Worcestershire Acute Hospitals NHS Trust

Paediatric Critical Care Unit Level 1
Worcestershire Acute Hospitals NHS Trust

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Key Documents Owner:	Dr Shinwari	Consultant Paediatrician
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Key amendments to this guideline

Date	Amendment	Approved by:
12/09/2018	New document	Paediatric QIM
19th Nov 2020	Document extended for 1 year	Dr J West/Paediatric QIM
26th March 2021	Document approved with no amendments	Paediatric Guideline Review Day Meeting
9th Feb 2024	Document Approved with no amendments	Paediatric Guideline Review Day

Operational Policy

Team Model and Structure

1. Purpose of policy
    a. A reference for care for children and young people (0-16 years old) needing level 1 critical care on Riverbank ward.
    b. Details of different conditions needing care as critical care
    c. Details of quality governance
    d. Escalation pathways
2. Philosophy and model of care
    a. To provide critical care locally to Worcestershire/Herefordshire children population at WAHT.
    b. Model of care is based on RCPCH paediatric critical care level 1&2 criteria and document 'Time to move on 2015'
3. Introduction
    a. To establish a 24 hours paediatric critical care level 1 unit in Worcester to provide services to local and surrounding counties.
    b. It will be a purpose designed facility as per local, regional and national guidelines. In interim, we'll continue to provide Level 1 PCC in specified cubicles on the Riverbank ward.
    c. The paediatric critical care unit (PCCU) cares for children and young people who require close monitoring and detailed care in designated bed and area than can be safely delivered on general ward.
    d. PCCU is able to provide short term stabilization and ventilation before transfer to tertiary intensive care unit or step down to ward care.
4. Staffing levels

a. All patients admitted under the Consultant of the Week unless previously known to another paediatric/speciality consultant.
b. There will be 24hrs paediatric middle grade cover with local anaesthetic, intensive care and ancillary support (physiotherapy/pain team/pharmacist etc.)
    - Any concerns about medical staff to be escalated to the consultant on call or supervising consultant of the trainee.
c. Nursing staff trained to look after children with critical care needs
    - 0.5:1 Level 1 care
    - 1:1 Level 2 care/cubicle
d. The nursing staff will consist of Band 7, Band 6 and Band 5's nursing staff
    - They must have done a regional Critical care course or completed Children's Critical Care Passport sections applicable to condition of CYP being cared for.
    - Band 7 and Band 6 must be APLS/EPLS certified
    - Nursing students allocated to PCCU will be under supervision of the registered nurse.
e. Any nursing concerns escalated to PCCU nurse manager/ward matron.
f. Appropriately qualified staff to provide support for play, mental stimulation and distraction during procedures (7/7)
g. On-call access to pharmacy and physiotherapy services able to support the care of children (24/7)
h. Access to dietetic service (5/7)
i. Pharmacist with paediatric competences (with time allocated at least 5/7 for work on the unit

5. Hours of operation and service provision
    a. 24hrs a day, 365 days a year
    b. Work towards separate nursing off duty

6. Team Meetings
    a. Twice daily nursing and medical handovers plus daily safety huddles
    b. Monthly team meeting involving PCCU lead, PCCU manager/matron and staff
    c. Quarterly regional critical care meetings attended by clinical and nursing lead
7. Supervision and Leadership
    a. Clinical lead – Dr W Shinwari
    b. PCCU Nursing lead – Sister M Austin

Clinical Processes

8. Referral
    a. All referral to PPCU to be discussed/agreed by the consultant on call/CoW and PCCU nurse in charge.
    b. Acutely unwell child or young person as per Level 1 or 2 criteria from WRH/Alexandra Hospital emergency department.
    c. Deteriorating child/young person on the paediatric ward.
    d. Unwell child/young people needing PCCU from surrounding counties.
    e. Long term ventilated child/young person from the tertiary unit <u>(Not applicable yet)</u>

9. Guidelines for admissions

All admissions for PCC will be following discussion with the Paediatric Consultant on call or Paediatric Registrar and the Nurse in Charge of PCC. Referrals can be made from the following areas:-

- Emergency Department WRH/AH
- Paediatric Ward
- Paediatric Medical, Orthopaedic or Surgical Consultants.
- Operating Theatres
- Referring Hospitals
- KIDS - Kids Intensive Care Decision and Support Team
- Anaesthetists

Admissions may also be planned or elective, for example

- Where close observation is anticipated following surgery
- Children requiring sedation for procedures

Referrals for Paediatric critical care may be for:-

- Patients requiring single organ support (excluding advanced respiratory support)
- Patients requiring more detailed observation/monitoring than can safely be provided on a general ward.
- Patients who no longer require intensive care but are not well enough for a general ward.
- Post-operative patients who need close monitoring for more than a few hours.
- High PEWS Score - see Paediatric monitoring & Observation guideline WHAT-TP-083

Children may satisfy one or more of the following interventions/observations.
This list is illustrative but not exhaustive-adapted from the, Paediatric minimum Data set, NHS Commissioning Board 2013 and PICS-CIC standards V5.1 20161130 WMQRS full version (December 2015)

- Mechanical ventilator support or non-invasive ventilation.
- The possibility of a sudden deterioration in respiratory function requiring immediate endotracheal intubation and mechanical ventilation.
- The need for more than 40% oxygen.
- The need for regular physiotherapy to clear respiratory secretions, i.e. via tracheostomy
- Children recently extubated
- The need for vasoactive drugs.
- Support for circulatory instability.
- Patients resuscitated following cardiac/respiratory arrest.
- Reduced conscious level (GCS 12 or below) and hourly (or more frequent) GCS monitoring
- Diabetic Ketoacidosis requiring continuous infusion of insulin
- Severe asthma requiring IV bronchodilator therapy
- Upper airway obstruction requiring nebulised adrenaline
- Apnoea
- Nasopharyngeal Airway
- The need for non-invasive ventilation, including CPAP (once level 2 training/status achieved)
- > 40 mls/kg fluid bolus in 24 hours
- Status epilepticus requiring treatment with continuous IV infusion
- Arterial line
- Oncology patients – Haemodynamicaly compromised see Febrile Child on Chemotherapy Guideline

Admissions not meeting the criteria may be subject to a mutual agreement between the medical and nursing staff, providing that it is:

- Appropriate
- In the best interests of the child
- There is adequate staffing and bed availability

All new admissions/transfers to PCC level 1 will have a paediatric medical review (Middle grade or consultant) within 15 minutes of arrival to Unit. A PEWS score will be completed including pain assessment within the first 15 minutes of arrival to PCCU.

10. Assessment
    a. All observation to be done at the bed in PCCU
        1. Oxygen saturation – monitored continuously
        2. Heart rate and rhythm - monitored continuously
        3. Blood pressure with appropriate size cuff or arterial line– intermittently (max interval hourly)
        4. Temperature – hourly
        5. Input/ output chart
        6. Pain score
        7. 4-6 hourly medical reviews by Middle grade or Above – unless PEWS score/nursing concerns warrant earlier review
        8. Neuro- observations as per patient needs
        9. Hourly monitoring of the ventilator support systems

11. Allocation and co-ordination of care
    a. All allocation of care done by PCCU nurse in-charge with consultation of the paediatric Consultant on call/middle grade.
12. Medication arrangements
    a. All medications to be provided by the hospital pharmacy/paediatric pharmacist
    b. On- Call pharmacist to support out of hours requests
13. Discharge procedures
    a. Patient must be discharged/Step down to ward once agreed by Middle grade or Consultant when well enough with discharge letter from the PCCU with copy to GP/parents and relevant medical teams
14. Service users and cares involvement
    a. Parents can care for the children/young people admitted in consultation with the nurse looking after the child/young person.
    b. Regional intensive care advice available via KIDS
15. Team documentation
    a. All information to be recorded in patient notes before discharge
    b. All discharge notes to be uploaded to ez notes as per trust policy
16. Safeguarding children
    a. To follow unit and trust guidelines
17. Equality and diversity
    a. To follow trust policy on equality and diversity
18. Liaison with other teams/agencies
    a. Any child/young person on PCCU if deteriorating to be discussed with senior clinician on the duty who in turn should discuss with the consultant on call if need be.
    b. Any child/young person needing KIDS advice must be discussed with the consultant on call first.

Quality Governance

19. Information governance
    a. Care records to be kept safe in a designated area that can be locked if unattended.
    b. To follow advice as per trust policy on sharing information with parents/carers
20. Care records

a. Use current inpatient notes
b. All charts and notes to upload to ez-notes on discharge

21. Incident management
    a. As per Trust policy
22. Health and Safety
    a. To follow unit guidelines
    b. No one to carry out a procedure if not trained to do so unless it's dire emergency and the nurse/physician understand is the only way to save patient life.
    c. Ensure continuous training for all the staff involved in PCCU care