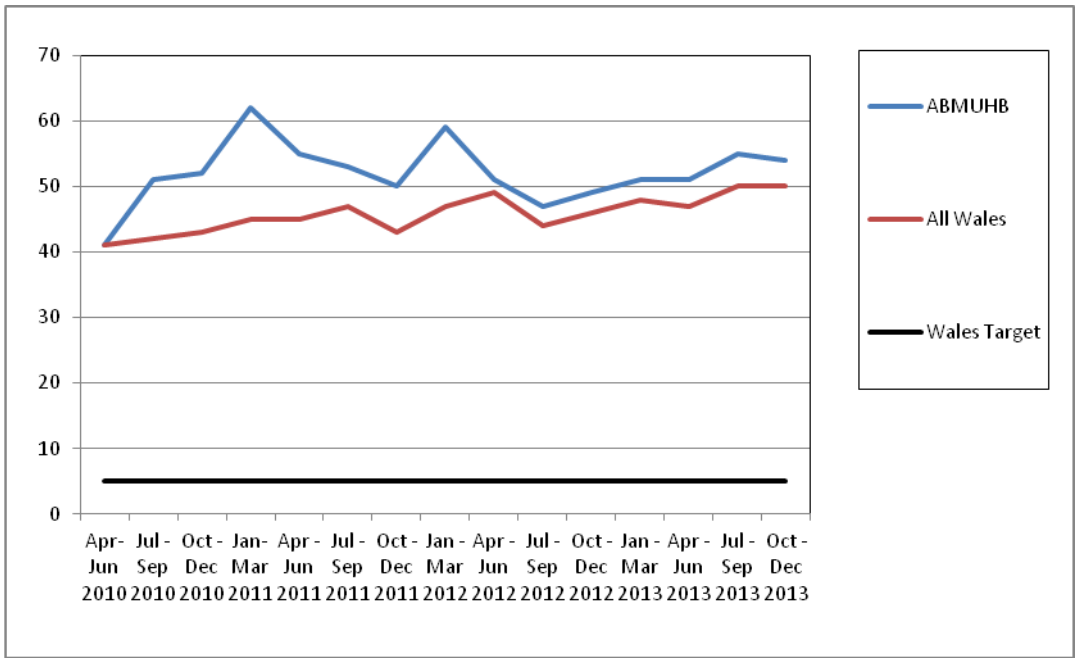
Outcome 2: General Critical Care Mortality

The below graph details the number of patient deaths that occured in ABMUHB's general critical care units, by year.



The graph demonstrates that the number of deaths within critical care units in ABMUHB has remained relatively constant through the period. This is despite an apparent upward trend in the number of critical care deaths from an All Wales perspective.

Outcome 3: % Delayed Transfer of Care from General Critical Care



The above graph demonstrates the percentage of delayed transfers out of a general critical care bed onto a general or specialty ward or area. The definition of a delay is where a patient's transfer out of general critical care takes four or more hours to occur. A large proportion of these delayed transfers are reflective of overall demand on hospital beds and resulting unavailability for patients to step-down in a timely manner. Continuous monitoring

and escalation processes exist within ABMUHB to reduce these delays and prioritise critical care beds for those in greatest need but bed availability continues to be an issue for most hospital specialties.

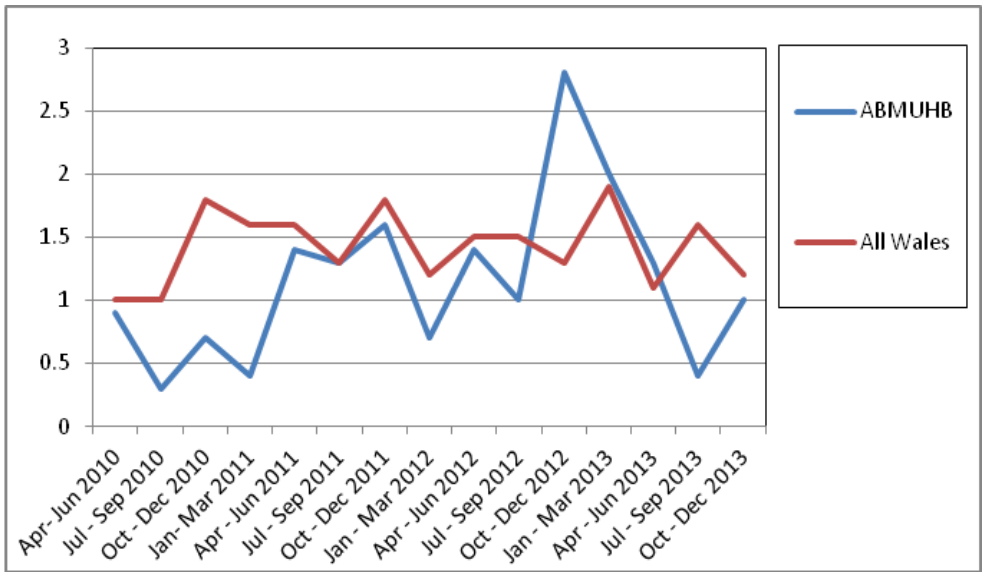
It is positive that despite these issues, the escalation arrangements have reduced the number of elective cancellations due to unavailability of an ITU bed. It is however, the belief of the general critical care department, that the level of delayed transfers is a reflection of a lack of available hospital beds. It is recognised that the percentage is far above the target level and that this impacts on the usage and availability of general critical care beds within the Health Board.

Development plan priorities:
Delivering appropriate, effective ward based care

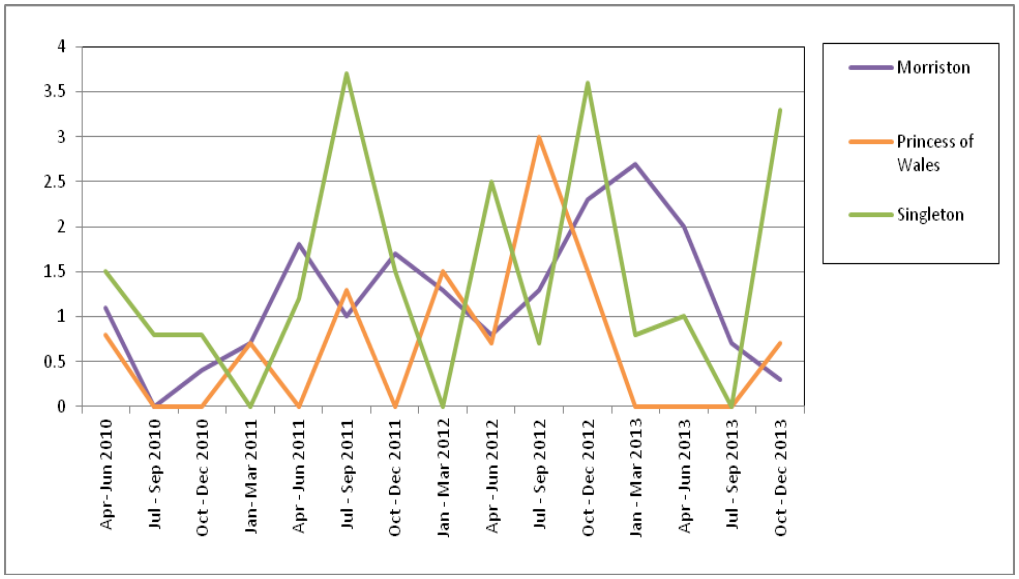
General Critical Care:
Patients, for whom critical care is appropriate, should be identified in a timely manner so they have the best chance of a good outcome.

The below graph shows the percentage of readmissions within 48 hours to a general critical care environment within ABMUHB and how those percentages compare against the available data compiled to provide an All Wales average. Positively, ABMUHB is largely experiencing fewer readmissions across the period provided.

Readmissions within 48 hours do not necessarily reflect that the discharge was premature, but this can be the case. For example, the graph demonstrates an increase in readmissions to general critical care units during December 2012 – March 2013 and it is accepted that given the exceptionally high rate of admissions within that period, this increase probably reflects the demand during that period.



Split by hospital site, the % of readmissions is further explained within the graph below. Please note that Singleton Hospital is not a general Critical Care ITU facility but has capacity for a maximum of two level 2 patients, therefore it is not a comparable unit and is not an area where patients are managed by critical care consultants.



Staffing

As part of annual capacity planning, the gap between staffing and provision of the Core Standards has been reviewed and can be explained within the below table:

Note: WTE = Whole time equivalent / O/C = On Call

Staff Group	Staffing gap to meet Core Standards	Comments
Morriston	*28 beds*	
Consultant	Require 3 consultants daily & 7 day working	Service previously shown to be unsustainable at 1 Cons:12 patients
	Further 20 sessions needed to achieve this	Patients to be seen within 12 hours of admission
		Concurs with benchmarking
Admin/secretarial		Secretarial/admin. support increase by 1wte Band 4 required for 40 beds
Residents	3.5 residents O/C teams ie -->4 teams	0.5 resident rota is impossible
	Whole O/C team needed	ACCPs could form a complete tier but can only work 37.5hrs/wk and will take several years to train
		40 beds could not be managed without an additional team O/C
Nurses	Compliant & staffed as efficiently as possible	
	0.6 wte nurse educator currently. Should have 1 wte per headcount of 75 nurses, therefore require 2.5 wte Morriston	Critical Care Nurse training needs to be specific. Also risk of failure to achieve mandatory training/risk to retention
	Supervising Nurse standard requirement 1 nurse per 10 beds. Therefore 3 required for Morriston per shift.	
Physiotherapy	3.6 wte	Less than 10% of rehabilitation opportunities achieved at weekends
		Highly likely to adversely affect length of stay
SALT / Dietetics	wte as identified - work ongoing	
Psychology	1 session/week (shared with POWH)	Involvement with inpatients and follow up clinic
POW	*8 Beds*	
Consultant	Requires 1 additional consultant	

Residents	Dedicated O/C team	
Nurses	Compliant & staffed as efficiently as possible	
	Supervisory nurse/nurse educator as above	
Physiotherapy	2 wte	
SALT	As above	

In September 2013 ABMUHB, in collaboration with Swansea University, established a training programme for Advanced Critical Care Practitioners. The programme provides a pathway for nurses and allied health professionals with extensive experience in critical care to develop the knowledge and skills to practice as residents in critical care, working alongside medical trainees and undertaking the same roles.

Such roles have been developed under the umbrella of the Faculty of Intensive Care Medicine and are increasingly prevalent across the UK providing, at last, a clinical development pathway for senior nurses and allied health professionals in addition to managerial and educational pathways which already exist.

Three ACCP trainees appointed to the Critical Care Unit at Morriston Hospital are approaching the end of their first year. The programme has already shown great success providing improved dissemination of unit policy and practice. It has become clear that the roles also offer the opportunity to improve continuity at medical changeover dates and thereby improve patient care.

The posts have been welcomed by all staff and it is hoped that funding will be made available to train more in the future. However, the development of ACCP roles will not resolve the larger concern around small numbers of Critical Care consultants qualifying in Wales. This is set to reduce further in 2016. Junior doctors are already difficult to recruit with appropriate training as are skilled, experienced intensive care nurses at all levels.

Critical Care Outreach Team

The Critical Care Outreach Team (CCOT) began operating at full staffing levels in the four acute localities within the Health Board in August 2011. At this time it did not represent twenty four hour, seven day per week staffing. The service has evolved in line with changes in the Health Board and the current level of funding provides the following cover.

- Morriston – 08:00-20:00, 7 days per week (18:00 if cover insufficient)
- Princess of Wales – 08:00-16:00, Monday to Friday (no bank holiday cover)
- Singleton – 08:00-16:00, 7 days per week

The remit of the CCOT includes the recognition, assessment and timely management of deteriorating patients. This assessment and management may be in the form of basic but effective interventions which may prevent the need for admission to critical care. It can enhance the patients' physiological status reducing illness severity and critical care interventions and may reduce length of stay in critical care if admitted. Early recognition and intervention in other patients may aid recognition that aggressive therapies and admission to critical care may be inappropriate and futile. This may lead to the generation of treatment limitation plans and do not attempt resuscitation (DNAR) instructions.

In addition to the recognition of the deteriorating patient the CCOT are instrumental in the safe and effective discharge of critical care patients to the ward. This is particularly the case

for the high risk discharges to wards with a high patient workload. There are a number of patient factors which would ordinarily complicate or obstruct effective discharge from critical care, in particular the ongoing necessity and presence of a tracheostomy for bronchial toileting. The CCOT have provided support that has allowed such patients to be discharged from the critical care setting.

The CCOT have provided a patient transfer service for patients requiring further input from Critical Care. The patients originate in Singleton Hospital and are transferred to Morriston Hospital. The presence of the CCOT is invaluable in facilitating transfers that may be otherwise delayed.

The CCOT is undertaking education with ward staff focusing on the recognition and management of the deteriorating patient, with the aim to improve quality and patient safety in the ward environment. This is in addition to their clinical duties. They have been instrumental in the education and delivery of the National Early Warning Score (NEWS) and have been the driving force in the delivery of the Bedside Emergency Assessment Course for Healthcare assistants (BEACH). BEACH aims to deliver assessment skills to the frontline staff responsible for obtaining the clinical observations from which clinical deterioration can be predicted.

Analysis of CCOT data demonstrates that in the first 6 months of the CCOT there has been a large number of averted admissions (185 across all four sites) and involvement in DNAR decisions (111 across all four sites). Averted admission criteria is currently subjective and conservative in nature. Retrospective review of the data base by a Consultant in Critical Care Medicine supports the validity of current criteria and may in fact underestimate the overall number. Standardisation of the averted admission criteria is likely to increase the averted admission rate further.

In addition there is a possible trend towards a decrease in cardiac arrest calls. It should be noted that these figures involve data collected by the CCOT in their hours of work and may not reflect the overall figures which are being currently obtained from the Resuscitation Team.

These data are very encouraging and would support the anecdotal supposition that patients are being appropriately managed on the ward and are not being subjected to aggressive, inappropriate and futile treatment in Critical Care.

Furthermore, it supports the theory that when patients are managed appropriately in the ward environment admission to Critical Care may be averted.

If the absolute numbers of averted admissions and involvement in DNAR orders are summed it represents a significant number of Critical Care in patient days avoided.

ABMUHB have embraced the concepts of the CCOT in a way that is unique in Wales. The CCOT have transcended their role from offering additional help to the ward based teams to becoming an invaluable, integral resource to both Critical Care and the ward based teams.

It has become clear that the presence of the CCOT in ABUHB is at least cost neutral. However, it appears increasingly likely that this initiative may be profit making.

In addition to the financial considerations there has been a marked improvement in training of the staff on the wards in the recognition and reporting of deteriorating patients. In this way those patients requiring an elevated level of care are recognised and managed appropriately with the support of the CCOT to achieve safe and timely treatment plans. Furthermore, those patients that would not benefit from Critical Care transfer are also being identified and inappropriate transfer is being avoided.

In a time of such financial constraints it would appear that CCOT, in view of it's financial and patient care quality improvements, may be one of the few areas within hospital care that may require expansion in order to improve the financial situation.

Outreach Audit:

The CCOT have recently undertaken audits in two wards within Morriston, POW and Singleton, as part of a newly introduced programme of monthly audits looking at different wards within the three hospitals. Workload makes larger scale audits across the hospital sites impossible, but the results of these smaller scale audits have to date been reflective of the differences and similarities between wards in their completion of the observation charts and responsiveness to risk scores. Overall compliance with NICE CG50 determined through the audit findings places the percentage of compliance between the range of 73-98% and suggests that documentation of the frequency of observations that need to be carried out on the NEWS charts requires improvement on all sites. However, a generalised improvement in compliance has been noted.

The audits continue to be developed by the CCOT and will be repeated in a cycle of re-education and support to ward staff.

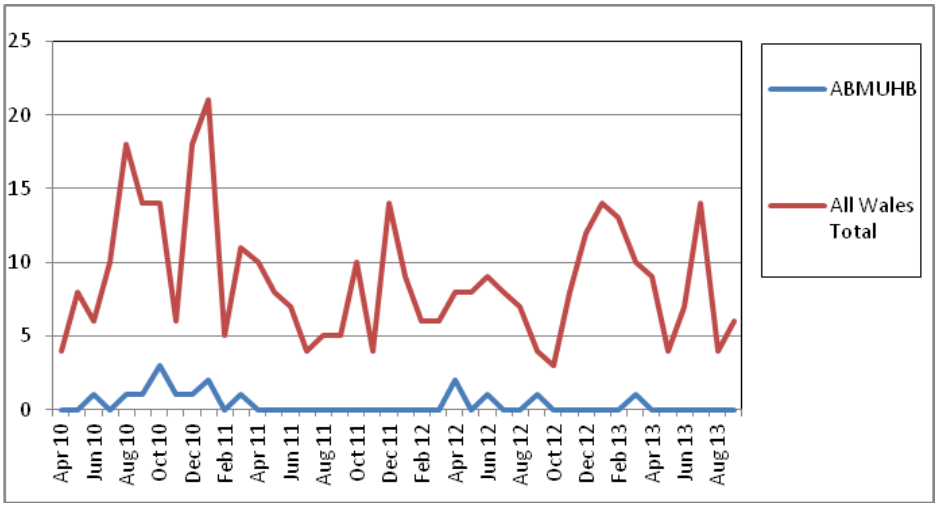
Timely admissions to critical care

General Critical Care:

It is hoped that patients, for whom critical care is appropriate, are admitted to an appropriately staffed critical care unit in a timely manner so they have the best chance of a good outcome.

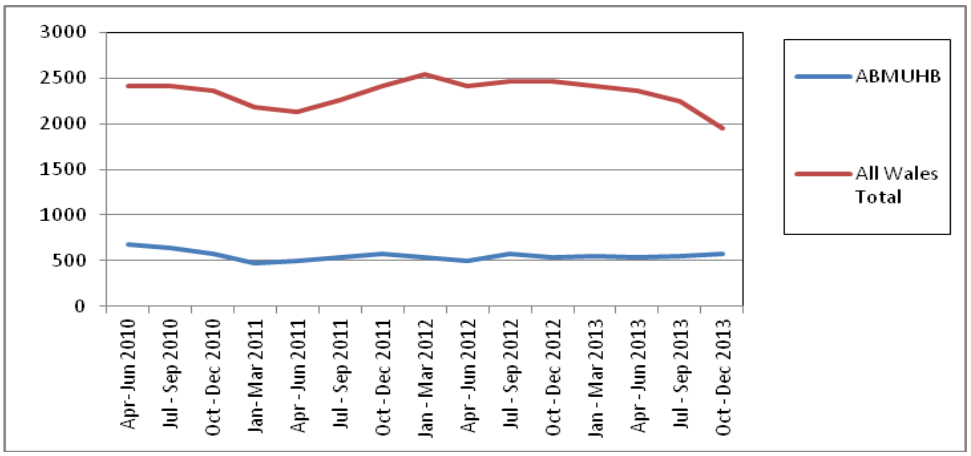
Two assurance measures are suggested in this area. They are:

- Non clinical transfers in general critical care due to lack of bed or equipment –



Non clinical transfers are a rare occurrence in ABMUHB which is completely in line with national intensive care standards and Welsh Government guidelines. The increasing pressure on beds means it is harder to maintain this level but every effort will be made to do so.

- Critical care activity – number of admissions to a general critical care unit



The number of admissions to a general critical care unit also demonstrates the level of demand is remaining at a constant level whilst in general, patients are becoming sicker and more complex to manage.

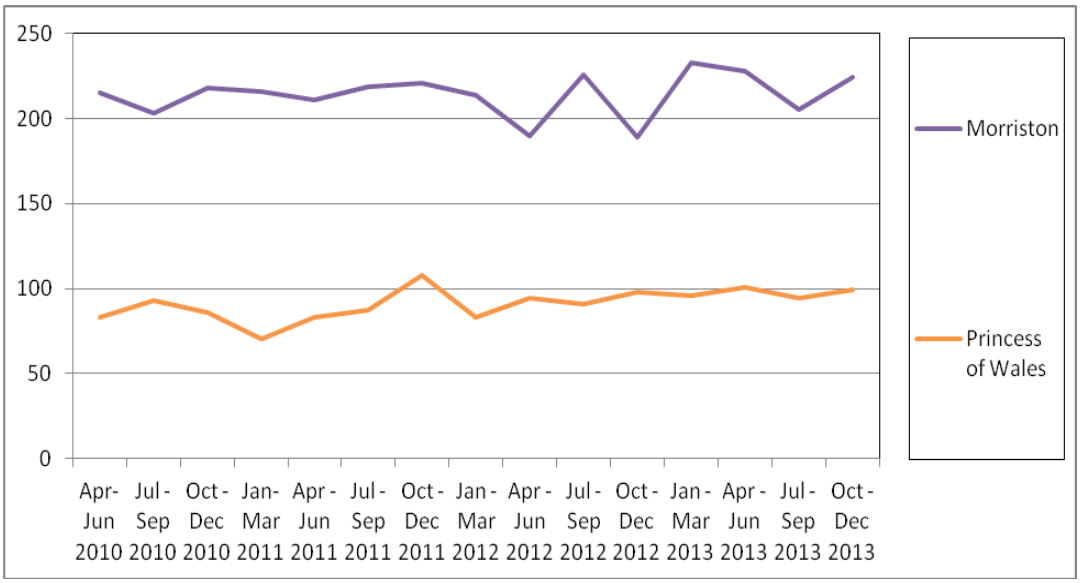
Effective critical care provision and utilisation

Critical care patients should receive care in environments with staff and resources appropriate to their level of care, compliant with the standards in the strategic vision.

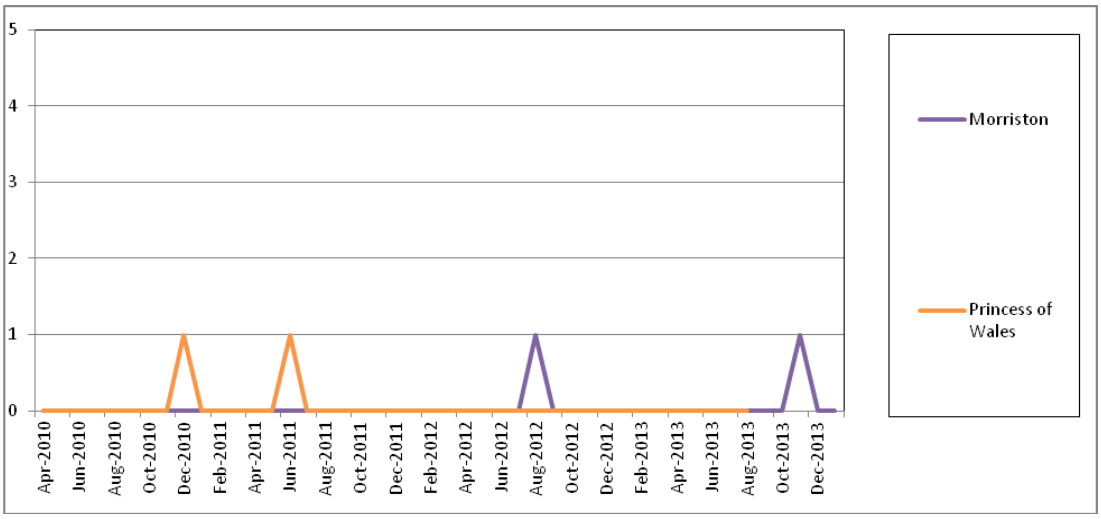
Patients in critical care should receive evidence based care in the form of high compliance with care bundles, national guidance and care pathways or other forms of standardised, high quality care. Patients will receive the right level of care in the right environment.

We have three assurance measures in this area:

- Number of unplanned admissions to general critical care:



- Number of critical care minimum data set admissions for level 1 care “episodes where L2+L3=0”



The above graph demonstrates that level 1 admissions, where there is no period during the admission at levels 2 or 3, are very rare. It should be noted that the data for the Princess of Wales Hospital between the period September 2013 to January 2014 is currently in collation to a data vacancy within the period. This information is pending update and will be available shortly.

Critical Care Follow-up Clinic

The Critical Care Follow-up Clinic is the only Consultant-led multi-disciplinary clinic for survivors of critical illness in Wales. The NICE guideline 83 (Rehabilitation Guidelines) and the Department of Health in their review of Critical Care Services recommend that each Critical Care Unit should run a Follow-up Clinic for ICU survivors. Our clinic in Morriston Hospital now runs on a weekly basis and has been running successfully for over 5 years.

From our experience and previous research, survivors of critical care have multiple on-going problems which are difficult to manage and often not addressed by current systems of care. The aim of the clinic is to holistically treat these patients and return them to an acceptable quality of life.

Data collection based on patient questionnaire results have shown that 20% suffer with post-traumatic stress syndrome as a result of their hospital admission and critical illness, 40% suffer with either depression or anxiety and 50% of follow up patients have on-going pain and mobility problems which they described as moderate to severe.

Some of the positive actions taken in this clinic include:

- 20% of patients seen in clinic were referred to the supervised rehabilitation programme run by the ICU physiotherapy team.
- 15% of patients were referred to see a physiotherapist as an outpatient.
- 56% of patients were referred for further investigations such as x-rays or blood tests.
- 43% of patients needed changes to their medication since discharge home from hospital.
- Over 15% of patients had their follow-up appointments with other medical teams expedited.

We are also completing a number of studies using the information collected in the clinic. This will not only benefit our patients but also those units who trying to set up a similar service.

Rehabilitation Passport

Patients often leave critical care with complex rehabilitation needs that require further input in the ward setting and NICE guideline CG83 recommends that information regarding a patient's rehabilitation status is communicated as appropriate to other health care professionals. In order to address this, the Rehabilitation Passport was developed and has been audited during the 2013/14 period. The results of the first phase of audit led to further developments to the passport which, when re-audited in phase two, achieved 100% compliance. This means that all patients leaving general critical care had a completed rehabilitation passport at the point of transfer.

In addition to the successful audit results, positive feedback was received from all ward staff regarding improved communication of patients' needs.

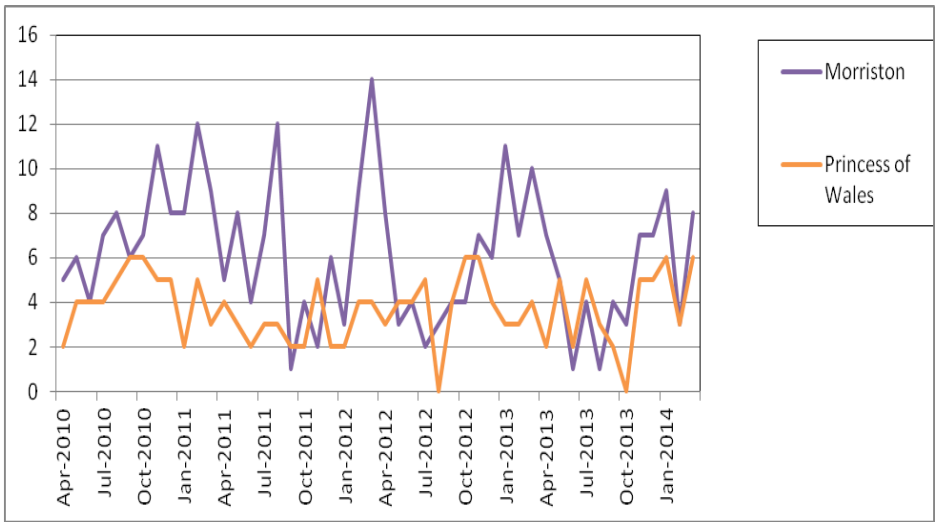
Timely discharge from critical care

Patients are discharged from critical care in a timely manner so they have the best chance of early rehabilitation. Patients requiring critical care will have improved access due to improved flow through the units.

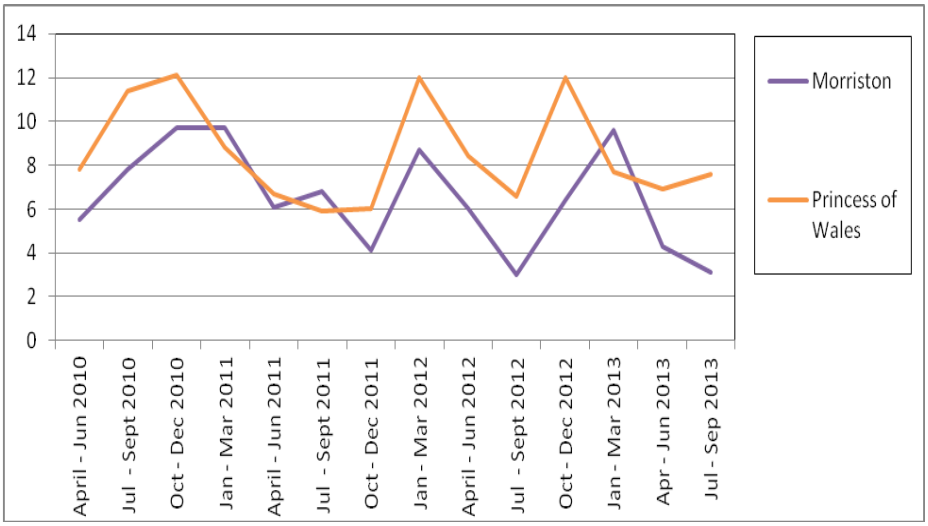
We have three assurance measures in this area. They are:

- Number and % of out of hours discharges (between 22:00 and 06:59):

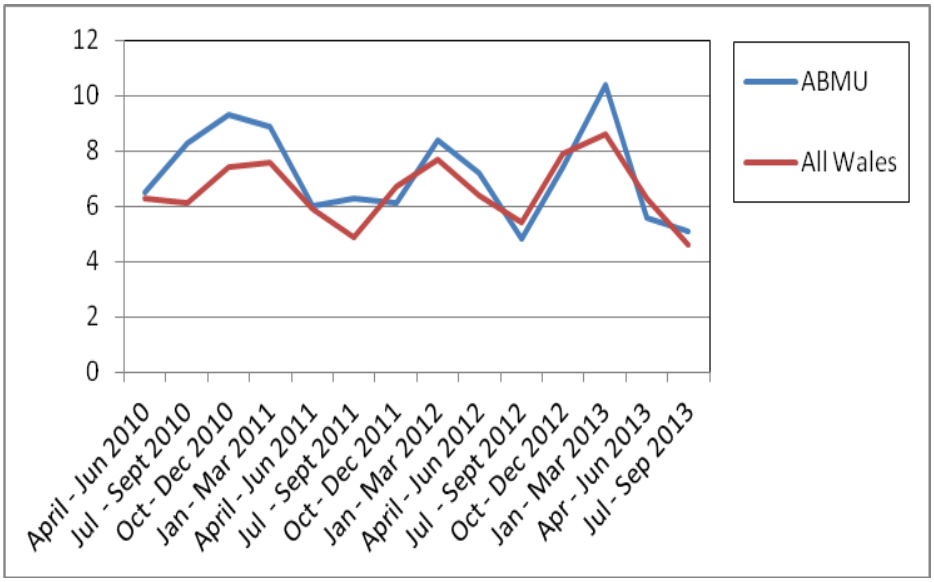
Number of discharges:



Percentage of out of hours discharges:

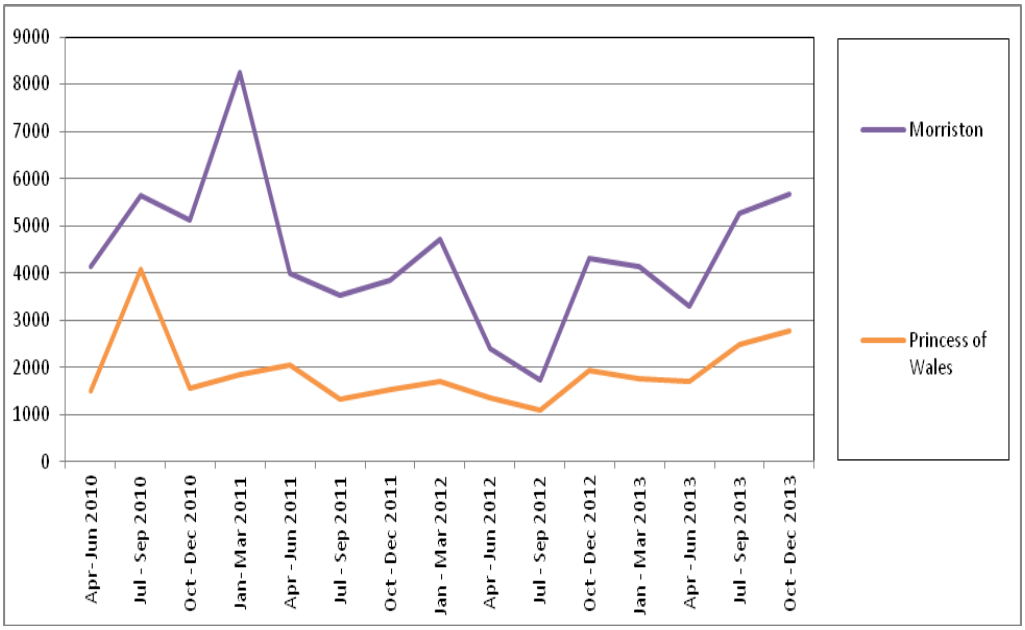


The graph below demonstrates the % of out of hours transfers against an All Wales position.



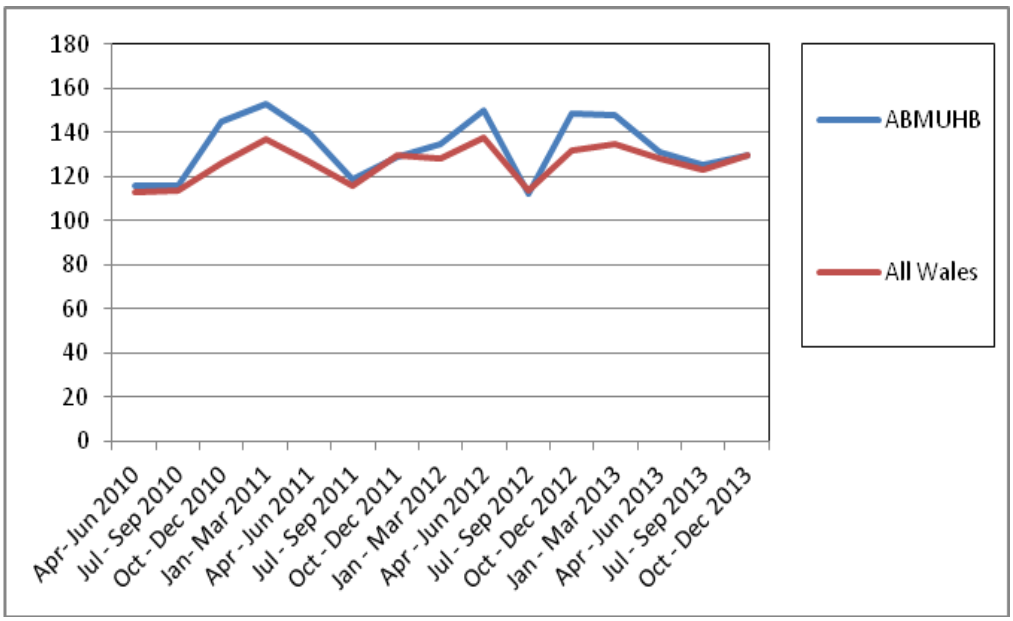
These graphs reflect the difficulty in gaining a transfer during daytime hours due to bed capacity not being released until much later in the day or evening. They also demonstrate periods of emergency demand.

- Hours lost to delayed transfer of care from critical care



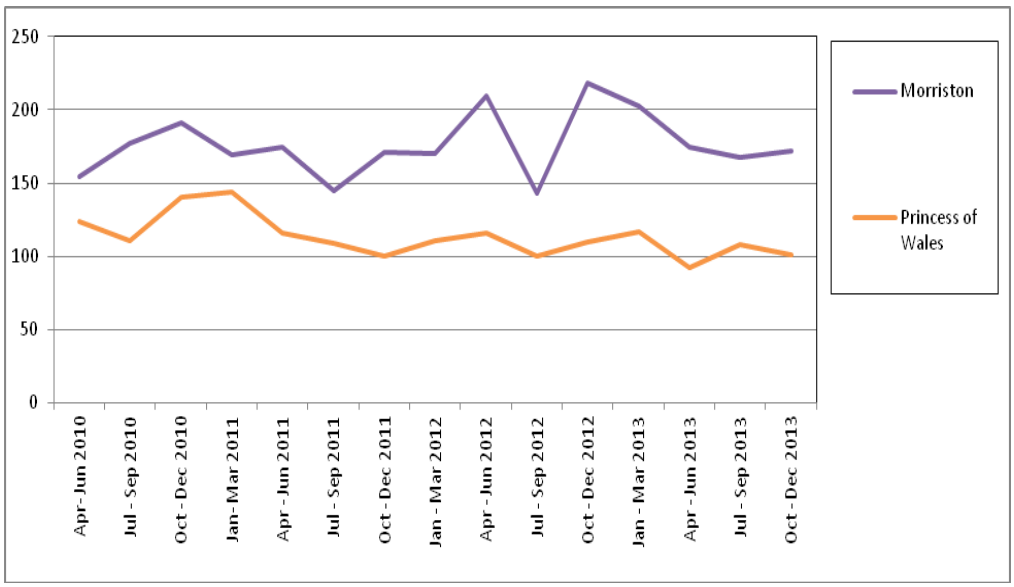
It is of concern that there are so many hours lost – particularly when these impact on elective care cancellations. It is considered that the level of lost hours further reflects the difficulties experiences in accessing ward beds in a timely manner.

Average length of stay (shown in hours within the below graph):



The length of stay shown in the above graph is reassuringly positive given that Morriston Hospital is a tertiary centre with complex cases, yet is maintaining average lengths of stay which are comparable with other All Wales non-tertiary units.

By ABMUHB Critical Care Unit, these average lengths of stay are provided within the following graph.



As explained above, Morriston is a tertiary centre and therefore this explains the variance in length of stay between Morriston and Princess of Wales Hospitals.

There were 103 occasions where out of hours discharges occurred in the period between April 2013 to March 2014. As a percentage, 97% of out of hours discharges in the last year were reported as untoward incidents, in line with NICE Clinical Guideline 50 Acutely Ill Patients in hospital recommendations.

Improving information and research

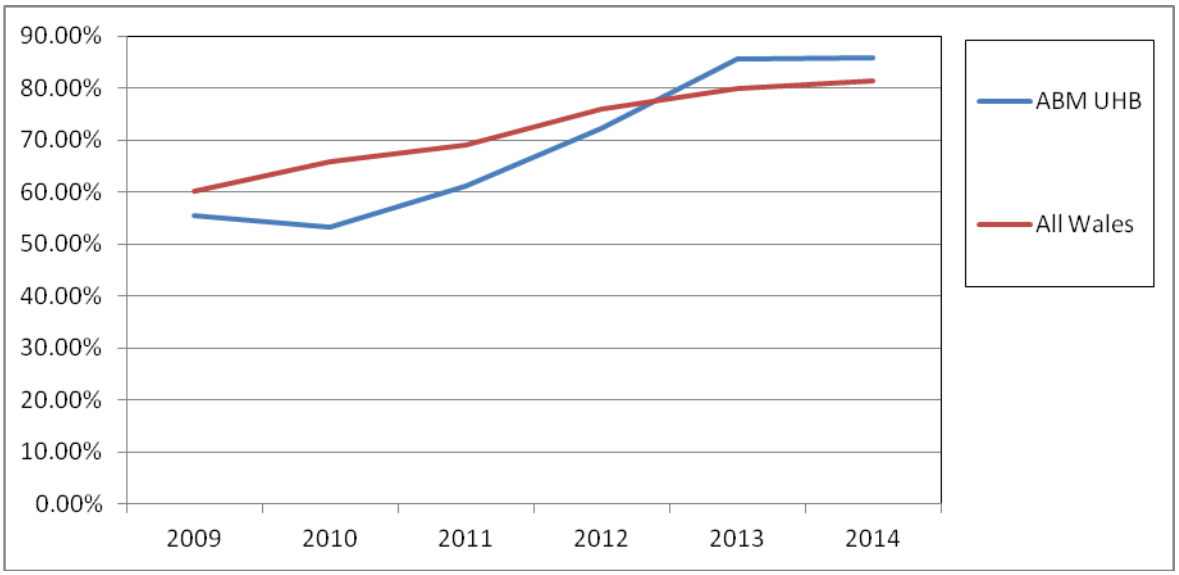
Information systems should support high quality care and performance, clinical audit and review to drive service improvement. Critical care research in Wales should be supported as a means to improve clinical standards as well as increasing the profile and role of critical care.

Audit

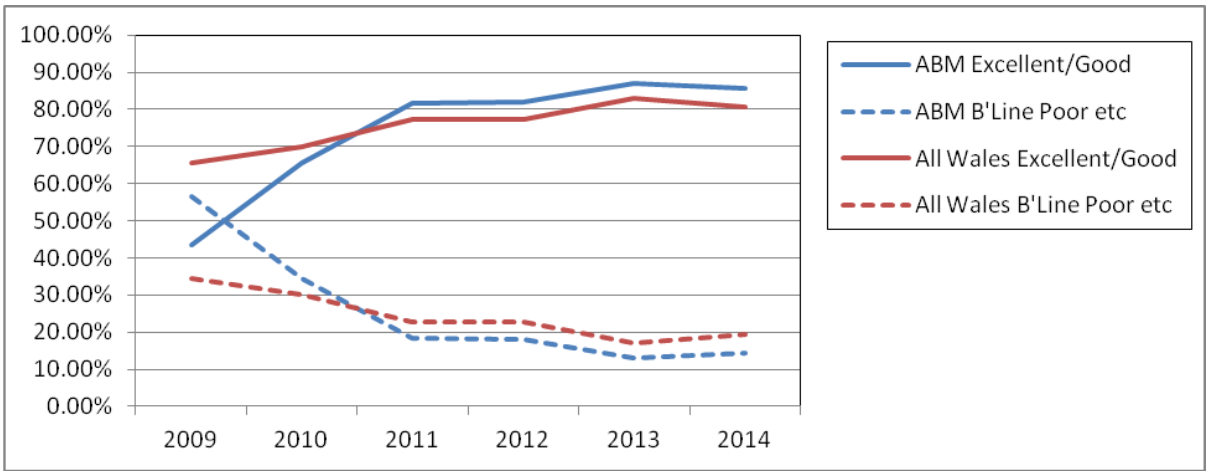
Participation in National Clinical Audits relating to critical care is a mandatory requirement which Local Health Boards must ensure is achieved. Full (100%) participation is required to effectively monitor progress in the delivery of critical care, to provide comparative outcome data and allow effective benchmarking.

In addition, the following two graphs demonstrate that the percentage of audit forms received year on year by the Health Board is continuing to increase as is the quality of transfer reported:

- Percentage of Transfer forms received:



- Transfer Assessment Grades - ABMUHB / All Wales comparison



Research

The success of the Swansea Critical Care Research Group has continued in 2014. The group was initially set up in May 2013 and over the last year we have developed close links with the NISCHR Clinical Research Centre and the South West Wales Research Network. The NISCHR CRC team have supported us in a number of our research studies this year and are looking to continue this work in the future. We have also developed close links with Swansea University, collaborating on a number of new studies with the College of Medicine, School of Health Sciences and the Department of Psychology.

Following on from the success of previous years, a total of five abstracts were accepted for the International Symposium on Critical Care and Emergency Medicine in Brussels in March 2014. All abstracts were presented at the conference and have been subsequently published in the international journal Critical Care.

We have also successfully participated in a number of international, multi-centred studies which will establish Swansea on the International Critical Care Research map. This is our best year yet, with completion of the following studies:

- Intensive Care Foundation / James Lind Appliance Research Priority study (Round 2). The aim of this UK study was to establish both clinicians and patients / carers' opinions on future priorities in Critical Care research.
- Medical Emergency Team: Hospital Outcomes after a Day (METHOD) study. The aim of the International METHOD study was to describe the clinical outcomes achieved by Rapid Response Systems, Medical Emergency Teams and Critical Care Outreach Services.
- The LUNGSAFE study. This was an international study aimed at investigating the incidence and current management of Acute Respiratory Distress Syndrome in Critical Care Units across the world.
- Stress Ulcer Protection (SUP) study. This international study was completed to investigate the current incidence and management of stress ulcers in Critical Care Units in Europe.
- The Welsh Intensive Care Society Ventilator Associated Pneumonia surveillance study.
- NCEPOD Sepsis study. This UK study was designed to identify and explore avoidable and remediable factors in the process of care for patients with known or suspected sepsis.

Our Critical Care Follow-up Clinic has also led to a number of new studies, one of which has found that sepsis is a risk factor for depression in survivors of Critical Illness. We'll be presenting our findings at the Welsh Intensive Care Society summer meeting in Saundersfoot in June.

The study investigating the effect of a six week supervised rehabilitation programme study for survivors of Critical Illness is also coming to an end, with some exciting results to report. This is a randomised controlled trial in which we are investigating whether a six week supervised rehabilitation programme can improve cardiovascular fitness, balance, strength and psychological outcomes in survivors of critical illness.
Research Group Lead Ceri Battle has published a number of papers in leading Critical Care journals this year in international emergency medicine and critical care journals, continuing her work on chest trauma. These include a study investigating the effects of pre-injury anti-platelet use in chest trauma outcomes, a study looking at the surprising protective effect of smoking on outcomes in chest trauma patients and a large multi-centre study in which a risk score was developed to assist in the management of chest trauma patients.

Overall it has been an exciting and productive year so far for the Swansea Critical Care Research Group. This will hopefully continue to progress.

Section Two: Progress with reviewing current service provision to identify where the tier of service provision needs to change to meet demand and quality requirements.

The Critical Care Department reviewed current service provision to understand the capacity limitations on the service. This review indicated that there is a vital distinction between bed numbers and capacity. The capacity of a unit can be exceeded despite adequate bed numbers. A recent benchmarking visit to a critical care unit with 100 beds revealed that cancellation of elective work is commonplace despite the fact that only around 75-80 of the total beds are used.

All complex processes have a rate-limiting step. Maximum capacity will not be realised until the rate limiting step is augmented. Collecting data allows analysis and identification of the limiting steps which will change over time.

Critical care is a complex process. Bed numbers can be one of the rate limiting factors but critical care capacity refers to the whole of the multidisciplinary team which provides safe, quality care. Capacity planning starts by calculating bed numbers required but must then

assess all other factors needed including nurses, junior/senior doctors, pharmacists, physiotherapists, dieticians, clerical, secretarial and IT support staff. It also includes step down facilities and all other factors affecting patient flow.

Data is crucial to capacity planning.

Calculation of bed numbers

Calculations in last year's capacity plan suggested that at the Morriston site at least 27 critical care beds would be required, with 8 at POW, to manage the demand based on figures for the preceding 12 months and occupancy of 75%. The same calculations have been performed this year and together with the 70% WG target. The data uses length of stay in minutes converted to days with adjustment for DTOCs (after the 'permitted' target of 4 hours) but allows no time for bed cleaning between patients.

It therefore represents the **minimum number of beds required assuming maximum efficiency and a smooth, uniform level of demand, without peaks or troughs,** which is never the case.

	1st Oct 2011 -30th Sept 2012	**1st Oct 2012 -30th Sept 2013**
Admission numbers (*Morriston*/POWH)	*1146*/547	*1147*/530
Mean LOS (Allowing for DTOCs)	*6.38*/4.4	*7.33*/3.9
Calculated bed requirement for 75% occupancy	*27*/8	*31*/7.5
Calculated for 75% occupancy on 95% of occasions At 70% occupancy(Together for Health)	*34*/12	*40*/12 42/13

Evidence from ICNARC over the last year supports the fact that the illness severity of admitted patients has increased and helps explain an increased length of stay to achieve survival at Morriston. Occupancy has therefore increased and elective surgery has been cancelled as a consequence of capacity being exceeded. At POWH elective surgery has proceeded with level 2 cases returning to ward areas, which contributes to unmet need. At both sites CCMDS data on occupancy reveals averages way above WG targets.

Unmet and unmeasured need which are not included in the above calculations:

- Cancelled surgical operations (n=183 at Morriston site/ward admissions of level 2 cases at POWH).
- Specialist referrals from other hospitals.
- Delayed repatriations.
- Support for WG target to provide level 2 care for all surgical cases with >10% risk of mortality.
- Support for WG organ donation programme.
- Expansion of services currently provided.
- New service developments, changes from SW Plan or C4B.

Empirically, Health Board Executives have commissioned architectural design of 40 critical care beds at the Morriston site. Evidence supports the need for more beds but no programme has so far been undertaken to match the need, (met, unmet and unmeasured) to the bed numbers required at either site.

Aside from developing general critical care units within the Health Board, some of the other areas of development currently underway are:

- Introducing a Vascular Access Team enabling patients to receive their IV therapy at home supported by both primary and secondary care.
- Standardisation and Rationalisation of Procurement within Critical Care
- Building a proposal to develop the Outreach Service within Morriston Hospital to provide 24 hour cover

Section Three: Progress against delivery plan (insert any significant achievements in implementing your local delivery plan)

Section Four: Conclusion: looking ahead to 2014/15 and beyond

Ensuring that critical care services are delivered appropriately and that those services are managed efficiently are two vital elements for a modern NHS in Wales. Looking beyond 2015 it seems likely that various drivers, such as the South Wales Plan and Changing For The Better, will result in the creation of 3 major critical care units in South Wales. One of these large units will be at the Morriston site where current modelling predicts the need for in excess of 35 beds. Staffing such units will be extremely difficult, particularly in a Health Board where a second critical care unit (Princess of Wales) does not have dedicated ITU residents.

This Progress Report shows that within ABMU, the efficient use of critical care services can be improved by reducing the delays in transfer of patient care to hospital ward beds. In terms of ensuring the appropriate delivery of critical care, Welsh Government's drive for Health Boards to establish a Delivery Plan for the Critically Ill is welcomed as it specifically tasks Health Boards to ensure that admitting hospital consultants consider, within the first 24 hours of hospital admission, whether a patient is for full or limited escalation of care.

The twin challenges of, one, ensuring that critical care is delivered appropriately and, two, the staffing of large critical care units, can be jointly resolved by consideration of the following:

- In a modern NHS where all acute hospital specialties refer patients to critical care and where Welsh Government policy appropriately asks admitting hospital consultants consider whether a patient is for full or limited escalation of care, how can specialty training be considered complete without some training in critical care?

- Wales could be a sector leader and state that training in a hospital based specialty in Wales requires 4-6 months training in critical care (either within or on top of their training scheme). Whilst great hope has been placed nationally and in ABMU on the establishment of Advanced Critical Care Practitioners to provide additional resident cover it is now clear that the numbers required are too great to provide a comprehensive solution. The only current solution for increased critical care resident numbers is the above suggestion. and. This is supported by the recent Independent Greenaway report - *Securing the future of excellent patient care in which recommendation 12 states – "*All doctors must be able to manage acutely ill patients with multiple co morbidities within their broad specialty areas, and most doctors will continue to maintain these skills in their future careers." The Critical Care Department at ABMU hope that Welsh Government will consider the matter seriously.

In addition, over the next 12 months it is hoped that the Core Standards for Critical Care (2013) will be achieved and appropriately supported to offer a 28 bedded unit in Morriston and a 9 bedded unit in Princess of Wales. It is also necessary to start recruitment towards staffing a larger unit at each site.