Ashford and St. Peter's Hospitals NHS
NHS Foundation Trust

STANDARD OPERATING PROCEDURE

TITLE: Level 1 Paediatric High Dependency Unit – Ash Ward	
PREPARED BY : Emily McCrea, Paediatric Clinical Practice Educator Dr Shola Doherty, Consultant Paediatrician Dr Tatiana Hyde, Consultant Paediatrician	**DATE November 2024**
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CONTENTS	**PAGE**
Purpose	
Aim	
Scope	
Competencies	
Glossary	
Process	
Responsibilities	

PURPOSE

To provide safe and effective care to children and young people who require level 1 care. Level 1 critical care is defined in the Time to Move On (2014) paper and Paediatric Intensive care society Quality standards for the care of Critically Ill or Injured Children (2021). The criteria have been adjusted, as advised in the guidance, to fit the context of our High Dependency Unit (HDU). Criteria for consideration of level 1 critical care are detailed on pages 3 and 4. For the rest of the SOP this level of care will be referred to as HDU care. The guidance addresses transitions of care including referral and stepdown pathways relevant for admissions, discharges and escalation of care.

AIM

To provide a standard Trust-wide pathway that ensures all patients requiring level 1 are cared for appropriately as per Paediatric Intensive care society Quality standards for the care of Critically Ill or Injured Children (2021)

The aims are:

- To ensure that there is safe transition between wards, departments and hospitals with the appropriate escort to minimise patient risk.
- Clear ownership of roles and responsibilities
- Standardised practice

SCOPE

The HDU consists of 2 permanent beds. The HDU is situated on Ash Ward which is a 20-bedded ward inclusive of HDU beds (3 beds can be opened for escalation).

COMPETENCIES

Registered nurse

Understanding of Trust policies and protocols

Detailed clinical and professional knowledge

National Paediatric Critical Care Nursing Competencies

GLOSSARY

HDU – High Dependency Unit

STRS – South Thames Retrieval Service

PCCS- Paediatric Critical Care Society

PICU- Paediatric Intensive Care Unit

NIC- Nurse in Charge

STPN – South Thames Paediatric Network

PEWS- Paediatrics Early Warning Score

STOPP – Safe Transfer of the Paediatric Patient

PROCESS

General principles

Admission to HDU is the responsibility of the on-call lead Consultant. All referrals to Ash Ward Paediatric HDU in normal working hours must be discussed with the Consultant accepting the patient and the Nurse in Charge (NIC). Out of hours, all referrals must be discussed with the Paediatric Registrar and NIC.

The lead Paediatric Consultant must be informed of all children who deteriorate on HDU and prior to referral to PICU for an opinion.

Discharge to the general medical ward from HDU must be planned and timely. This should be agreed by the Paediatric Registrar and NIC.

There should be daily Trust and Regional discussions regarding Paediatric beds, including HDU escalation and de-escalations.

Admission criteria to HDU are in line with the principles outlined in the Time to Move On document 2014[1], Paediatric Intensive care society Quality standards for the care of Critically Ill or Injured Children 2021[2], South Thames Paediatric Network and the Children and Young People's Safer Nursing Care Tool (C&YP SNCT).

Referral for admission to Ash Ward Paediatric HDU

Consider any patient who a Paediatric Consultant, Nurse or Ward Sister has clinically assessed to require HDU care.

LEVEL 1: BASIC CRITICAL CARE

<u>Airway:</u>

- Upper airway obstruction requiring nebulised adrenaline
- Established nasopharyngeal airway
- Management of unventilated child with tracheostomy (>7days post procedure)
- Intubation and ventilation of child or baby in an emergency until retrieval team arrives

<u>Breathing</u>:

- Apnoea – recurrent and requiring intervention in past 24hrs
- Oxygen or nasal high flow therapy plus continuous pulse oximetry and ECG monitoring
- Delivery of CPAP <1yr

- Severe asthma requiring IV bronchodilators or continuous nebulisers with full monitoring

Circulation:

- Arrhythmia due to SVT requiring IV anti-arrhythmic therapy
- Monitoring of shocked children who achieve cardiovascular stability after fluid resuscitation (and do not require inotropes)
- Initiation of inotropes whilst awaiting retrieval to Level 2 or 3 critical care

Disability

- Reduced level of consciousness (GCS ≤12) and hourly neuro-observations
- IV anticonvulsants to stop seizures
- Care of child recovering from status epilepticus (un-intubated, including extubated locally)
- Care of intubated child recovering from status epilepticus awaiting retrieval
- Initial resuscitation and management of child with altered level of consciousness, raised intracranial pressure, post head injury (e.g. requiring hypertonic saline bolus) until recovers or transferred out

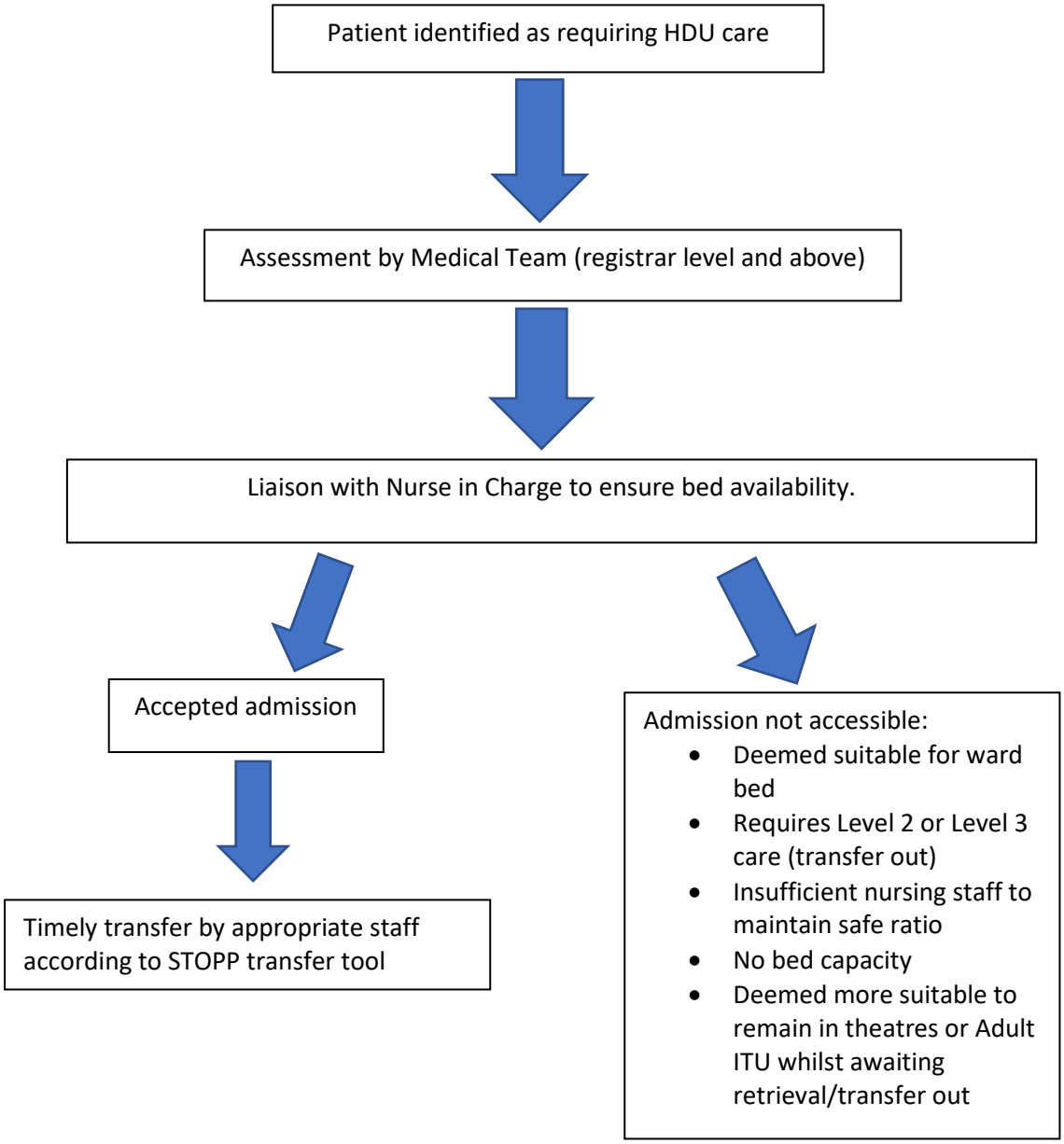
Endocrine/Electrolyte/Metabolic

- Diabetic ketoacidosis requiring continuous insulin infusion
- Acute deterioration of long-term endocrine and metabolic conditions where there is a clear individual patient management plan in place
- Complex IV fluid balance management
    - Specialised fluids (e.g. human albumin solution, IVIg)
    - Replacement fluids (e.g. surgical or gastroenterological patients)
    - IV electrolyte management
    - Renal impairment

Other:

- Patient controlled analgesia (PCA)

Acute in-house deterioration from Ash Ward, Paediatric Emergency Department, Theatres or Radiology requiring admission to Ash Ward Paediatric HDU



Stepdown from PICU to Ash Ward Paediatric HDU

Attending consultant and Ash Ward Nurse-in-charge to accept stepdown of PICU patient to Ash Ward Paediatric HDU

Complex[1] patients require MDT[2] meeting prior to PICU discharge

HDU capacity to be agreed by Ash ward Nurse-in-charge prior to transfer[3]

Timely transfer to be agreed (In hours 9-7pm[4]; direct to Ash ward)

Transfer for complex patients to happen within weekday hours (Monday – Thursday/Pre 12pm Friday)

PICU team to complete verbal handover to Ash ward Paediatric Registrar, prior to transfer to the Ash ward

Ash ward Paediatric Registrar to document handover on CERNER

PICU to Ash ward joint nursing and medical handover at the bedside on arrival to HDU

Written discharge summary from PICU given to Ash ward team at the time of transfer

Within 1 hour of Ash ward admission: Paediatric Registrar review, medications prescribed and clerking document on CERNER

[1]Patients should be considered as complex if length of hospital stay is >2weeks and >2 clinical teams involved or social complexity including complex safeguarding or conflict that has threatened to impact care. These are general rules, and the definition is at the discretion of the clinical team.

[2] Multi-disciplinary team meeting should be arranged for all complex patients pre-discharge. MDT meeting should include all relevant medical and therapy teams involved in care as well as representation from PICU and Ash ward management

[3]Set expectations to families/parents/carers prior to transfer of the different environment and level of care; including ratios of nursing staff to patients is likely to be 1:2-1:3 in HDU, unless clinically deemed otherwise.

[4]In hours reflective of medical and nursing day shifts

Escalation of Care to Level 2 and Level 3 Paediatric Critical Care (PICU)

A referral should be made to PICU as soon as is reasonably possible via the STRS line (020 7188 5000).

Any patient who requires an acute escalation of care should be appropriately stabilised prior to transfer by the ward and anaesthetic team (as needed), with support from the ITU, critical care outreach team and bleep holders.

This *may* include intubation and ventilation, commencement of peripheral inotropes and central line insertion as appropriate.

Discharge

Discharge from HDU beds should be safe and timely to ensure adequate flow of patients.

Any perceived delay to discharge must be escalated to the NIC as soon as identified.

Criteria for stepdown from HDU include:

- No longer requiring Level 1 Paediatric Critical Care interventions
- Stable respiratory status with FiO2 <0.4 for >4 hours
- Neurological stability for >6 hours
- Haemodynamic stability without intervention for >6 hours

Safe Staffing on Ash Ward Paediatric HDU

Nursing ratios of HDU patients should be in continual review. National standards recommend that one nurse should provide care to two patients (1:2) who are requiring critical care intervention. If acuity is deemed higher than the current staffing ratio, it is recommended that a safe staffing risk assessment should be undertaken by the Ward manager or matron in collaboration with the nurse in charge.

Safe staffing will be provided as follows:

HDU has 2 beds staffed at a 1:2 ratio with members of the nursing team with the appropriate skill set for the acuity and complexity. Staffing requirements are assessed at multiple points throughout the shift & reported via daily safe staffing.

The NIC will not take a patient load where possible. This is to allow support from them in all areas of the ward.

Where a child requires more intense nursing intervention as assessed by the NIC, the ratio may be increased to 1:1 temporarily. Where this needs to be sustained, a discussion should be had between the NIC and the Paediatric Registrar about whether transfer to Level 3 PICU is indicated.

At least one competent HDU nurse (including PANICC/equivalent HDU course) should be allocated HDU patients where possible and be aware of the HDU patients when not allocated.

Where possible, all staff working in HDU should have completed the HDU induction.

Allocation of HDU patients should be a collaboration between the NIC for oncoming shift and current shift, taking into consideration completed risk assessments, to ensure safe staffing for care needs.

Risk Management

HDU patients should always remain on continuous monitoring. Alarm settings on the monitor must be checked at the beginning of each shift and adjusted to the patient's individualised needs with a check to ensure monitor alarms are high enough to be heard and responded to.

Escalation of alarms for monitoring, ventilation or in response to PEWS chart should be prompt. Escalation should be to the NIC and medical team.

Tracheostomy patients should not be cared for in a prone position on HDU.

RESPONSIBILITIES

Registered nurse:

- Care of the HDU patients on a 1:2 basis. They will monitor all observations and escalate where needed as condition dictates
- Administer all medication as prescribed.
- Be competent in all equipment used within HDU
- Have evidence of PCCS national nursing competencies or be working toward this.
- All documentation is completed and up to date.
- Ensure that the infection control policy is adhered to

Nurse in Charge:

- Ensure all nursing documentation is completed
- Ensure nurse(s) caring for HDU patients are competent in their role
- Support break cover of HDU staff
- Ensure staffing for next shift is appropriate during allocation

Ward manager:

- Ensure patients are being cared for at the correct ratio
- Ensure nurses are undertaking relevant HDU course
- Ensure National Nursing Competencies are completed
- Ensure staffing is appropriate.
- Ensure risk assessments are completed where appropriate

HDU consultant Lead:

- Responsible for oversight of service, including staffing, training, guidelines and governance
- Coordinate multidisciplinary review and learning from Paediatric HDU cases

Attending Consultant:

- To review HDU patients daily on morning ward round
- Ensure attending consultant or the on-call consultant reviews HDU patients in the evening
- Ensure paediatric registrar or above reviews HDU patients at any time the nursing staff feel there has been a deterioration
- To decide and ensure when prompt escalation via STRS and/or step down to main ward is needed

References

1. High Dependency Care for Children - Time To Move On, October 2014, Royal College of Paediatrics and Child Health Paediatric Intensive Care Society, 2021, Quality Care Standards for the Care of Critically Ill Children 6th Ed https://pccsociety.uk/about-pccs/pics-standards/

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3. RCPCH, 2021. Standardising Intravenous Infusion Concentrations for Children In the UK, https://www.rcpch.ac.uk/sites/default/files/2018-07/high_dependency_care_for_children_-_time_to_move_on.pdf

4. NHS England Service Specifications for Level 2 Paediatric Critical Care, 2013. https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/01/eo7-sb-paed-hig-dep-care.pdf

5. Morris, K & Fortune, P.M., 2022. Paediatric Critical Care GIRFT Programme National Specialty Report. https://pccsociety.uk/wp-content/uploads/2022/04/Paed-Critical-Care-GIRFT-report_final_April2022.pdf