SOUTH LONDON ADULT CRITICAL CARE OPERATIONAL DELIVERY NETWORK

Peer Review Report

Intensive Care Unit, Queen Elizabeth Hospital, Woolwich

Date: 8th February 2017

Acknowledgements

The South London Adult Critical Care Operational Delivery Network would like to thank all the healthcare professionals at Queen Elizabeth Hospital Woolwich for their support and co-operation with this peer review of adult critical care service. The network would also like to thank those who volunteered to be part of the peer review panel.

Contents **Page number:**

Foreword

The South London Critical Care Operational Delivery Network (SLACCODN) is an NHS Operational Delivery Network (ODN) functioning as the interface between commissioner and provider organisations. As part of the NHS structure for ensuring delivery of quality outcomes, our role is to provide impartial clinical advice and expertise through clinical collaboration, for both providers and commissioners, to identity gaps/issues in service provision and to ultimately develop equitable high standards for critically ill patients where possible.

The ODN Memorandum of Understanding provides a clear governance assurance process in line with national guidance to support this function, and outlines the key roles and responsibilities of all providers who deliver critical care services; one of these is for the ODN to provide assurance that its member organisations are complying with related national and best practice standards. The peer review has benchmarked services against the professional standards laid out in the critical care service specification standards (D16) 2015.

Executive Summary

The peer review process involved the panel reviewing evidence submitted in advance of the visit, spending the day visiting the Unit, interviewing various members of the multidisciplinary team, patients and visitors, as well as speaking to members of the Outreach team, a recent patient of the Unit and service users including medical registrars and the Trust resuscitation officer. We also considered the results of the Unit's 360° feedback survey.

The peer review team was encouraged by the level of co-operation and support offered by the nursing staff and allied health professionals at the critical care unit at Queen Elizabeth Hospital. The review provided a valuable learning experience for the peer review team and it is hoped that the recommendations contained within this report are helpful for the unit to improve their critical care services.

There was clear evidence of teamwork, communication and strong leadership in the critical care nursing team. The physiotherapy team has worked hard to achieve their current standard, despite limited resources. The unit has good infection control rates according to ICNARC reports.

However, the review team felt that there were some significant concerns which are listed in brief below:

1. High patient to consultant ratio within the unit. On the day of the visit there were 19 patients and only 1 consultant, exceeding the recommended ratio of between 1:8 and 1:15. It was apparent that this is a consistent issue with no clear recognition of the need for extra consultant input, nor any plans to address this.

2. Long term consultant vacancies, with only 3.5 WTE in post, resulting in current staff working internal locums to fill the gaps.

3. Complete lack of medical leadership. There is no clinical lead at the Woolwich site. The Clinical Director is based at the Lewisham site, and has no regular clinical input at the Woolwich site. There are no regular meetings where all the consultants discuss the care of patients, development of the unit or future strategy regarding bed base, patient case load, recruitment, standards or guidelines. The Clinical Director has recently stood down and no other consultant has applied for the role. The plan is for a nurse to take over as CD, and a clinical lead to be appointed at each site. However there is no job description for this role and it was generally accepted that they will be unpaid roles.

4. Inadequate clinical governance structure. Governance meetings happen alternate months, but it was clear that there is inconsistent attendance and contribution from the consultants. M&M meetings were well organised but occur only every 3 months and only discuss outliers highlighted by the quarterly ICNARC report. It was unclear

that any actions created by any of the governance meetings were completed or fed back or resulted in any change to practice.

5. Lack of any MDT meetings to discuss patients' care and progress or any difficult decisions.

6. Lack of clear handover process. A formal junior doctors handover had only recently been introduced. There was no set process for this or any clear requirement for consultants to be involved. Consultants do a 3 or 4 day block of on call for the unit. There was no handover between consultants except on an ad hoc basis.

7. In the wider hospital, there are a high number of peri-arrest calls (60-80 per month), suggesting that the escalation pathway for deteriorating patients is ineffective and patients are not being identified early enough and appropriate interventions are not being made in a timely fashion. It was reported that frequently the ward teams are not alerted to high NEWS scores until the score reaches 9.

8. The Outreach team does not sit within the critical care directorate, they are part of the site management team. Only 2 out of 12 nurses on the outreach team had critical care training. There is no consultant input to the outreach team.

9. There are a high number of patients on NIV in the wider hospital with varying reports of up to 18-24 NIV machines available for use on the wards.

10. There was no clear clinical leadership of the identification of the deteriorating patient, and no ownership of the care of deteriorating patients in the wider hospital. Whilst it was reported that there was a vital signs policy in place, there was no knowledge of any monitoring of compliance with that policy or audit of patients that had not been escalated in a timely fashion according to policy.

11. It was reported by ward teams that younger fitter patients with single organ (usually respiratory) failure, would often not be admitted to the critical care unit until in multi organ failure due to pressure on bed availability.

12. In January 2017 there were 16 non-clinical transfers due to lack of critical care capacity at the Woolwich site. Whilst the unit had expanded into a 19th bed, there were no clear plans on how these capacity issues were going to be addressed or mitigated going forward.

13. Poor incident reporting culture. Two members of staff (one internal to unit, one external to unit) reported being approached by their respective managers after submitting incident forms. One was told 'she had created a lot of work'. The other was told she should have said something at the time to address the issue rather than submitting an incident form.

14. Lack of ENT support. The ENT surgeons are based at the Lewisham site, and refuse to attend the Woolwich site. Therefore critical care patients requiring surgical tracheostomy have to be transferred to Lewisham for their operation.

15. There was no clinical ownership of the Unit risk register, which sits within the surgical directorate risk register. It was not regularly reviewed and the wider team were not aware of the top 3 clinical risks.

16. There is a problem with delayed discharges that affects patient flow and decreases the efficiency of the service. The extent of the delayed discharge issue is evident from the data found in NHS England's Specialist Services Quality Dashboard (included in appendix 5).

History

The Queen Elizabeth Hospital is located on Woolwich Common in London, England, was opened in March 2001 and serves patients from the Royal Borough of Greenwich and the London Borough of Bexley. The hospital was built to accommodate the services previously provided at Greenwich District Hospital and Brook General Hospital, and is a Private Finance Initiative hospital. In April 2009, the hospital was part of a merger with Queen Mary's Sidcup NHS Trust and Bromley Hospitals NHS Trust to form South London Healthcare NHS Trust.

In July 2012, Andrew Lansley, Secretary of State for Health, announced that the South London Healthcare Trust, formed in 2009 was to go into special measures due its financial difficulties. On 1 October 2013, QEH merged with Lewisham announced Healthcare NHS Trust to form Lewisham and Greenwich NHS Trust in the confidence that the new Trust will be better able to meet the challenges as part of a larger organization.

The Critical Care Unit at QEH had 8 beds when it opened in 2001. As a result of the mergers, and associated increased workload, it has expanded into adjacent ward areas and now runs 18 beds and an additional 19th bed as part of an escalation area. Patients are admitted to the Critical Care Unit from a number of sources including the emergency department, the operating theatre and in-patient wards. They come with a range of conditions including sepsis, acute kidney injury, cardiac arrest or respiratory failure.

Introduction:

The South London Critical Care Network has introduced a peer review programme for critical care units in South London, based on the model used by other successful peer review schemes by networks in other parts of the country. The purpose of this review programme is to promote and support excellence of care for critically ill patients by professionals working within this specialist area.

This process will identify gaps against the Critical Care Service Specification Standards (D16) that can be used by organisations to provide valuable information on the provision and state of critical care services delivered by the units in the network. In this way results can help NHS providers identify good practice, future improvement areas and prioritise areas for action for its critical care services.

The process is intended to be a collaborative one, where knowledge and ideas can be shared in order to improve critical care services in a spirit of co-operation. The responsibility for acting upon any recommendation made by the peer review team lies with the trust board. The peer review team is composed of experienced multi-disciplinary professionals with expertise in critical care who face similar challenges in their day-to-day work. Therefore, peer review has added advantages over reviews/inspections carry out by other NHS bodies.

Aim

The aim of the peer review is to evaluate the critical care service against the D16 service specification standards. The result of the review intend to help the critical care to identify the areas where the service does not fully meet the specific standards and where further improvement and investment is required. In this way, the result can help the NHS provider to identify good practise, future improvement areas and to prioritise areas for immediate action for its critical care service.

Methodology:

The peer review is conducted by an experienced multi-disciplinary team consisting of critical care consultants, senior nursing staff and allied health professionals.

The unit is asked to carry out a self-assessment against the D16 Critical Care Service Specification Standards at least three weeks prior to the peer review. The unit is also asked to provide email contacts of colleagues who work within the unit (internal colleagues) and those who use the critical care services (external colleagues). Using an external company, the network carries out a 360 feedback review, where internal and external staff are invited to provide feedback on specific questions related to the Critical Care Services. The 360 review report may be found in **appendix 1.**

The unit is also required to provide ICNARC data, the Critical Care Dashboard, patient and relative feedback report, copy of critical care risk register and minutes from recent clinical governance and mortality and morbidity meetings.

On the day of the review, the review panel followed an agenda which can be found in **appendix 2.**

From 2pm on the day, a feedback session took place with senior members of the critical care team and the divisional leads present. The feedback session was based on the self-assessment provided by the unit. The discussion focussed on the evidence presented to support the Unit's self-assessment and any gaps found by the peer review team. The final assessment includes the unit's assessment of their compliance with the standards, identified by a black cross (X) on the document, and the peer review panel's assessment of the extent of the unit's compliance with the standards. The latter is shown in red (X), with comments also in red. These can be found in appendix 4.

Following the visit, a draft report was compiled by the network manager and circulated to the peer review panel and the critical care clinical leads for ratification prior to issuing the final report.

Review Summary:

The peer review team was encouraged by the level of co-operation and support offered by the nursing staff and allied health professionals at the critical care unit at Queen Elizabeth Hospital. The review provided a valuable learning experience for the peer review team and it is hoped that the recommendations contained within this report are helpful for the unit to improve their critical care services.

This report aims to support the unit to identify the gaps in critical care service, areas where the service does not fully meet specific standards, and where further work and investment is required.

There was clear evidence of teamwork, communication and strong leadership in the critical care nursing team. The physiotherapy team has worked hard to achieve their current standard, despite limited resources. The unit has good infection control rates according to ICNARC reports, shown in figure 1 below.

Figure 1: Unit-acquired infections in blood (ICNARC Quarterly Quality Report 1 Apr 16- 30 Sep 16)

The unit does however; face a number of inherent challenges, such as environmental issues like the unit's layout and lack of available storage space. Staffing issues; such as medical staffing (long standing consultant shortage), and difficulties recruiting band 6 nurses have also presented a challenge. The Trust has on-going issues with delayed discharges from critical care. There are a number of acutely unwell patients who may be in need of a critical care bed being treated in non-critical care areas in the hospital, such as the Acute Medicine Unit, respiratory ward and Coronary Care Unit. The Critical Care Unit itself has an elevated standardised mortality ratio as shown in figure 2 below.

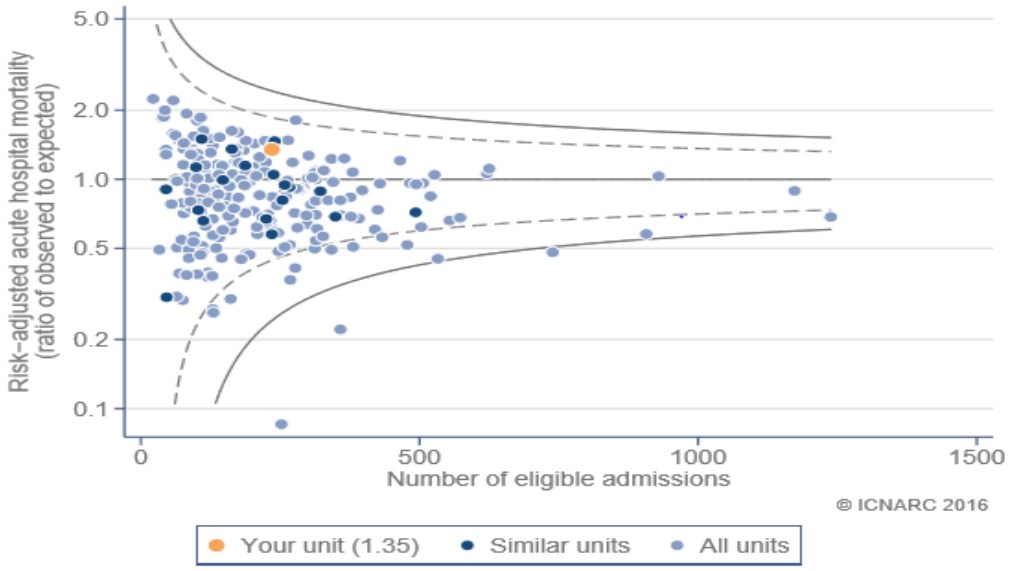

Figure 2 .Risk Adjusted acute Hospital Mortality –predicated risk <20% (ICNARC Quarterly Quality Report 1 Apr 16- 30 Sep 16)

The peer review team has sought to present a detailed account of their findings, taking into account the inherent challenges faced by the unit, and provide a number of constructive recommendations for improvement.

The report is mainly based upon the D16 Critical Care Service Specification Standards and in the following report, headings in bold are the standards, and the text below the peer reviewers' findings on the unit's compliance with the specification.

1. Facilities:

New facilities must comply with the 2013 NHS estate guidance HBN 04/02.

The review team found that the existing facilities do not comply with HBN 04-02 standards. Details of the Health Building Note can be accessed by clicking the link below.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/147865/HBN_04-02_Final.pdf

The QEH Critical care unit was built in the 1990s. The unit treated around 700 critically ill patients yearly, however these numbers have been increasing in recent years and in 2016 there were around 900 patients treated. The unit presented that there have been increased lengths of stay for patients, and an increased standardised mortality ratio (SMR). This was believed by the unit to be due to high acuity and high levels of co-morbidities in the patient population in the unit's geographical area.

The layout of the unit raised some concerns for the review team. There are 3 main bays and 6 side rooms, making it difficult for the nursing shift leader to maintain an overview of all the patients. As the Unit has expanded into adjacent vacated ward bays, rather than purpose built ICU bays, none of the bays have enough space for the number of beds. The Unit has reduced the number of beds in each bay but the areas remain cramped.

The bed spaces were undersized, which raises concerns about patient privacy and dignity, and may have a negative impact on infection control practices. However, we recognise the unit's infection rate in the ICNARC figures is better than its peers. There are 6 side rooms available to isolate patients, which the review team noted is better than many similar units.

The review team would suggest that the unit compares its facilities with the standard and records deficiencies in the trust risk register.

There are issues with amount of storage space available; the review team noted there was small room which was used for storage and which used to be a bathroom. The room had a bath in the middle which had not been removed in the two year period in which room had been used for storage, despite requests to remove it. QEH is a Private Finance Initiative hospital.

2. Equipment:

The provider must ensure that all equipment conforms to the relevant safety standards and is regularly serviced and that staff are appropriately trained, competent and familiar with their use. The provider must have a programme in place for the routine replacement of capital equipment.

Some of the equipment checked met safety requirements; however the peer review team did not check a large sample of equipment.

Oxygen cylinders were not stored safely in the main store room. This is potentially hazardous. There was observed to be an oxygen cylinder leaning on a wall, which presents a safety issue. The unit should store oxygen cylinders in a safety rack.

It was noted that the monitoring equipment used is old and will need replacement.

A large amount of equipment was found stored in corridors, which could be hazardous in the event that an evacuation is required. On the review day, a fire in the paediatric ward necessitated an evacuation of that ward. The review team were mindful of the disruption this was causing to the wider hospital that day.

3. Workforce:

Medical staffing:

Once admitted to critical care, patient care must be led by consultant in intensive care medicine (as defined by faculty of intensive care medicine). Medical staffing must conform to the standards described in GPICS.

The GPICS Standards are as follows: The consultant/patient ratio must not exceed a range between 1:8 to 1:15 and the ICU resident/patient ratio should not exceed 1:8.

The Guidelines for the Provision of Intensive Care Services (GPICS) can be accessed via the link below.

https://www.ficm.ac.uk/sites/default/files/GPICS%20%20Ed.1%20(2015)_0.pdf

The unit has a high patient to consultant ratio. On the day of the visit there were 19 patients and only 1 consultant, exceeding the recommended ratio of between 1:8 and 1:15. This reportedly increases to 20 beds at times.

The perception on the unit was that there had been a significant increase in the workload for medical team. This was felt to be a serious issue by review team.

There are currently 3.5 WTE consultants. The consultants in post are doing extra locum shifts to ensure cover for the unit. Best practice suggests a minimum 1 in 8 rota is required to provide adequate 7 day consultant cover in a sustainable manner. This may need to be increased if more than 1 consultant is required on duty each day. The team felt that at least 2 consultants should be on duty each day to cover the number of patients in the Unit and to provide support to the Outreach team.

There are enough junior doctors covering the rota for February - August 2017. As part of winter pressures, an extra (locum) junior doctor has been rota'd on each night shift. There was general agreement by all staff groups in the unit that this was essential and should be continued throughout the year. GPICS standards suggest a minimum of 1 junior doctor per 8 patients, and the review team would recommend this is adhered to, all year round.

The unit has grown from 8 beds in 2001, to the 19 it has today, without any significant increase in resources over the time period.

Each provider must have designated clinical director, lead consultant and critical care matron

The review team felt that clinical leadership at the Woolwich site was not optimally organised. The Clinical Director for critical care is based at the Lewisham site, and

has no regular clinical input at Woolwich. There are no regular meetings where all the consultants discuss the care of patients, development of the unit or future strategy regarding bed base, patient case load, recruitment, standards or guidelines.

The Clinical Director has recently resigned and no other consultant has applied for the role. The plan is for a nurse to take over as CD, and a clinical lead to be appointed at each site however the plan is for these to be unpaid posts and there are no current role descriptions.

The review team had serious concerns regarding the lack of clear medical leadership on the Unit. It was apparent that there were longstanding cultural issues that were preventing appropriate development of the medical model. Communication between the consultants was reportedly inconsistent. There were no planned handover conversations, or MDT discussions to agree plans for difficult medical decisions.

Consultants in ICU must be immediately available 24/7, be able to attend within 30 minutes and take twice daily ward rounds.

Feedback from the ICU teams indicate that the unit is compliant with this standard with consultants readily accessible day and night and willing to come in as necessary.

The perception on the unit was that there had been a significant increase in activity in recent years and subsequent increase in workload for medical team. This was felt to be a serious issue by review team as there did not appear to be a plan to address the consultant shortfall.

It is also reported that there are issues relating to peer support & cohesion within medical team, due to reduced staffing level and workload issues.

The junior medical staff on the general wards felt that the possibility of getting help from senior ICU medical staff was dependent on which consultant was on duty at the time.

Consultant led multi-disciplinary clinical ward rounds within intensive care must occur every day (including weekends and national holidays)

There was no pharmacist or physiotherapist present on the ward round. With the current level of AHP resource, it is felt that they cannot attend the ward round and fulfil other their other duties. The physiotherapists also cover the general wards.

The physiotherapy team felt that receptiveness to their input varied from consultant to consultant.

The level of care varies over the weekend and national holidays with physiotherapy meeting a minimum of 80% of its targets.

The review team did not observe any patient examinations to take place during the ward round.

The teaching on the unit happens variably, sometimes twice a week, with no consistency.

Ward rounds must have attendance or daily input from nursing, microbiology, pharmacy, physiotherapy and dietetics:

There is a formal Microbiology ward round 3 times a week with the team available by phone on other days.

Microbiology & Pharmacy are available by phone at weekends.

There is regular SALT & dietetics input on Monday to Friday.

Nursing staffing

Level 3 patients have 1:1 nursing ratios for direct patient care

The unit meets this standard for level 3 patients (1:1),

Level 2 patients have 1:2 nursing ratios for direct patient care

The Unit meets this standard, although it was noted that with so many side rooms, break cover may compromise the ability to maintain this standard at all times. Level 2 patients in side rooms may still require 1:1 nursing due to the risk associated with accidental disconnection of arterial lines in confused or delirious patients.

A minimum of 50% of nursing staff must have post-registration award in critical care nursing:

This standard is currently met. Some concern was expressed over reduction of educational funds and whether this standard can be met in future. The review team is aware that this issue affects units nationally, and is not a specific local issue. The unit follows Step One national competencies.

All registered nursing staff supplied by bank/agency must be able to provide documentary evidence of their competence to practice within a critical care environment

Agency/bank staff have a good induction pathway. The unit tends to use regularly booked agency staff that have experience of the unit. The unit usually meets the standard of bank/agency staff not exceeding 20% of a shift.

The culture within the nursing team at Queen Elizabeth Hospital is positive. They are a well-integrated team and the nursing staff spoken to by the review team all spoke highly of the unit. They expressed their happiness to work there, and belief that everyone was treated equally and given development opportunities. They are

allowed flexible shift patterns and their personal circumstances are taken into account.

Despite lockable storage at every bedspace, the team found that a number of infusions (syringes) were made up in advance and stored at the bedside. The team also did not observe syringe changes being double-checked with the patient drug charts and wristband at the time.

Pharmacy staffing:

Pharmacy services should be in accordance with GPICS (minimum 0.1 WTE per level 3 bed)

There is one pharmacist for the unit, who has responsibilities on other wards in addition to critical care.

There is a lack of guidelines for pharmacy, only 7 critical care guidelines were identified. These guidelines are not dated and do not carry review dates. The trust is in the process of developing cross-site guidelines and has made the introduction of more guidelines in critical care a priority. Non-Critical Care specific guidelines are also used, and are used across the site.

The unit appears to have a low rate of medicines incident reports for its size which may indicate underreporting.

The prescription practice on the unit was outdated. There is a plan to introduce electronic prescription, which is expected to be rolled out sometime in 2018.

The CD keys on the unit are not kept separate from other drug cupboard keys. The unit's response to this was that it is difficult to separate the two owing to the layout of the unit.

4.0 Clinical Governance:

Critical care services must have an effective clinical governance platform and robust data collection system. This must encompass presence of an adverse incident reporting system and evidence.

The review team noted good structure to M&M meetings & clinical governance meetings. However, there was a lack of clarity regarding ownership of issues/actions discussed at clinical governance meetings. For example, from the clinical governance meeting in November 2016, the minutes mentioned a discussion of an escalation policy for delayed discharges and ward bed policy. The review team were unable to find any evidence of action regarding this.

M&M meetings, while well-organised, occur only once every three months and not all deaths are discussed at these meetings.

Staff understand the incident reporting system. The Woolwich unit has not had any serious incidents in the past year. A serious incident which happened at Lewisham is used for training and education purposes. Nursing staff had to write two reflective analyses of the incident, which the review team felt was useful.

A comment in the 360 feedback report suggested that sometimes when there is a serious clinical incident, the consultants involved/responsible may not participate in the review.

Two reports raise questions over the incident reporting culture. Two members of staff (one internal to unit, one external to unit) reported being approached by their respective managers after submitting incident forms. The internal staff member completed an incident report which was not picked up for four weeks; a manager told them they should have communicated about the incident at the time it happened. The other was told by a non-critical care manager that her incident report had ‘created a lot of work’.

Participation in the National database for adult critical care, including publication of the nationally agreed dashboard (The standardised morality ratio is included in this dashboard)

The feedback system ensures that nursing staff receive feedback on a monthly basis and it was noted that information was put up in the staff room.

The review team was unsure how effectively information is communicated to medical staff.

Standardised handover procedures for medical and nursing staff, both for shift handovers and discharge of patients from critical care back to patient teams

There is a good structure for the handover system within the nursing team, which is updated at the end of every shift.

The medical handover observed by the review team tended to be unstructured and lacking in interaction.

There is no formal mechanism for handover of clinical information between consultants at changeover. This occurs only on an ad hoc basis.

The review team did not observe any patient examinations to take place during the ward round.

One former critical care patient was observed on a general ward. No discharge summary could be found in the medical notes despite unit policy requiring patients to have discharge summaries written prior to leaving the unit. Entries from ward teams commented that no discharge summary could be found.

Evidence of effective engagement with patients and their families and carers

The review team interviewed a small number of patients and relatives. Their feedback was positive. Those interviewed were happy with the level of communication and care received. Patients knew how to raise complaints and information on how to provide feedback was readily available in visitor's room.

Presence of a risk register and associated audit calendar which is regularly updated and acted upon.

There was no clinical ownership of the Unit risk register, which sits within the surgical directorate risk register. It was not regularly reviewed and the wider team were not aware of the top 3 clinical risks.

The issue of delayed discharges, due to difficulty in accessing ward beds, has been included on the risk register repeatedly. The Review team did not find evidence of Trust level action on the issue, although there was a discussion on prioritising critical care discharges in a similar way to A&E admissions.

Effective strategies to minimise hospital-acquired infections within critical care and publication of central venous catheter-related blood stream and infection rate

The ICNARC report from April 2016-September 2016 shows that unit's level of unit-acquired infections in blood is below the national average.

Unplanned readmission to Critical Care (ICU & HDU) within 48 hours of discharge.

The readmission rate to the unit is low based on the information submitted to ICNARC.

5.0 Admission to Critical care

The provider must implement a standardised approach to the detection and response to deteriorating health on general wards with reference to NICE 50.

The trust has an outreach team. According to the team, out of twelve nurses, only two are specifically ICU trained. Information provided by the Trust, however, stated that there are in fact, 8 Outreach Nurses out of the 12 with formal critical care qualifications. The 4 nurses on the team who do not, hold Advanced Assessment, Enhanced Clinical Assessment and ALS skills, and have critical care experience. This team is organisationally located under the Site Management Team rather than Critical Care and this was felt to present a barrier to the outreach team's interaction with, and access to, critical care. The review team felt that from a clinical and managerial perspective the outreach team ought to be part of critical care. It was felt that currently there is no real clinical leadership, or clarity regarding who is responsible for the outreach team. This is particularly relevant as there appears to be a high number of cardiac and peri-arrest calls on the wards.

General ward medical and nursing staff expressed concerns over access to critical care as there was felt to be significant variation in the treatment of referrals between ICU consultants. This is reflected in the 360 feedback and in further feedback from teams on site.

The peer review team visited the Acute Medicine Unit, Coronary Care Unit and respiratory ward. The Trust has 18-24 non-invasive ventilators available for use outside of critical care and several reports estimated that, as a minimum, 8-10 of these would be in use at any one time.

The respiratory ward team highlighted that there was a lack of Opti-flow (high flow nasal ventilation) machines available.

On the respiratory ward, there are two 4 bedded 'high acuity' bays (one male and one female), used for patients requiring non-invasive ventilation. These are staffed with one permanent experienced nurse per four patients. There were sometimes healthcare assistants in addition or a float member of staff, however this was not consistently the case.

It was reported by medical ward teams that younger fitter patients with single organ (usually respiratory) failure, were often not admitted to the critical care unit until they were in multi-organ failure. This was felt to be due to pressure on bed availability.

A high number of peri-arrest calls from ward areas were noted. Data provided by the resuscitation officer is presented below. The review team was concerned that this could reflect an ineffective escalation pathway for deteriorating patients on the wards.

Nov 2016	10 Arrests (Inc. 1 ITU, 1 Theatres) 61 Peri-arrests
Dec 2016	17 Arrests (Inc. 6 in ITU,1 in theatre,1 out of clinical area), 69 peri-arrests
Jan 2017	18 Arrests (Inc. 2 in ITU,1 in CCU,1 in Cath Lab,1 in OPD), 89 Peri Arrests

However, the trust's response to this is that the increased number of peri-arrests are due to increased awareness of the escalation policies. The spike of peri-arrests in January was attributed to the increased acuity of patients in QEH at the time.

It was reported that while escalation occurs at NEWS 8-9, with a peri-arrest call at NEWS 9, there is a suspicion of a large number of NEWS 6-8 patients who may not be escalated in a timely manner. In response to this, the Trust stated that the NEWS escalation policy requires urgent escalation and assessment by the critical care outreach team upon a NEWS score reaching 5. In the event of a patient being found in a ward area with a NEWS score of 9 and not being reviewed immediately, a clinical incident would have to be reported, according to trust policy.

The Trust participates in the national cardiac arrest audit. Figure 3 below shows the trusts position in the national audit. The full audit report from 01 April 2016 to 30 September 2016 is included in appendix 3. The resuscitation officer is currently starting an audit of peri-arrests.

Figure 3: National Cardiac Arrest Audit, Queen Elizabeth Hospital, 01 April 2016-30th September 2016

There is no structured on-going auditing of outreach services to review, for instance, the sources and appropriateness of referrals. During the feedback session, it was mentioned that there was a system in place to audit outreach activity, however there was no clear ownership of who is responsible for the audit outcomes or what that audit involved.

Admission to critical care must be timely and meet the needs of the patient. Admission must be within 4 hours from the decision to admit (unscheduled admissions) (Guidelines for provision of Intensive Care Services)

There was concern over timeliness of recognition and referral to critical care as noted above.

Ward teams suggest that, due to bed pressures, it is common for transfers to critical care to be delayed following decision to admit. In at least one case, this delay apparently extended overnight.

Feedback from the 360 review and from clinicians on the day of review indicated that clinical responses and admission criteria vary widely depending on which consultant is on call.

The transfer of a level 3 patient for comparable critical care at another acute hospital (non-clinical transfer) must be avoided.

There were 16 non-clinical transfers in January 2017, compared to just 5 non-clinical transfers for whole 2016. This was attributed to the increase in activity and on-going difficulties with delayed discharges and lack of ward beds.

The 360 feedback included comments that there is sometimes a lack of registrars to oversee patient transfers.

6.0 Discharges from critical care

6.1 Transfer from Critical care to a ward must be formalised within the handover. The handover must satisfy the requirements from NICE 50 and GPICS and include: A summary of critical care stay including diagnosis, treatment and changes to chronic therapies.

360 feedback respondents commented on inadequate discharge information on ward step-down from critical care. It was mentioned in feedback that handovers have lacked information or detail. Ward teams estimated that patients arrive on wards with absent or inadequate discharge information in around 75% of cases.

One patient who had been stepped down recently was observed not to have critical care discharge summary in his notes. Entries from hospital medical and nursing teams also noted that no discharge summary could be found. The unit policy requires the discharge summary to be completed prior discharging the patient to the ward.

6.2 Transfer from Critical Care to a ward should occur between the hours of 07:00 and 21:59.

From the ICNARC data, out of hours discharges appear to be common because of capacity issues. This issue should be included in the critical care risk register. Woolwich is a national outlier for discharges. See **appendix 5** for Specialised Services Quality Dashboards from NHS England generated on January 25, 2017.

7.0 Interdependencies with other services

Physical & rehabilitation needs and specific communication needs

There is no formalised written handover from ICU to ward teams regarding rehabilitation and communication needs because the same team oversees the patient on critical care and on the wards. The unit has undertaken to initiate a formal handover.

No specialised rehabilitation equipment is available or used within the unit.

On the 360 report, it indicates that the relationship with the SALT team has improved significantly in the last two years.

Follow-up requirements

The trust offers a follow-up service. This is currently run by nurses but without MDT input.

Each patient must have an assessment of their rehabilitation needs within 24 hours of their admission to critical care.

No formal record of patient assessments of rehabilitation needs was found by the review team. The team were informed that formal assessment is carried out on weekdays; however the standard is not met during the weekend.

Competent resident medical practitioner with advanced airway skills (anaesthetist/intensive care medicine)

Not every shift is covered by an airway-competent medical practitioner, but we were assured there are two anaesthetists on duty in the Trust who cover ICU airway emergencies if necessary.

Echocardiography

Echocardiography services are only available Monday-Friday 9-5.

Informatics support

The Trust has a newly designed intranet with relevant information for staff. There is a monthly dashboard for ICU and HDU, although some relevant information, such as hand hygiene, was missing.

ENT

The ENT service is based at the Lewisham site, and if a critical care patient requires a surgical tracheostomy, the patient must be transferred to Lewisham. The ENT team reportedly refuse to attend the Woolwich site. The review team felt that this is unacceptable and that there should be provision for critically ill patients to receive ENT input on site.

Psychological needs:

There is no psychologist available if needed.

Areas of Good Practice:

Welcoming staff, who despite overwhelming demand, remain patient centred and industrious.

Good patient feedback and satisfaction with care provided

Good dissemination of information within nursing team

Nursing team displays good teamwork and enthusiasm

Physiotherapy team working well in spite of limited resources

Low infection rates despite challenges with the environment

Areas of Concern:

The consultant to patient ratio was significantly low, presenting an area of serious concern.

Long term consultant vacancies

Lack of medical leadership

Inadequate clinical governance structure and lack of MDT meetings

On-going delayed discharge issues and increasing number of non-clinical transfers

High number of peri-arrest calls and inadequate escalation pathway for deteriorating patients on the ward

Lack of ownership and responsibility for audit of deteriorating patients on the ward

Outreach team not under critical care team and limited critical care experience within team

Wards will tolerate a high NEWS scores and sometimes not report until score reaches 9

Increased use of non-invasive ventilator support outside critical care

Lack of on-site ENT support

No clinical ownership of unit risk register

Lack of pharmacy guidelines

Recommendations:

As a Network, We would like to support and collaborate with the critical care department with the implementation of the following recommendations in a timely way due to our significant concerns. We feel obliged to share our concerns with the Executive Team at the Trust:

As a minimum, the current consultant vacancies should be filled, and the unit must meet the required standard of consultant to patient ratios.

Create a number of leadership roles for senior members of the MDT, with clearer and more transparent job description and responsibilities and accountability

Introduction of regular weekly clinical MDT meetings. Structured M&M meetings to include review of all deaths

Reduction in delayed discharges to improve patient flow and to increase efficiency of the service.

The outreach team should be managed by the critical care team, and include more critical care trained staff, and have consultant leadership and clinical input

The response to high NEWS scores should be managed better in order to detect the deteriorating patient earlier and reduce the number of peri-arrests on the wards.

A policy regarding non-invasive ventilation on the wards needs to be introduced, to reduce the number of seriously unwell patients outside critical care

Introduction of clinical guidelines for safe medication practices in critical care. Any medication incidents should be reported and acted upon regularly.

Any patients requiring ENT intervention in critical care, especially those in need of surgical tracheostomy, ought to have the provision to have it at the Woolwich site rather than a potentially hazardous transfer of a critically ill patient.

Complete review of the critical care risk register

Create a vision and strategy for the critical care service to deliver services that meet the national critical care service specification in a sustainable manner

A review of current Physiotherapy and SALT staffing levels in-line with GPICS Standards

Physiotherapy, Speech and Language Therapy, Dietetics Report

Governance and Quality

Staff members interviewed know how to raise incidents and feel empowered to do so should they need to. One comment of a manager suggesting that staff should deal with the incident at the time to ensure learning from it.

Staff members attend monthly governance meetings and feel involved in governance practice.

The Physiotherapy team have recently conducted an audit on the appropriateness of emergency call outs to their out of hours service, and the SALT department have conducted an audit on communication needs on Critical Care.

Patients should be screened within 24hrs of admission to Critical Care by a physiotherapist for rehabilitation needs. This is met 100% during Monday – Friday, and a minimum of 80% at weekends. This data is recorded by the Physiotherapy Team and is available at request.

SALT has a standard referral process for staff to request their service if a patient is appropriate for input, but will also accept verbal requests. All staff interviewed feel this is appropriate and that SALT will attend immediately to assess patients when requested.

Dietetics screen all patients admitted to Critical Care between Monday and Friday.

Continuation of care for all three services is via verbal handover to other teams, or direct follow up by the staff themselves. There is no documented rehabilitation pathway in place.

Staff members attend in-house and cross-site training within their select specialties, and have yearly competency updates as required.

Resource and Environment

The Critical Care physiotherapy team has a large caseload of patients outside of the Critical Care Unit, and so the level of care they can provide varies with overall caseload. The suggested ratio of 1 WTE Physiotherapist to four Level 3 beds is difficult to assess due to external caseload obligations. For the 19 bed unit there are

currently 5 full time physiotherapists (1 x Band 7, 2 x Band 6, 2 x Band 5), 1 technician (Band 4), and 1 assistant post (currently vacant, Band 3), but these staff spend at least half of the day attending to patients and duties outside of critical care. The majority of staff on the unit feel that the physiotherapy team is understaffed, and this is affecting the level of input they can have on the unit.

The suggested ratio of 0.05-0.1 WTE dietitians per ICU bed is met as there is currently 1 WTE band 7 Dietician for 19 beds.

While there is no agreed national guidance regarding the minimum staffing levels for SALT services in ICUs, local discussion and planning should ensure that there are sufficient SALT resources available to support the complex needs of these patients within a multi-professional context. On discussion with the SALT Team lead and other MDT members, there is a general consensus that the level of input and quality of care for SALT is of a very high standard, but that they would largely benefit from increased staffing provisions to allow this level of input to be sustainable. There is currently 0.7 WTE Band 7 SALT for 19 beds, covering a 6 day service.

The suggested ratio of 0.22 WTE Occupational Therapists per Critical Care bed is not met as the is currently no OT provision for the Critical Care unit.

There is a lack of seating equipment for daily patient use, and some seating is not currently usable/working.

- 7 chairs for 19 beds

There are good manual handling equipment provisions.

- 2 x Hoists
- Manual stand aids
- Electronic stand aid

No dedicated storage space is provided for any equipment, all stored in corridors.

No active rehabilitation equipment is currently used on Critical Care by the Physiotherapy team. Rehabilitation equipment has been trialed on the unit (Moto-Med), but there was not adequate Physiotherapy staffing levels to set up the equipment on a daily basis with each patient, therefore the equipment was not purchased.

No FEES machine available for bedside swallow assessments.

All appropriate patients are offered inline Passy Muir valves while ventilated to assist communication.

The SALT team has conducted an audit on communication needs on the Critical Care unit, which has led to the order of new simple communication devices for patients to use.

Is Good Care Provided?

There is a full physiotherapy service available Monday – Friday during normal working hours (08:30 – 16:30), with an on-call service for emergencies available outside of these hours. There is a reduced weekend service, which focuses on respiratory intervention with some rehabilitation as time allows. Once the caseload has been seen, the therapists finish and are off site, with 1 therapist on-call to attend any emergency situations that arise.

SALT offers a 6-day service, which allows early, timely, responsive assessment of patients that would usually have to wait 48hrs at a weekend. Bank holidays are also covered with SALT input. There are no out of hours protocols in place for swallow screening.

Dietetics provides a 5-day service, with a standardized 'Critical Care Enteral Feeding Protocol' to be followed in the absence of a qualified dietician.

All members of the Physiotherapy, SALT, and Dietetics team interviewed felt they could access courses if they were to request them, so long as they were appropriate to their practice.

The therapists interviewed felt general health promotion (smoking cessation, dietary advice etc.) was less appropriate on Critical Care, and if it was to be offered it would be at a later date on the general wards.

SALT reported a good relationship with family members, supporting them to communicate with the patients and encouraging regular engagement.

The physiotherapist interviewed stated that they engaged less with family on the Critical Care unit, and they were not encouraged to engage with the patient's rehabilitation program. Care plans are more 'staff-led'.

Are staff working as a Team and is the Service well led?

All three disciplines appear to have good team leadership and high levels of inter-disciplinary working and communication.

Therapists are not involved in the extubation process with patients, but are very much involved in the weaning of any patient with a tracheostomy. The lead

Physiotherapist has daily input to weaning plans, and some input with decannulations.
The Dietician provides advice on feeding plans daily at the Consultant-led ward rounds, and feels these plans are listened to and followed.

Trust swallow screens were terminated based on current research. They now use a 'Decision Making Tool' that has had positive feedback from staff members.

The Physiotherapy team does not attend the daily Consultant-led ward round as they currently do not have the staffing levels to allow for their attendance. In spite of this they feel that they are involved in MDT discussions, and feel able to approach all members of the MDT when they need to. They report that they feel valued as part of the MDT, however comments were made that while the team feel their opinion is valued, the degree to which it is followed depends on which consultant is in charge at the time.

SALT does not currently attend regular ward rounds on Critical Care, but may join intermittently for specific patients if required and time allows.

A dietician is present at the 9am ward round daily from Monday to Friday.

Pharmacy Report

Governance

Good governance processes are in place regarding regular controlled drug checks and safe storage of medications (including fridges) which were checked/audited on monthly basis by the ICU pharmacist and nurse in charge.

Medicines reconciliation is regularly completed on the ICU drug charts (as per NICE guidance). There was limited space provided on the drug chart to record medicine reconciliation.

Seven guidelines that were specific to ICU related medications that were available in a paper format at each the bedside. There was also a number of Trust wide guidelines related to medications (presumably available via the trust intranet although this was not verified). There appeared to be limited IT access at beside if guidelines need to be reviewed. BNF 69 opposed to latest 70 (edition) were available on the ward. With regards to the ICU specific guidelines it was not clear how frequently these were update or review by internal governance committees.

The ICU drug chart followed the patient at step down allowing accurate transcription, with a written of discharge plans provided by the doctors.

NPSA alerts have been action with regards to policies around strong potassium, epidural storage midazolam and missed dose audits.
The pharmacists provide regular input into the critical care clinical governance committee including clinical risk and action related to incident reporting relating to medication. It was unclear how shared learning occurred throughout all levels of staffing following medication incident reporting. Pharmacists provide regular financial feedback to the critical care and pharmacy general managers/leads.

The pharmacist appeared well integrated in terms of participation in the MDT ward round (clinical activity) although this limited to Monday to Friday service. Non ICU specific pharmacy covers at weekends and out of hours.

Staffing

Currently services on both sites do not meet the minimum national standards for staffing – in terms of staffing numbers and/or qualifications. There is insufficient cover currently for annual leave and sickness for Critical Care, particularly at the QEW site.

Based on the minimum recommended staffing levels (0.1 WTE per level 3 bed, and 0.05 WTE per level 2 bed) and therefore requires 1.65 WTE (this increases to 2.0 WTE to cover for annual leave and sickness). Currently the QEW site has 1.5 WTE (0.5 WTE Band 8c and 1 WTE Band 7 pharmacist).
A Band 7 pharmacist should not manage a Critical Care unit alone, since this is a training grade. At QEW this happens on a weekly basis when the Band 8c works cross site. During annual leave and sick leave the band 7 also manages the unit alone. This is not in line with national guidance.

Critical Care Pharmacists manage beds with no technical support.

Peer review team:

[redacted]

Trust critical care MDT representatives:

[redacted]

Appendix 1: (Following page)

Appendix 2:

Agenda for Peer review

Date: 8th of February 2017

Unit: ICU, Queen Elizabeth Hospital, Woolwich.

08:00	Meet the ICU team and introduction
08:30	Medical handover
09:00	Coffee and review panel discussion
09:30	Ward round
	Follow up clinics
	Rehabilitation service
	Outreach service
	Meeting staff, patients and relatives
13:00	Lunch + Panel discussion
14:00	Presentation (ICU team)
14:20	Review panel's feedback + 360 feedback
14:45	Coffee + Joint discussion (D16 + draft action plan)
16:00	Panel debrief
16:15	Close

Appendix 3:

NCAA Report Q2
2016-17 Queen Elizat

Appendix 4

Final score – D16

Appendix 5 (Below)

Critical Care Networks
England, Wales & Northern Ireland

CRITICAL CARE SERVICE SPECIFICATION STANDARDS (D16) 2015

These specification standards relate to patients requiring **levels 2 and 3** critical care. Patients aged 16 to 18 years are also included in this specification but there may be occasions when a paediatric critical care service is more appropriate for such patients.

NB. PLEASE PLACE AN 'X' IN COLUMNS 'C' to 'F' TO INDICATE COMPLIANCE AGAINST EACH STANDARD.

Hospital/Unit Name:		**Fully Met**	**Partially Met**	**Unmet**	**Comments**
	1. Admission to Critical Care				
1.1	The provider must implement a standardised approach to the detection and response to deteriorating health on general wards with reference to NICE 50.	x	X		Based on the peer review findings, there is no clear pathway and therefore this standard is only partially met
1.2	Admission to Critical Care must be timely and meet the needs of the patient. Admission must be within 4 hours from the decision to admit (unscheduled admissions)(Guidelines for Provision of Intensive Care Services).	x	X		The review team felt that this was only partially met, as due to the current level of delayed discharges, and the number of peri-arrests on the wards.
1.3	The provider should ensure appropriate planning of elective surgical admissions to critical care in order to avoid unnecessary postponement of surgery.	x			
1.4	The decision to admit a patient to Critical Care must be made by a Consultant in Intensive Care Medicine.	x			

1.5	The transfer of a level 3 patient for comparable critical care at another acute hospital (Non-Clinical Transfer) must be avoided.		x		Previously 1-3 non-clinical transfers per year. Unprecedented rate of 16 in January 2017
	2. Critical Care				
2.1	The provider must ensure that all adult critical care areas are designed, equipped and services delivered according to the Guidelines for Provision of Intensive Care Services (GPICS).	x			
2.2	New facilities must comply with the 2013 NHS Estate guidance HBN 04/02.		x		Not applicable as the unit is 17 years old
2.3	The provider must ensure that all equipment conforms to the relevant safety standards and is regularly serviced and that staff are appropriately trained, competent and familiar with their use. The provider must have a programme in place for the routine replacement of capital equipment.	x	X		The review team noted that the unit's oxygen storage does not meet the safety standards, and the monitoring equipment was noted to be quite old, with no clear replacement program in place.
2.4	Once admitted to Critical Care, care must be led by a Consultant in Intensive Care Medicine (as defined by the Faculty of Intensive Care Medicine). **Medical staffing must conform to the standards described in GPICS.**	x	X		Due to the lack of WTE consultants, it is felt that it would be difficult to fully meet the standard.
2.5	Patient review within 12 hours of emergency admission to critical care by a Consultant in ICM	x			
2.6	Each provider must have a designated Clinical Director/lead Consultant and matron for Critical Care.	x			
2.7	Consultants must be freed from all other clinical commitments when covering Intensive Care and this must include other on-call duties.	x			

2.8	A Consultant in Intensive Care Medicine must be immediately available 24/7, be able to attend within 30 minutes and undertake twice daily ward rounds.	x			
2.9	On admission to Critical Care all patients must have a treatment plan discussed with a Consultant in Intensive Care Medicine.	x			
2.10	All admissions to Critical Care must be seen and reviewed within 12 hrs by a Consultant in Intensive Care Medicine.	x			
2.11	Consultant led multi-disciplinary clinical ward rounds within Intensive Care must occur every day (including weekends and national holidays).	x			
2.12	The ward round must have attendance or daily input from nursing, microbiology, pharmacy, physiotherapy and dietetics.		X		Microbiology and pharmacy available by telephone at weekends. Met Monday to Friday
2.13	All providers must ensure that: The following nurse to patient ratios are adhered to: Level 3 patients have 1:1 nursing ratios for direct patient care	x			
2.13.1	Level 2 patients have 1:2 nursing ratios for direct patient care	x			
2.14	A minimum of 50% of nursing staff must have a post-registration award in critical care nursing.	x			
2.15	Each Critical Care Unit must have a supernumery clinical coordinator 24/7.	x			
2.16	A Critical Care Unit must have a supernumerary Clinical Educator, 1 WTE per circa 75 staff.	x			

2.17	All registered nursing staff supplied by Bank/Agency must be able to provide documentary evidence of their competence to practice within a critical care environment.	x			
2.18	The number of non-established bank/agency nursing staff must not on average exceed 20% of a shift.	x			
2.19	Pharmacy services should be in accordance with GPICS.	x			
2.20	Critical Care services must have an effective Clinical Governance Platform and robust data collection system. This must encompass: Presence of an Adverse Incident Reporting System and evidence of associated action planning.	x	X		Lack of evidence of monitoring of action plans
2.21	Participation in the National database for Adult Critical Care, including publication of the nationally agreed dashboard. (The Standardised Mortality Ratio is included in this dashboard).	x			
2.22	Standardised handover procedures for medical and nursing staff, both for shift handovers and discharge of patients from Critical Care back to parent teams.	x	X		There was no structured handover process for the medical handover, but the nursing handover was seen to meet the specified standard.
2.23	Evidence of effective implementation of evidenced based practice within Intensive Care Medicine.	x			
2.24	Evidence of effective engagement with patients and their families and carers.	x			

2.25	Presence of a risk register and associated audit calendar which is regularly updated and acted upon.	x	X		There was no evidence to suggest that the risk register is acted upon in a timely way.
2.26	Effective Strategies to minimise hospital - acquired infections within Critical Care and publication of Central Venous Catheter-related Blood Stream Infection rate.	x			
2.27	Unplanned Readmission to Critical Care (ICU and HDU) within 48hrs of discharge.	x			
	3. Discharge from Critical Care				
3.1	Transfer from Critical Care to a ward must be formalised within the handover. The handover must satisfy the requirements from NICE 50 and GPICS and include: A summary of critical care stay including diagnosis, treatment and changes to chronic therapies.	x	X		Need to see further evidence of complete discharge bundle of clinical information
3.1.1	A monitoring and investigation plan.	x			
3.1.2	A plan for on-going treatment.	x			
3.1.3	Physical and rehabilitation needs.	x			Provided by physiotherapy
3.1.4	Psychological and emotional needs.			x	No psychologist available if needed
3.1.5	Specific communication needs.	x			
3.1.6	Follow-up requirements.	x			
3.2	Transfer from Critical Care to a ward should occur between the hours of 07.00hrs and 21.59 hrs.		x		Access to ward beds on risk register

3.3	Discharge from Critical Care to ward level care must occur within 24 hours of the decision to discharge.		x		Access to ward beds on risk register
3.4	Transfer of a patient to a Trust, closer to their home, to continue their reablement following specialist critical care should occur within 48 hours of the decision to transfer.				Not applicable
3.5	Each patient must have an assessment of their rehabilitation needs within 24hrs of admission to Critical Care.	x	X		No rehab assessments at weekends. Continuation of rehabilitation services is via verbal handover to other AHP teams, or direct follow up by the staff themselves. There is no documented rehabilitation pathway in place.
3.6	All NICE 83 eligible patients must have a rehabilitation prescription on discharge from critical care. This must be updated throughout the rest of the patient's stay in hospital in accordance with NICE 83.	x	X		Physiotherapy See the above comment
	4. Interdependencies with other services/providers				
4.1	Co-located Services – to be provided on the same site and to be immediately available 24/7:	x			
4.1.1	Competent resident medical practitioner with advanced airway skills (anaesthetist/Intensive Care Medicine)	x			
4.1.2	General Internal Medicine	x			
4.1.3	Endoscopy	x			
4.1.4	Radiology: CT, Ultrasound, plain xray	x	X		No MRI available for ventilated patients
4.1.5	Echocardiography/ECG	x	X		Echo only available Monday-Friday, 9-5.

4.1.6	General Surgery for any site with unselected medical admissions.	x			
4.1.7	Access to Theatres	x			
4.1.8	Transfusion Services	x			
4.1.9	Essential haematology/ biochemistry service and point of care service	x			
4.1.10	Speciality Intensive Care Units must have their speciality specific surgical service co-located with other interdependent services e.g. vascular surgery with interventional vascular radiology, nephrology and interventional cardiology; obstetrics with general surgery.				
4.1.11	Informatics support.	x			
4.1.12	Physiotherapy	x			On call service
4.1.13	Pharmacy	x			On call service
4.1.14	Medical Engineering Services	x			On call service
4.2	Interdependent Services, available 24/7. The response time to these specialities will depend on the case mix of the patient population and will range from available within **30mins to a maximum of 4 hours**. (For services not immediately available on site service level agreements need to specify response times):				
4.2.1	Interventional Vascular and non-vascular Radiology	x			

4.2.2	Neurosurgery	x			
4.2.3	Vascular Surgery	x			
4.2.4	General Surgery	x			
4.2.5	Nephrology	x			
4.2.6	Coronary Angiography	x			
4.2.7	Cardiothoracic Surgery	x			
4.2.8	Trauma and Orthopaedic Surgery	x			
4.2.9	Plastic Surgery	x			
4.2.10	Maxillo-facial Surgery	x			
4.2.11	Ear, Nose and Throat Surgery	x		X	ENT services based at Lewisham, for surgical tracheostomy, patients have to be transferred to the Lewisham site.
4.2.12	Obstetrics and Gynaecology	x			
4.2.13	Organ Donation Services	x			
4.2.14	Acute/Early Phase Rehabilitation Services	x			
4.2.15	Additional laboratory diagnostic services	x			
4.3	Interdependent services - available during daytime hours (Monday – Friday):				
4.3.1	Occupational Therapy	x			

4.3.2	Dietetics	x			
4.3.3	Speech and Language Therapy	x			
4.3.4	Bereavement Services	x			
4.3.5	Patient Liaison Service	x			
4.4	Interdependencies with operational delivery networks		X		Nursing team is involved, but there is little input from medical staff.
4.4.1	Critical Care Networks	x			
4.4.2	Burns Networks	x			
4.4.3	Trauma Networks	x			
4.4.4	Paediatric Critical Care	x			
4.5	Interdependencies with Strategic Clinical Networks				
4.5.1	Cancer, Cardiac, Stroke, Vascular and Renal Networks	x			
4.5.2	Maternal and Paediatric Networks	x			
4.6	Interdependencies with CCG commissioned pathways and services				
4.6.1	Emergency General Surgery	x			
4.6.2	Emergency Medicine	x			
4.6.3	Clinical Psychology	x			
4.6.4	Mental Health	x			
4.6.5	Rehabilitation, Re-ablement and Recovery	x			

	Services				
4.7	Related services – services available following the critical care phase of the patient journey:				
4.7.1	Local Hospital and Community Rehabilitation Services	x			
4.7.2	Specialised Rehabilitation Services	x			
4.7.2	Critical Care Follow Up		x		Nurse led
4.7.3	Clinical Psychology			x	
4.7.4	Spinal Cord Rehabilitation Services	x			
4.7.5	Primary Care	x			
4.7.6	Burns Services	x			
4.7.7	Voluntary Support Services	x			
4.7.8	Independent Providers	x			