WM QRS West Midlands Quality Review Service

NHS

Midlands Critical Care Networks

Review of Critical Care Services

Report Date: June 2011 Visit Dates: May to November 2010

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INTRODUCTION

West Midlands Quality Review Service (WMQRS) was set up as a collaborative venture by NHS organisations in the West Midlands to help improve the quality of health services by developing evidence-based Quality Standards, carrying out developmental and supportive quality reviews - often through peer review visits, producing comparative information on the quality of services and providing development and learning for all involved.

Expected outcomes are better quality, safety and clinical outcomes, better patient and carer experience, organisations with better information about the quality of clinical services, and organisations with more confidence and competence in reviewing the quality of clinical services. More detail about the work of WMQRS is available on the WMQRS website: http://www.wmqi.westmidlands.nhs.uk/wmqrs/.

Reviews of urgent care, critical care, stroke (acute phase) & TIA, and vascular services in the West Midlands were undertaken between May and November 2010. Full reports of each visit are available on the WMQRS website, including details of compliance with Quality Standards and membership of the visiting teams. This report contains the critical care section from each of the 2010 visit reports. These should be read in the context of the full visit reports, including details of compliance with WMQRS Quality Standards for Critical Care Services, Version 2 (April 2010).

These visits were organised by WMQRS on behalf of the Midlands Critical Care Networks. Network representatives participated in each of the visits. The dates for each visit are given in Appendix 1.

The reports reflect the situation at the time of the peer review visits. Services may have changed and developed since these visits.

ACKNOWLEDGMENTS

The Midlands Critical Care Networks and West Midlands Quality Review Service would like to thank the staff and patients of the West Midlands Critical Care Services for their hard work in preparing for the reviews and for their kindness and helpfulness during the course of the visits. Thanks are also due to the visiting teams and their employing organisations for the time and expertise they contributed to these reviews.

SOUTH WARWICKSHIRE HEALTH ECONOMY:

SOUTH WARWICKSHIRE NHS FOUNDATION TRUST

General Comments, Achievements and Good Practice

This was a friendly, welcoming unit and feedback from patients and families was good. The critical care unit was achieving the target level of an average of not more than 85% occupancy. Nursing staff worked very flexibly; when the unit was quiet they 'banked' their hours and used them when the service was busier. A transfer trolley was ready to move patients and FASTHUG had been implemented. The service had good resources for professional development of critical care nursing staff, especially given the relatively low turnover of staff. There was good outreach team involvement in Trust-wide education programmes.

Immediate Risk: None

Concerns

1 The critical care unit did not have continuity of consultant care. There was a change of responsible consultant each day and a different consultant was on duty out of hours. The visiting team also saw evidence of a lack of effective handover and the impact of this on the quality of patient care.

2 Out of hours support to the critical care unit was provided by general anaesthetists and there was no evidence that they were doing CPD of relevance to their work on the critical care unit. Intensivists provide informal advice when they were not on duty and it appeared that they were regularly contacted for advice when not on call.

3 Reviewers were told that up to 10% of discharges from the critical care unit took place out of normal working hours. Discharges should take place within normal working hours whenever possible.

4 Multi-disciplinary working within the critical care unit was not well developed. There were separate ward rounds by consultants, pharmacist and physiotherapists.

Further Consideration

1 It was not clear why the unit has problems with delayed discharges when the average occupancy was less than 85%. The visiting team suggested that further analysis of the times and reasons for delayed discharges are undertaken.

2 The visiting team heard different views about the number of patients needing critical care who were supported in other areas. Some people thought that this was high whereas others said they had no problems getting patients admitted to the unit. The visiting team suggested that further analysis of this issue is undertaken.

3 'Out of hours' there was one anaesthetist covering critical care, maternity, emergency theatres and time-critical transfers. The Trust should consider the need for two rotas, especially if the number of deliveries continues to increase.

4 Critical care unit staff used to rotate with outreach service staff but this no longer happens and the visiting team recommends that reinstating this should be considered.

5 Several of the policies and procedures seen by the visiting team had been recently developed. The Trust should ensure that full implementation of these policies and procedures is achieved.

6 The visiting team considered that there was the potential for nursing staff to take a more pro-active role in the management of unit.

Commissioning: No specific commissioning issues were identified.

NORTH WARWICKSHIRE HEALTH ECONOMY:

GEORGE ELIOT HOSPITAL NHS TRUST

General Comments, Achievements and Good Practice

A good service was provided from a very clean, well-run unit. There was a welcoming environment and patients and relatives were well-prepared for elective admissions. A lot of work had been put into improving privacy and dignity and relatives who met the visiting team were very positive about the care and facilities available. The critical care unit was achieving the target level of an average of not more than 85% occupancy. The unit had achieved low infection rates and a low rate of non-clinical transfers. There was good integration with ward staff and the outreach service was available at all times. Pharmacy support was very good. The service had a strong ethos of team-work supported by good team-building activities. Staff were very clear, and open with reviewers, about the areas where the service still needs to develop. There was good leadership and a clear plan and vision for the future development of services.

Concerns

1 The critical care unit did not have continuity of consultant care. There was a change of responsible consultant each day and a different consultant was on duty out of hours.

2 Out of hours support to the critical care unit was provided by general anaesthetists and there was no evidence that they were doing CPD of relevance to their work on the critical care unit. The Trust had, however, agreed plans to separate the anaesthetist and intensivist rotas which will address this issue.

3 Non-invasive ventilation was not available on the critical care unit but there were plans for the development of this service. There was access to non-invasive ventilation on the respiratory ward.

Further Consideration

1 There were still a number of discharges from the critical care unit late in the day. This was partly because the bed management policy prioritised elective admissions over discharges from the critical care unit. The visiting team was told that measures had been introduced over the last 12 months and the number of discharges occurring later in the day had reduced. Discharges should take place within normal working hours whenever possible.

2 Some policies were still in draft form and it will be important to ensure that these are followed through to approval and full implementation. Some of the Quality Standards were not yet fully met and the service should continue its programme with the aim of achieving implementation of all relevant standards.

Good Practice

1 The unit had very clear, well structured policies and procedures.

2 There was a very good nurse training programme. The education team was very responsive to educational opportunities, including those relating to the introduction of new therapies. Good records were kept of training undertaken. There were good arrangements for moving staff who were unable to undertake clinical duties into educational roles, where appropriate. There were also facilitated feedback forums following times of pressure on the service to ensure that learning occurred.

3 Disposable curtains were used which may have contributed to the reduction in infection rates.

4 There was a very clear, written process for handover between shifts of staff.

Commissioning: No specific commissioning issues were identified.

HEREFORDSHIRE HEALTH ECONOMY:

HEREFORD HOSPITALS NHS TRUST

General Comments and Achievements

This was a well-equipped unit providing care in very good facilities. There was good nursing and medical leadership. Staffing was relatively stable, with little turnover, and the middle-grade medical rota was relatively senior.

Concerns

1 There was no clinical pharmacy input into the multi-disciplinary care of patients. Pharmacists attended the unit to check stock levels but not to advise on the care of patients.

2 Out of hours support to the critical care unit was provided by general anaesthetists and there was no evidence that they were doing CPD of relevance to their work on the critical care unit.

3 There was no critical care delivery group, or similar mechanism, for the Trust to ensure that critical care services link effectively with other services within the hospital.

4 The outreach service was only available between 08.00 – 18.00 on weekdays and 08.00 – 13.00 on weekends and bank holidays.

Further Consideration

1 The arrangements for supporting nurse training should be kept under review. There was no Practice Development Lead and no plans to recruit to this post. The staff base was very stable but the service will need to ensure that competences are maintained and, if there are new staff, that appropriate competences are achieved.

2 Multi-disciplinary input to the ward round was limited. There was no allied health professional or pharmacy (see above) involvement.

3 Nursing staff wash the vertical blinds in the unit. This may not be the best use of their time.

Good Practice

1 Ultrasound with echo-probe was available and two consultants were trained to use this.

2 Facilities for relatives were available in addition to the interview room.

Commissioning: No specific commissioning issues were identified.

WORCESTERSHIRE HEALTH ECONOMY:

WORCESTERSHIRE ACUTE HOSPITALS NHS TRUST

General Comments and Achievements

The critical care services at the Alexandra Hospital and Worcestershire Royal Hospital were reviewed as a county-wide service. There was good county-wide working by enthusiastic and committed staff. Medical and nursing leadership was good. Services were well organised and infection rates were low at both sites. Mortality rates at the Alexandra Hospital unit were also low. The unit at Worcestershire Royal Hospital was well-designed and worked well. The unit at the Alexandra Hospital was small for the amount of care provided.

The Quality Standards for Critical Care Services cover level 2 and 3 care in critical care units and level 1 care across the hospital. At Worcestershire Royal Hospital there were several high dependency units (vascular, surgical, medical and stroke) providing at least level 1 care. The vascular and surgical high dependency units were also providing some level 2 care. These units had not self-assessed against the critical care Quality Standards and had not prepared to be reviewed. Critical care reviewers visited each of these units but did not undertake a full assessment against the standards.

Immediate Risk

1 Level 2 critical care was being delivered to an unknown but significant number of patients in areas where there was no assurance that medical and nursing staff had competences in critical care and where there was no critical care consultant ward round or regular input to the care of patients from staff with critical care competences. Reviewers were told that level 2 patients were 'often' cared for in the vascular and 'sometimes' in the surgical high dependency units, including the use of vasopressors and inotropes and the delivery of non-invasive ventilation. Whilst these interventions assist in the management of critically ill patients, they can cause harm and should only be instigated and managed by appropriately trained staff. Reviewers were told that intensive care staff are contacted when patients get into difficulties but there was no regular contact between the departments over the care of these patients. The outreach service did provide support if required but was not available at all times (which would partially mitigate the risks to patients).

Concerns

1 Reviewers were seriously concerned that the clean linen and supplies area in the critical care unit at the Alexandra Hospital was accessed through the sluice. This arrangement had been risk assessed and risk control arrangements were in place, including ensuring doors were kept shut. The last infection control risk assessment was, however, undertaken in 2007. In 2007, plans to redesign the entrance to the clean area were being discussed but no progress has been made since then.

2 The critical care unit at the Alexandra Hospital did not have continuity of consultant care. There was a change of responsible consultant each day and a different consultant was on duty out of hours.

3 Out of hours support to the critical care unit at the Alexandra Hospital was provided by general anaesthetists and there was no evidence that they were doing CPD of relevance to their work on the critical care unit.

4 Outreach services at both hospitals were not available 24 hours a day. Outreach teams were available 8am to 7pm seven days a week. This was of particular concern at the Worcestershire Royal Hospital because of the number of high dependency units within the hospital.

5 There was no mechanism for coordinating the care given in high dependency units at Worcestershire Royal Hospital with critical care services and no apparent oversight of the care in these units from critical care staff. The Trust critical care delivery group does not involve staff from these units.

6 At the Alexandra Hospital patients did not have access to washing and toilet facilities on the critical care unit.

Further Consideration

1 Reviewers suggest that further work is undertaken on patient flow through the critical care unit at Worcestershire Royal Hospital. Based on the data available, this unit would appear to have capacity for the level 2 patients currently being cared for in vascular and surgical high dependency units. Reviewers were told, however, that one of the reasons for admitting these patients to the HDUs was because beds were not available in the critical care unit. An alternative to admitting level 2 patients to the critical care unit would be to ensure a) that medical and nursing staff on the surgical and vascular HDUs have appropriate competences and b) that there is regular input to the care of these patients from critical care staff, including daily consultant reviews.

2 Several of the guidelines and protocols had been produced relatively recently. It will be important to ensure these are followed through to full implementation.

3 Storage at the Alexandra Hospital was insufficient and some areas, including corridors, in the already small unit were taken up with storage. Reviewers suggest that options for improving storage are explored.

Good Practice

1 Arrangements for nurse induction and training were good. There was an ongoing programme of professional development with good folders of competences for all nursing staff. There was obvious commitment to encouraging nursing staff to learn and develop.

2 A patient diary had been developed and was being implemented in practice.

3 The outreach service was actively engaged with training and development of ward staff, including the use of training packs for ward staff. A 'Stamp It' campaign to verify activity has been successfully developed and presented nationally.

Commissioning: No specific commissioning issues were identified.

SOUTH STAFFORDSHIRE (WEST LOCALITY) HEALTH ECONOMY:

MID STAFFORDSHIRE NHS FOUNDATION TRUST

General Comments and Achievements

This service had good facilities for relatives and good recruitment and retention of staff. Data collection was generally good. Staff worked well together and were aware of the issues which needed to be addressed. Staff were very welcoming and friendly and had good ideas for how to develop the service.

Immediate Risks: None

Concerns

1 **Infection control:** The critical care unit had no isolation facilities. Fans were in use and the responsibilities for cleaning were not clear. Arrangements for ensuring visiting clinicians were bare below the elbow and washed hands before contact with each patient did not appear to be robust. Some bed spaces were very small. The blood gas machine was stored in the sluice.

2 **Patient flow:** There was a high proportion of discharges from the unit late in the day and 'out of hours'. Patients should be discharged in daytime hours whenever possible. Patients were being ventilated regularly in the recovery area. The critical care unit was running at less than 85% occupancy partly because of the relatively high proportion of level 1 patients. It was therefore sometimes difficult to find a bed for a patient needing level 2 or 3 care. There was no clear policy on the care of patients needing level 2 and 3 care outside the critical care unit.

3 The outreach service was not available at all times. It was available Monday to Friday 8am to 8pm and 8am to 4pm at weekends.

4 Out of hours support to the critical care unit was provided by general anaesthetists and there was no evidence that they were doing CPD of relevance to their work on the critical care unit.

5 The unit did not have a rolling programme of equipment replacement.

Further Consideration

1 The Trust may want to consider the development of a level 1 facility in order to improve patient flow through the critical care unit.

2 The unit did not have a Practice Development Team. Nurse education was, however, very good and it will be important to ensure this is maintained.

3 The nurse in charge was not always supernumerary. Reviewers considered that it may be possible for this to be achieved within existing staffing levels through tighter control of leave.

4 Nursing staff rotation between the critical care unit and the outreach team was not in place. It may be helpful to consider this rotation to ensure all staff maintain relevant skills and awareness.

Good Practice

1 Very good electronic medical notes were available and there were plans to combine these with the nursing notes.

2 The outreach team had been very proactive in the identification and management of sepsis throughout the hospital.

Commissioning: No specific commissioning issues were identified.

NORTH STAFFORDSHIRE HEALTH ECONOMY:

UNIVERSITY HOSPITAL OF NORTH STAFFORDSHIRE NHS TRUST

At the time of the visit, critical care services were provided in several different units. This report is structured as follows:

1 Intensive Care Unit (ICU), High Dependency Unit (HDU) and Multiple Injuries Unit (MIU)

2 Surgical Special Care Unit (SSCU)

3 Non-invasive Ventilation Unit (NIVU)

4 Neuro-Specialist Care Unit (NSCU)

The cardiac critical care unit was not reviewed at this visit.

ALL CRITICAL CARE SERVICES

General Comments and Achievements

At the time of the visit, critical care services were provided at both City Hospital and the Royal Infirmary sites. Plans for the new hospital involve bringing together critical care services and a strategy for level 1 care has been developed.

Immediate Risk

1 At weekends, one consultant covered critical care services on both the Royal Infirmary and City Hospital sites. At night there was no middle grade cover on the Royal Infirmary site. Both issues will be resolved when services move to the new hospital.

Concerns

1 Critical care outreach was provided on one site only. There was recognition that the service should be developed to cover both sites and the move to the new hospital will resolve this. The current service had no lead consultant and was covered by the on call rota from MIU.

Further Considerations

1 Some of the information for patients and families was out of date and may benefit from review.

2 Hospitality services on the City site, although technically compliant with the Quality Standards, were limited.

3 Arrangements for medical staff induction were not clear to reviewers. The Trust should assure itself that these arrangements are robust.

4 The professional development team in conjunction with the specialist nurses covered a range of specialities across both sites. Consideration should be given as to how professional development will be organised when all these areas are consolidated on one site.

5 Not all clinical guidelines relating to level 2 and 3 care were easily accessible.

INTENSIVE THERAPY UNIT (ITU), HIGH DEPENDENCY UNIT (HDU) and MULTIPLE INJURIES UNIT (MIU)

General Comments and Achievements

Critical care services were provided by staff who were enthusiastic and committed. There was good team working and a pro-active approach to improving the quality of care. The staffing skill mix has been thoughtfully developed. In the new hospital these services will be brought into a single unit and equipment had already been standardised. Arrangements for governance of the units were good and there was good research management.

NON-INVASIVE VENTILATION UNIT (NIVU)

The unit was a ward based service with the capability to provide within the patient pathway up to level 2 care. This was a very good service, admitting more patients and extending the patient groups to which treatment was offered across the region. The unit was nurse-led with nursing staff having enthusiasm and motivation to make further developments. It will be important to ensure ongoing links with critical services when the unit moves to the new hospital.

Immediate risks: None

Concerns: None

Further consideration

1 Activity data presented did not clearly demonstrate the utilisation of the facility. Accurate data on activity will be important for future plans for service development and to inform commissioners.

Good Practice

1 The patient pathway from critical care to the NIV unit was well managed. Early patient identification and preparation ensured that patients were admitted appropriately and in a timely fashion.

SURGICAL SPECIAL CARE UNIT (SSCU)

General comments and achievements

This unit had developed well over the last two years. Capacity had doubled to 10 beds although the layout was awkward and storage space was limited. The unit was well-equipped. There was much enthusiasm and good team-work within the unit. Surgeons had responsibility for admission and clinical management. Links with critical care services were good. This was achieved through close working between SSCU and critical care nursing staff, informal links between all staff and formal management links. Pharmacy support was shared with the critical care service.

Immediate Risk: None

Concerns

1 At night and weekends the unit was staffed by junior medical staff who had surgical skills but no intensive care experience. Any problems were mitigated by the highly experienced nursing staff and by the willingness of consultants to be contacted when on call.

2 Formal arrangements for out of hours cover were not yet in place to provide timely care. Staff would access the junior medical staff based on the SAU who may not always be able to take responsibility for the patient on the SSCU. The process for escalation to a more senior member of the team was not clear and, in practice, staff would contact the relevant Consultant for advice if they were concerned.

Further Consideration

1 Patient flow from the unit to one surgical ward appeared to depend on which member of the ward staff was on duty. It may be helpful to formalise the criteria for discharge to wards in order to standardise practice.

Good Practice: See general comments and achievements

NEURO-SPECIALIST CARE UNIT (NSCU)

The NSCU was a 6 bedded unit providing a good level of care for this group of patients. Facilities were cramped but there were plans to move the new build in 2011.

Immediate Risks: None

Concerns: None

Further consideration

1 The unit nursing staff did not have access to formal specialist training as would be expected of a unit delivering level 2 care. This is particularly important as the unit was isolated from the main critical care service areas. A preceptorship programme was in place.

Good Practice

1 Staff rotated frequently between the HDU and the ward, which ensured that staff had the competencies for looking after level 2 patients as well as those in the step down and ward area.

Commissioning: No specific commissioning issues were identified.

SOUTH STAFFORDSHIRE (EAST LOCALITY) HEALTH ECONOMY

BURTON HOSPITALS NHS TRUST

General Comments and Achievements

The critical care service was provided by caring and committed staff. There was a high level of engagement with other services in the Trust, including in providing ALERT, MEWS and resuscitation training. The unit had a strong history of providing high frequency oscillation. The intensivist and anaesthetist rotas were separate so an intensivist was available at all times for the critical care service. There was good teamwork and staff worked flexibly to support variations in activity within the unit. Patient satisfaction surveys had been undertaken and an action plan developed to address the issues identified in the survey.

Immediate Risks:

1 Arrangements for access to endoscopy for patients with a possible gastro-intestinal bleed were not robust. Sometimes a member of staff was available but staff were not clear of the action to take in other circumstances.

Concerns

1 The outreach service was not yet available at all times. There was a one hour gap in the morning and evening when the service was not available.

2 No isolation facilities were available. Infection rates were, however, very low.

3 The critical care unit was not yet engaging in the 'surviving sepsis' campaign.

4 Nurse staffing levels were not always sufficient for the number and dependency of patients (EN – 201) and the nurse in charge of the unit may not always be supernumerary due to nurse sickness (EN-202). On occasions, the skill mix of the nursing staff was insufficient to ensure there were enough nurses with a formal qualification in critical care for the number of patients (EN- 206). Outreach nurses were sometimes band 5 rather than band 6 which restricted the level of interventions and care they may be able to provide.

Further Consideration

1 There was little evidence of completed audits. The unit may wish to review its ongoing audit programme.

2 Nursing staff rotation between the critical care unit and the outreach team was not in place, although some secondments had taken place. It may be helpful to consider this rotation to ensure all staff maintain relevant skills and awareness.

Good Practice

1 Pink labels were used to identify laboratory specimens from the critical care unit so that specimens could be processed very quickly.

2 There was a very good discharge form which was linked to the electronic prescribing system.

3 There was a very good junior physiotherapy training pack with updates available.

4 Imaging and pathology support to the services reviewed were excellent. Results were nearly always routinely available within the expected timescales and could be available more urgently on request. Consultant review of imaging was available very quickly, including at weekends. There were very good systems for notification that results were available.

5 The Trust IT system was excellent. Reviewers were also impressed by staff comments on the helpfulness of the IT department and their willingness and ability to make changes to the IT system when these were needed.

Commissioning: No specific commissioning issues were identified.

COVENTRY & RUGBY HEALTH ECONOMY:

UNIVERSITY HOSPITALS COVENTRY & WARWICKSHIRE NHS TRUST - UNIVERSITY HOSPITAL, COVENTRY

General Comments and Achievements

The critical care unit was spacious, well laid out and had very good facilities for relatives. The unit was well-organised with good teamwork among staff. The information needed by the reviewers was well prepared. A good skill mix review had been undertaken following the merger of four, previously separate, units.

Immediate Risks: None

Concern

1 Several policies and guidelines were out of date, including the anaesthetic handbook and policies on neutropenic sepsis, sedation, tracheostomy care, and transfer of self-ventilating adult patient from general ward to the in-house critical care unit.

Further Considerations

1 The intensity of workload for the critical care consultants was very high. Clinical outcomes were, however, good. The relevant Quality Standard was met when the unit is operating at normal capacity but not when this capacity was increased. There were 9 Consultant Intensivists for 13 Level 3 and 12 Level 2 beds. Reviewers considered that this placed considerable pressure on consultants and that this level of workload would not be sustainable for them.

2 Nursing staff rotation between the critical care unit and the outreach team was not in place. It may be helpful to consider this rotation to ensure all staff maintain relevant skills and awareness.

3 Average occupancy of the critical care unit was just above the recommended level (88% compared to 85%) and this should be kept under review to ensure occupancy levels do not increase.

4 Allied health professional support to the critical care unit was under establishment at the time of the review because of vacancies.

5 Notification to GPs of discharges from the critical care unit was not yet in place.

Good Practice

1 An excellent education package for new nursing staff was available. This included staff-directed work packages, lots of detail – including picture, and assessment sheets.

2 Cross-cover with the anaesthetic department was efficient. The process of management of emergencies throughout the Trust, meant that medical personnel from the intensive Care Unit were supported well by on-call staff from the Anaesthetic department to make most efficient and appropriate use of skill mix and expertise available.

Commissioning: No specific commissioning issues were identified.

WOLVERHAMPTON HEALTH ECONOMY:

ROYAL WOLVERHAMPTON HOSPITALS NHS TRUST

General Comments and Achievements

The unit was well-organised by staff who were highly committed to providing good care for patients. There was a holistic approach to care and a strong culture of audit. Reviewers were impressed by the number of audits that had been undertaken and good audit support was available. The general and cardiac critical care units had been integrated into a single unit. This had resulted in fewer refusals as capacity could be used more flexibly. Nursing and allied health professionals were working across the whole unit and there was good, flexible use of nursing staff. Infection rates were low and average bed occupancy was below 85%. The rates of non-clinical transfer and ventilating patients in theatre recovery were also low. Staff retention was good. Medical staffing was robust with low use of locum staff.

Immediate Risks: None

Concerns

1 Reviewers were concerned that medical teams covering the general and cardiac areas of the unit were not yet collaborating effectively. This had the potential to compromise patient care at times when medical staff needed to cover both areas of the unit. There could be short gaps in the middle grade or consultant cover on the general or cardiac team. Sufficient cover was available from the other team but it was not clear, in practice, that this would be forthcoming.

2 The proportion of discharges late in the day was increasing and there was no Trust policy for the eventuality that a level 2/3 bed was not available.

3 CT scans undertaken at night were not reported until the next day. Reviewers were also told that obtaining CT scans was sometimes difficult. (This issue was related to a Trust-wide Immediate Risk – see main report)

4 The out-reach team was not supporting the care of patients in the Emergency Department or the cardiothoracic 'step-down' unit.

5 Links with other units in the hospital were not formalised. The vascular 'high care' unit was not declared as a level 2 unit and patients there did not have regular oversight from a critical care consultant. The cardio-thoracic 'step-down' unit and the non-invasive ventilation unit were not visited and so no assessment was made of the care on these units.

6 A 24/7 rota for endoscopy for patients with possible gastro-intestinal bleeds was not in place. The rota covered Monday to Fridays 9am to 5pm and weekends but there was no on-call service on Monday to Thursday 5pm to 9am. There was, however, a clear protocol and process covering these hours involving calling the on-call consultant if there were concerns. The consultant would then make a decision about whether the patient should be transferred.

Further Consideration

1 The Outreach Team provided the acute pain service at night but it was not clear that they had appropriate competences to care for patients with epidurals, including abscesses or fluid leaks.

2 There was no evidence that the Outreach Team was collecting and reviewing activity data.

3 Multi-disciplinary ward rounds were not yet established for the whole critical care unit.

4 Some guidelines, policies and procedures were still separate for the two parts of the unit. Work should continue on integrating these, as far as possible, in order to avoid any confusion for staff.

Good Practice

1 Arrangements for appraisal and induction of all staff were very good. All new staff on the unit, including allied health professionals were included in these arrangements. New nursing staff were supernumerary for six weeks.

2 Equipment was well-organised and good equipment was available, including portable, self-cleaning Kwik screens, gantry hoists and a well-organised store.

Commissioning: No specific commissioning issues were identified.

SHROPSHIRE HEALTH ECONOMY:

SHREWSBURY & TELFORD HOSPITAL NHS TRUST – PRINCESS ROYAL HOSPITAL

General Comments and Achievements

This was a busy general critical care unit. It was well equipped with appropriate staffing levels. Staff were well-motivated and leadership was strong. Good use was made of the limited resources of the unit. The relatively small number of senior staff meant that introduction of new practices was achieved relatively easily. There was a comprehensive induction pack for new nursing staff and a good competency booklet.

Immediate Risk: None

Concerns

1 General anaesthetists were on call for the critical care unit at weekends and there was no evidence that they were undertaking Continuing Professional Development of relevance to their work on the critical care unit. Consultant intensivists provided telephone advice and support on an informal basis.

2 The Intermediate Care Area was not declared as an area which may provide level 2 care. Reviewers were concerned that this area was providing some level 2 care, including CPAP, but did not have the appropriately trained nursing staff and input from critical care consultants. Regular support from the outreach nurse was provided but this service was not available at all times.

3 The outreach service was available 9am to 5pm Mondays to Fridays only. This service was provided by one nurse and the arrangements for cover for absences were from the Critical Care Unit doctor on call. The arrangements for handover to the Hospital at Night Team were not clear.

4 Ward rounds on the critical care unit did not have daily sessional input from physiotherapy, pharmacy or dietetic staff. The way in which these staff input to multi-disciplinary discussion may benefit from review. The role of the pharmacist on the unit may also benefit from review as this appeared to be limited with little medicines management input.

Further Consideration

1 Although sisters on the critical care unit were involved in training, the practice development nurse role had been reduced and was no longer actively involved in delivering training and education. This arrangement may benefit from review, including consideration of the potential for Trust-wide training and education of staff.

2 Middle grade staffing at nights and weekends was covering the critical care unit and other areas of the hospital. The workload involved should be kept under review to ensure this arrangement is satisfactory.

3 Several of the guidelines and policies had not been ratified or were not in a standard Trust format. It will be important to ensure that these are ratified and to monitor that they have been fully implemented. There may be the potential to combine some of the policies, for example, those relating to transfers.

Good Practice

1 IT was used well to ensure the critical care unit was aware of critically ill patients who were on wards.

SHREWSBURY & TELFORD HOSPITAL NHS TRUST – ROYAL SHREWSBURY HOSPITAL

General Comments and Achievements

This was a busy combined critical care unit and high dependency unit. Nursing staffing levels were adequate although there was not always a supernumerary nurse / coordinator. The outreach team was enthusiastic and

busy. Leadership and team-working were good. There were good information sheets. Infection rates were low, which was a tribute to the care given by staff as preventing infections in the cramped facilities (see below) must have been difficult. Survival rates were also good. The dedication of staff working in such cramped conditions should be commended.

Immediate Risk:

1 At night, middle grade medical staff were covering maternity services and critical care. This was considered to be an immediate risk because of the number and complexity of deliveries at Royal Shrewsbury Hospital and the likelihood that middle grade staff would be involved, and so not available to the critical care service.

Concerns

1 The Critical Care Unit and High Dependency Unit (HDU) were cramped and did not meet the expected Quality Standards, especially those relating to air changes per hour, space per bed and oxygen and suction outlets per bed on the HDU. A two-year old report on ventilation in the Critical Care Unit was available but there was no evidence that action had been taken on the issues raised. Storage space was inadequate.

2 General anaesthetists were on call for the critical care unit at weekends and there was no evidence that they were undertaking Continuing Professional Development of relevance to their work on the critical care unit.

3 The outreach service was not available after 6pm on weekdays and 5pm at weekends.

Further Consideration

1 Multi-disciplinary ward rounds did not take place and the introduction of these should be considered.

2 No practice development nurse was available. This arrangement may benefit from review, including consideration of the potential for Trust-wide training and education of staff.

3 Several of the guidelines and policies had not been ratified or were not in a standard Trust format. It will be important to ensure that these are ratified and to monitor that they have been fully implemented. There may be the potential to combine some of the policies, for example, those relating to transfers.

Good Practice

1 A good induction programme was in place with good arrangements for mentorship.

Commissioning: No specific commissioning issues were identified.

DUDLEY HEALTH ECONOMY:

DUDLEY GROUP OF HOSPITALS NHS FOUNDATION TRUST

CRITICAL CARE UNIT, SURGICAL AND MEDICAL HIGH DEPENDENCY UNITS

General Comments and Achievements

Critical care services were well-organised and well-managed. Bed capacity was used flexibly to ensure that patients needing critical care were not transferred out of the hospital. Good progress had been made since the pilot peer review visit, in particular, ensuring that the medical high dependency unit was integrated with the critical care unit. This process has been helped by the appointment of a consult physician with training in intensive care medicine.

Immediate Risk: None

Concerns

1 The medical high dependency unit was not yet collecting and submitting ICNARC or CCMDS data. CCMDS data should be collected for all level 2 areas.

Further Consideration

1 It may be helpful to review the timings of consultant rounds of both the surgical and medical high dependency units with two aims, a) enabling capacity management and timely discharge from high dependency areas to wards and b) enabling multi-disciplinary input into discussions about the care of patients, including from allied health professionals. Other ways of achieving these aims should also be considered, for example, nurse-led discharge.

2 Several guidelines expected by the Quality Standards were not documented, were out of date, or did not appear to be in a Trust-wide format. The governance arrangements covering policies and procedures may benefit from review.

3 The critical care minimum dataset was being collected but not yet used for commissioning the service. Using the MDS may be a useful development of commissioning arrangements for critical care services.

Good Practice

1 The non-invasive ventilation pathway was very well organised with needs assessed early in the pathway and a very stream-lined process for the management of patients with chronic diseases.

2 The 'Care View' IT system gave access to all relevant information about patients and included electronic prescribing. As a result, the unit's records were almost 'paperless'.

Commissioning: The critical care minimum dataset was being collected but not yet used for commissioning the service. Using the MDS may be a useful development of commissioning arrangements for critical care services.

HEART OF BIRMINGHAM AND SANDWELL HEALTH ECONOMIES:

SANDWELL & WEST BIRMINGHAM HOSPITALS NHS TRUST

TRUST-WIDE

Good Practice

1 The Follow up Support Service (FUSS) was excellent and active at both sites of the Trust (Sandwell and City). This service was over and above what most hospitals offer to patients following discharge from critical care services. It was a well run nurse-led service that offered support to patients and their relatives following discharge from critical care services and, ultimately, hospital. The service focused on the long term physical and psychological support and rehabilitation of patients, following a period of critical illness. Regular forums were also held for patients and their families to visit the critical care department to discuss and share with others their critical care experience. Staff had found that patients were returning and using this forum many years after discharge, thereby offering support to others going through the same experience.

CITY HOSPITAL

General Comments and Achievements

This was a friendly, well-managed unit. There was good teamwork and links with services at Sandwell Hospital were developing. Nursing staff were working across both sites as required for the number of patients. Mortality rates were low. Multi-disciplinary working was well-developed. The atmosphere on the unit was very calm, friendly, helpful and patient-centred.

Concerns

1 Occupancy levels were unacceptably high. Occupancy of the unit at City Hospital was reported as over 99%. This level of occupancy is not sustainable, places considerable pressure on staff and is likely to lead to higher rates of non-clinical transfers and infection.

2 A high proportion of discharges were taking place late in the day. Discharges should take place during normal working hours whenever possible.

Further Consideration

1 Some guidelines and protocols were different from those at Sandwell Hospital. Reviewers suggested that standardising cross-site guidelines should be completed as soon as possible to support staff movement between the two services.

2 The entrance door to the unit was too heavy to allow easy movement of patients and staff.

Good Practice

1 A good outreach service was available. Staff were enthusiastic and it was a well-run, organised service. The outreach team had embedded an Early Warning Scoring system across the hospital. Staff were keen to teach and train ward staff and had targeted particular specialities or wards and developed appropriate competencies. The team was visual throughout the Hospital and was well-supported by the critical care team. The workforce who worked flexibly, including cross-site working to ensure gaps in the service due to sickness or high patient dependency were addressed.

2 The pathway for patients needing non-invasive ventilation was very good. The Outreach Team facilitated and provided ongoing support in the use of NIV outside of the Critical Care.

3 The professional development department provided a good level of education and training. The induction programme for doctors was good. A comprehensive development pathway was also available for nursing staff. Links with local University meant that staff could earn academic credits for the work completed in-house.

SANDWELL HOSPITAL

General Comments and Achievements

This was a friendly, well-managed unit. There was good teamwork and links with services at City Hospital were developing. Nursing staff were working across both sites as required for the number of patients. Mortality rates were low. Other achievements included the introduction of point of care testing for MRSA with results available within one hour. 24 hour outreach services were being piloted.

Immediate Risks: None

Concerns

1 Occupancy levels were unacceptably high. Occupancy of the unit at Sandwell Hospital was reported as 109%. This level of occupancy is not sustainable, places considerable pressure on staff and is likely to lead to higher rates of non-clinical transfers and infection.

2 A high proportion of discharges were taking place late in the day and patients were sometimes being discharged after 10pm. Discharges should take place during normal working hours whenever possible.

Further Consideration

1 Some guidelines and protocols were different from those at City Hospital. Reviewers suggested that standardising cross-site guidelines should be completed as soon as possible to support staff movement between the two services.

2 The 24/7 outreach service was being piloted. At the end of the pilot arrangements for continuing 24/7 access to outreach (in line with the Quality Standards) should be implemented.

Good Practice

1 Services for children and young people were particularly good. The arrangements for the admission of children and young people were clear and robust. The Practice Development Nurse had done a lot of work ensuring that all critical care unit staff had appropriate competences

Commissioning: No specific commissioning issues were identified.

WALSALL HEALTH ECONOMY:

WALSALL HOSPITALS NHS TRUST – MANOR HOSPITAL, WALSALL

General Comments and Achievements

The critical care service was staffed by a friendly committed team who were trying hard to provide good care in rather difficult cramped circumstances. The critical care unit had an electronic data management system which has been implemented this year. Nurse staffing levels were good and there was a robust training programme and detailed competencies for nursing staff development and progression. Over 50% of the nursing staff had critical care qualifications. Several consultants had been appointed relatively recently and the Clinical Lead for the critical care units had been in this role for only four months at the time of the visit. Staff were aware of the difficulties they faced. There was a seven bedded critical care unit, of which 5 beds were funded for level 3 care, and an eight-bedded high dependency unit.

Immediate Risks: None

Concerns

1 The critical care services at Walsall Hospitals NHS Trust were of serious concern for a combination of reasons:

a. The environment in the units was very poor. Bed spaces were too small for the care being provided and did not meet the expected standards for piped gas and oxygen, sockets, space and phones. Patients were occasionally being ventilated in the high dependency unit because of a lack of space elsewhere. Some ventilators were old, although there were plans to replace five ventilators in 2011.

b. There was no evidence of review of outcomes data for the units. Care bundle audits were undertaken on the critical care unit and there were tools for collecting data incorporated in the patient's medical record daily review charts. ICNARC Data was collected by a designated ICNARC audit clerk and submitted but no reports were available. There was little evidence of dissemination and review of results by individuals or the multidisciplinary team of any of the data collection or audit undertaken. ICNARC data and the minimum data set and care bundles audits were not collected for the high dependency unit

c. Links between the critical care services and Trust management and delivery mechanisms were not yet robust. The Critical Care Delivery Group had recently been re-formed and was not yet functioning effectively in ensuring that issues relating to critical care services were being addressed across the Trust. Membership and terms of reference of the group did not meet the recommendations in 'Comprehensive Critical Care'. The unit's Clinical Lead had been in this role for only four months. The nurse manager was in an acting capacity.

d. Occupancy levels on the Critical Care Unit were reported as averaging over 115%. This may be because occupancy was calculated on five beds whereas seven beds were available and could be used. No data were available on occupancy of the eight level two beds. Reviewers were told that discharges were often delayed and took place late in the day but no data were available on this issue. Accurate collection of data on occupancy, admissions and discharges is needed as a matter of urgency so that informed decisions can be taken about capacity and staffing required for critical care services for the Trust. Within the Trust's bed management arrangements, consideration should be given to prioritising discharges from the critical care units.

e. Many of the expected policies and procedures were not yet in place. Some work had taken place recently but the more recently-developed policies had not yet been ratified. Other policies were out of date. In particular, the admissions and discharge policies were in need of review.

f. The outreach service was available 7am to 5.30pm only. There was no rotation of staff between the Critical Care Unit and the outreach team. Arrangements for handover when outreach staff went off duty were not robust. Reviewers were told that the outreach bleep was left on the critical care unit but there was no formal handover of information about patients. The outreach team and Pain service was managed separately to the unit and had no general management links to the Critical Care Unit which may have contributed to the perceived isolation of the team from other critical care services.

Further Considerations

1 The use of LEAN / productive ward approaches may be helpful to ensure that all the space within the unit is used to best effect and, in particular, for ensuring that unnecessary items are not stored in visible areas. (NB. This does not detract from the concern that the unit was too small. It may, however, help in the short term.)

2 Although consultant staffing of the units was good (nine consultants), consultants were providing the middle grade tier at weekends. The units had one middle grade doctor and no junior medical staffing. Two consultants were therefore on duty at weekends. This approach to staffing the service may not be sustainable in anything other than the short-term.

3 Level 1 patients were regularly being cared for on the critical care unit but were cared for in a mixed sex environment and did not have access to a bathroom. Unless discharge of level 1 patients can be speeded up, compliance with 'same sex' guidance should be achieved.

Commissioning: No specific commissioning issues were identified.

BIRMINGHAM EAST & NORTH AND SOLIHULL HEALTH ECONOMIES

HEART OF ENGLAND NHS FOUNDATION TRUST

GOOD HOPE HOSPITAL

General Comments and Achievements

Good Hope Hospital had a separate Intensive Therapy Unit (ITU) and High Dependency Unit (HDU) immediately adjacent to each other. Critical care outreach was available at all times. Level 2 and 3 capacity was used flexibly. The service was provided by a cohesive team with a good approach to staff development. The facilities available at the time of the visit were cramped and did not meet the expected standards but there were plans for the units to move into a new facility in 2011. Staff were providing good care in difficult circumstances. The Trust's critical care services were starting to work more closely together

Immediate Risks: None

Concerns

1 Occupancy levels were averaging 93% which exceeded the expected standard of 85%. The number of non-clinical transfers had increased, with six transfers in the last 12 months. Discharges were often delayed and regularly took place late in the day. Patients needing level 2 and 3 critical care were also often being cared for outside the critical care unit because beds were not available.

2 Middle grade anaesthetic staff were covering critical care, obstetrics and theatres at night. As a result, a middle grade doctor was not always immediately available to the critical care service. Consultants were undertaking resident night shifts when middle grade medical staff were not available or when the unit was busy. This was not a sustainable way of staffing the service and may impact on the supervision available for junior staff.

3 At the time of the visit the unit was cramped and did not meet the expected standards for critical care facilities. There were, however, plans for the unit to move to a new facility in 2011.

Further Consideration

1 Nursing staff were undertaking pharmacy ordering and 'topping up' which may not be an appropriate use of their time.

2 Multi-disciplinary ward rounds were not taking place. Pharmacy, dietetic and physiotherapy staff did separate rounds and had no input into the medical and nursing round.

3 It may be helpful for nursing staff to consider undertaking a nurse prescribing course.

4 The Outreach Service collected activity data but there was little evidence of this information being used to support the management of the service.

5 Physiotherapy service support to the Unit may benefit from review.

Good Practice

1 Very good follow up of patients on long-term ventilation was provided by the critical care service, including a home visit by a consultant intensivist.

2 A good central venous catheter system was in place supported by clear guidelines and good training and supervision.

BIRMINGHAM HEARTLANDS HOSPITAL

General Comments and Achievements

Birmingham Heartlands Hospital ITU and HDU facilities were on separate floors and staffed jointly. Critical care outreach was available at all times. Level 2 and 3 capacity was used flexibly. The service was provided by a cohesive team with a good approach to staff development. Robust nurse training programmes were in place. Policies and guidelines were clear and comprehensive. Staff should be commended for providing high quality care in cramped and unsuitable facilities. The Trust's critical care services were starting to work more closely together and there was particular emphasis on joint working between the Birmingham Heartlands and Solihull units.

Immediate Risks: None

Concerns

1 Occupancy levels were on the ITU were averaging 93% and on the HDU 88%. Both exceeded the expected standard of 85%. Discharges were often delayed and regularly took place late in the day. Reviewers were told of some patients needing level 1 care who had to wait several days before a bed became available. Staff reported considerable difficulty in getting patients discharged from the unit. Patients needing level 2 and 3 critical care were often cared for outside the critical care unit because beds were not available. Two recovery beds were regularly used for patients needing critical care and other recovery beds were used as well when the unit was busy.

2 Facilities on both the ITU and HDU were unsuitable for the number of patients. Both units were cramped and did not meet the expected standards. Isolation facilities were not available. Air conditioning was not available on the high dependency unit. Patients' privacy and dignity was compromised for several reasons:

a. Noise levels were high and patients were issued with earplugs.

b. There were no toilets for patients on the HDU. Patients had to use commodes or facilities on the adjacent ward. Staff were reluctant to transport patients through the adjacent ward because of the risk of infection.

c. Many of the bed spaces did not have curtains and screens were used which did not provide adequate privacy.

d. Patients in adjacent beds could not get out of bed at the same time.

e. One room functioned as a staff room, relatives' room and office.

3 After 2pm and at nights one consultant intensivist covered both Birmingham Heartlands Hospital and Solihull Hospital.

4 Pharmacy and dietetic services did not have time allocated for their work on the unit. A pharmacy review had been undertaken approximately two years ago. Reviewers were told that this had identified several issues relating to pharmacy services for the critical care service but no action had been taken on the recommendations.

5 The thoracic HDU and non-invasive ventilation HDU at Birmingham Heartlands were not put forward for review even though these units were providing level 2 care. The Trust and commissioners should ensure that these units are meeting appropriate Quality Standards.

Further Consideration

1 The corridor leading to the HDU and some other parts of the units were cluttered. Clearing these areas may improve the 'feel' of the units although this would not resolve the underlying problem of a lack of space.

2 Staff wore theatre 'scrubs' which made it difficult for patients and relatives to identify different staff groups. It may be helpful to consider some way of identifying staff.

3 Cover for absences of physiotherapy staff was not in place.

Good Practice

1 Several aspects of the service were examples of good practice, including good documentation, the use of multi-disciplinary notes and the commitment to research and development.

SOLIHULL HOSPITAL

General Comments, Achievements and Good Practice

Solihull Hospital had a three-bedded critical care unit which could provide level 2 or level 3 care. Critical care outreach was available at all times although this service was withdrawn if additional nursing staff were needed at Birmingham Heartlands Hospital. The service was provided by a cohesive team with a good approach to staff development. The Trust's critical care services were starting to work more closely together and there was particular emphasis on joint working between the Birmingham Heartlands and Solihull units.

Immediate Risks: None

Concerns

1 After 2pm and at nights one consultant intensivist covered both Birmingham Heartlands Hospital and Solihull Hospital.

2 The environment within the critical care unit did not meet expected standards. It was small and there were no isolation facilities. The patients' toilet was shared with the adjacent ward.

Further Consideration

1 Critical care staff were clear that when the outreach nurse was needed to support services at Heartlands Hospital the registrar would, in practice, cover the outreach service. The Medical Admissions Unit was not aware of this arrangement and other wards may be in the same position. It may be helpful to communicate again the arrangements for supporting wards when the outreach nurse is not available. More frequent communication of the criteria for admission to the critical care unit to referring teams may be helpful.

Commissioning:

Commissioners should be actively involved in discussions about critical care capacity at Birmingham Heartlands Hospital, including whether existing capacity is being used most appropriately and whether existing capacity is sufficient.

APPENDIX 1 VISIT DATES

Health Economy	Acute Trust	Visit dates 2010
South Warwickshire	South Warwickshire NHS Foundation Trust	11 & 12 May
North Warwickshire	George Eliot Hospital NHS Trust	20 May
Herefordshire	Hereford Hospitals NHS Trust	16 & 17 June
Worcestershire	Worcester Acute Hospitals NHS Trust	22 & 23 June
South Staffordshire (West) Locality	Mid Staffordshire NHS Foundation Trust	30 June
North Staffordshire	University Hospital of North Staffordshire NHS Trust	7 & 8 July
South Staffordshire (East) Locality	Burton Hospitals NHS Trust	14 July
Coventry and Rugby	University Hospitals Coventry & Warwickshire NHS Trust	7 & 8 September
Wolverhampton	Royal Wolverhampton Hospitals NHS Trust	22 & 23 September
Shropshire	Shrewsbury & Telford NHS Trust	28 & 29 September
Dudley	Dudley Group of Hospitals NHS Trust	6 October
Heart of Birmingham and Sandwell	Sandwell & West Birmingham Hospitals NHS Trust	13 & 14 October
Walsall	Walsall Hospitals NHS Trust	19 October
Birmingham East & North and Solihull	Heart of England Foundation Trust	16 & 17 November