LRI Children's Hospital

Paediatric Virtual Ward H@H provision in Leicester Children's hospital.

Staff relevant to:	Medical, Nursing,
Approval date:	August 2024
Revision due:	February 2026
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Version:	1
Trust Ref:	C42/2024

Contents

1. Keywords

University Hospital of Leicester NHS Trust	UHL
Leicester Partnership NHS Trust	LPT
Standard Operating Procedure	SOP
Children and Young People	CYP
Clinical Management Plan	CMP
Electronic Patient Record	EPR
Paediatric Virtual Ward	PVW
Paediatric Emergency Department	PED
Virtual Ward Team	VWT
Consultant of the Week	COW
Red Amber Green	RAG

2. Introduction and who this standard operating procedure applies to:

The Paediatric Virtual Ward (PVW) team aims to provide enhanced monitoring and assessment for paediatric patients who are deemed appropriate to use the service and meet a defined criteria pathway. It provides remote monitoring, video/ telephone consultations, support and follow-up for patients who would normally require hospitalisation.

Patient referrals will be received from the Children's Hospital Wards at the Leicester Royal Infirmary (LRI). Children and Young People (CYP) aged 0-16 will be accepted into the service and will be assessed by PVW team who will provide treatment, support and education in the home. The PVW nurse will work under the guidance of a Senior Children's Doctor (Consultant Paediatrician) based at the Leicester Royal Infirmary Children's Hospital (LRI). This document details the clinical escalation protocol that will be followed by all staff during each clinical assessment.

2.1 Objectives of the SOP-

- Standardise the process of identifying and referring patients for paediatric virtual ward within a defined criteria.
- Standardise the process of patient on boarding the service.
- Standardise the management of patients receiving the service.
- Ensure that the Paediatricians and nursing team on boarding and monitoring are aware of their roles and responsibilities for the safe management of patients receiving the digital service.
- Ensure that the paediatric team provides timely intervention where this has been identified by the digital service.
- Ensure patient safety is maintained by the reviewing of the patient data as agreed with the patient through-out length of admission.

2.2 National Drivers for Change

- NHS long Term Plan
- The People Plan 2020
- NHSE Winter Readiness

- GIRFT report 2021

3. Roles and responsibilities

3.1 Named COW clinical leads

University Hospital of Leicester NHS Trust will provide a 'Consultant of the week (COW) model' whereby the clinical oversight of the care and monitoring of patients admitted to the virtual wards will be under their remit. On-going medical support for deterioration and continued care will be provided by the COW between Mon-Fri 9-5 and out of hours the Paediatric Registrar on call.

- COW identifies a patient for PVW
- Referral is completed to PVW
- Consultant reviews the referral and assesses the suitability of stated referral.
- Clear management (Documented in patient notes on Nerve centre) and follow up plan.

On-going management: We anticipate that most patients will be admitted on PVW for short period of time approx. 3-4 days on average.

The UHL PVW team will on board patients (admit) onto the virtual ward, explaining the equipment use, care plan and how to complete the at home monitoring and question set with technical platform provider.

Technical provider will provide the digital health software and hardware (where required) for use in the service. The technical provider will give training and support to the specialist teams to enable them to set up, allocate and initiate monitoring. The technical provider will assist with technical support for the on-going utility of the units in patients' homes.

3.2 Nursing Staff working for the Paediatric Virtual Ward

All staff working within the UHL virtual ward teams are:

a. Responsible for the safe and appropriate management of patients within the service.
b. Practising within their respective codes of practice, conduct and area of responsibility.
c. Able to identify and escalate any patient safety concerns.
d. Report any incidents as per UHL policy.

It is the responsibility of UHL- Children's Hospital Clinical Leads to ensure that their staff are trained in the use of the SOP and adhere to it in the delivery of the service.

3.3 Ward team

The patient will be discharged from the children's hospital ward by the staff. Those patients admitted to the PVW will remain under their respective Lead Consultant Paediatrician.

4. Evaluation of Virtual ward suitability & equality of Access

Assessing the eligibility of a patient for the PVW should be a joint decision between the treating clinician and the PVW Team.

Virtual wards are not the best option for all patients however we aim to ensure that no medical condition, social situation or protected characteristic leads to an automatic exclusion of a patient to be admitted onto a virtual ward but the decision will be made with the patient/family as part of individual personalised care.

To support this the PVW team will provide a locked down, large screen tablet with inbuilt access to wifi or sim card. Bluetooth devices further aid simplicity for patient use. Textual colours are high contrast with aiding those with visual impairment. The patient user interface is easy to navigate with touch screen functionality.

Education modules are provided with varied formats including textual, spoken and video. All educational material is assessed to a reading age of 9 years of age or over.

For patients who are not used to technology we will provide education and link with patient's permission for support from a willing family member to upload data. If this is not possible the virtual ward team can take the data from the patient by telephone and upload onto the system.

Through UHL contracted providers we have access to translation services for both language and hearing impaired. This can done virtually or in person as is appropriate with the patient. They can be contacted via telephone interpreting service on : 0330 0882443

If there are concerns about housing and heating, families can be referred to UHL housing to assess and link into community support.

All carers and patients will be provided with a carers pack which provides support and sign posting to various services.

4.1 Inclusion

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- Patient aged between 0-16yrs
- Identified Lead Consultant
- Patient to have confirmed treatment plan
- Observation within agreed patient normal parameters
- Patient to understand instructions or have access to translation if needed
- Patient to have access to transport
- Patient consent to home monitoring, participation in virtual calls.
- Patient has adequate home amenities – e.g. electricity to charge equipment.

4.2 Exclusion

- Patients aged 16 years and above
- Patient who requires new oxygen requirement
- Patients who require suction
- Patients at significant risk of deterioration
- Patients with co-morbidities
- <2months corrected gestational age
- Prematurity <34/40 (only for bronchiolitis?)
- Congenital Heart Disease
- History of Neuromuscular or metabolic disease
- Any child under a safeguarding review, or child protection order.

4.3 Parent/Carer

- Demonstrates competence in taking observations and accessing the technical dashboard
- They will complete the observation Assessment booklet
- Sign consent to receive monitoring at home.

5. Service Structure

- To support earlier safe discharge from hospital and/or to provide a safe alternative to hospital admission
- To support patient choice, address sustained pressure on urgent and emergency care services and support elective recovery by enabling patients to access clinical monitoring in their own home.
- To offer an improved patient experience through shared decision making and improve patient flow by reducing hospital admissions and length of stay.
- Monitoring frequencyThe monitoring frequency of any patient can be set at the point of referral via the patient referral form and adjusted throughout a patient's time on the service by emailing the technical team.
- Patients will be registered to the Paediatric Virtual Ward caseload on System1. As per the separate UHL Virtual Wards System1 SOP all clinical activity will be recorded on System1 by a member of the clinical team. When discharged, patients and their registered GP will receive a discharge letter.

6. Pathways suitable for management on the Virtual Ward

- Bronchiolitis in patients aged 2 months-24 months
- Respiratory tract infections 1-16years
- Viral Wheeze
- Gastroenteritis not needing IV fluids
- Croup
- Constipation

- Consultant Lead

7. Patient monitoring

Data shared via email between UHL and the technical provider is over a secure server via an nhs.net email paediatricvirtualward@uhl-tr.nhs.uk

- Data Protection Impact Assessment completed in line with GDPR and agreed by UHL and the technical provider.
- All hardware is covered by the technical provider insurance and remains the property of the technical provider at all times. This applies whether it is with the UHL on boarding team or the patient.
- UHL Paediatric virtual ward teams have all been trained by the technical provider and have been provided with a login to the Dashboard.

8. Referral Pathway

8.1 Identification of patients

Patients can be identified for the service by ward staff and medics with approval by the Paediatric COW, referred to the service utilising the general criteria below and more specific pathway inclusion/exclusion criteria (see appendix)

8.2 Strategies to ensure equal access to services in specific patient groups

- The technical dashboard is available in alternate languages
- Use of interpreter services
- The technical provider offers voice activation & Video showing how to use equipment
- Encourage support of carers of family members
- Provide electronic devices to make accessing dashboard/ upload possible with 4G.

8.3 Patient monitoring

The data uploaded by the patient is automatically flagged by the technical support using a red, amber, green (RAG) rating. The responsible PVW nurse will need to review the patient data daily 7 days a week and action accordingly (see below for guidance)

- **Red** – Highest Priority
- **Amber** – Moderate Priority
- **Green** – Lowest Priority
- **Blue** – Patients whose question set is overdue.

The PVW nurse must document deviations (RAG) in EPR. The responsible clinician will, following escalation, review the patient data and determine the appropriate intervention which may include:

- Instant message to patient through the technical platform
- Video consultation or telephone assessment of the patient or repeat biometric readings
- Discussion with virtual medical staff
- Signposting to GP or out of hours service
- Attendance to PED

The PVW nurse will contact the patient/carer on the same day if they do not complete the required monitoring and dashboard question set.
Where a set of data has not been input, and no contact can be made via telephone, the PVW nurse will:

- Check EPR for recent health related update
- Contact next of kin/emergency contact.
- Arrange a possible visit to the home

The PVW nurse will prioritise patients on the list of ‘higher risk patients’

8.4 Non-submission of data (recurrent)

If a patient is recurrently not submitting their data as per care plan, the PVW nurse will:

- Discuss with patient/carer an alternative management plan
- Agree and update the technical platform and record in EPR
- Schedule a home visit for nursing team
- Consider a referral to safeguarding
- Request patient attends PED for assessment

8.5 Patients in hospital:

- If a patient is admitted to hospital the PVW nurse will document this in the EPR, specifying the admission reason. The patient will have to be discharged and recommence back on the PVW if suitable and still appropriate.
- On discharge, the responsible clinician will contact the patient to undertake a reassessment and update patients CMP and EPR.

Equipment:

Faulty Equipment from the Technical provider:-

- For faulty equipment, clinicians or patients can contact the technical support directly
- All non-working equipment will be resolved (or replaced) by them within 2 working days with a replacement unit deployed as appropriate.
- In the event of a non-working unit, the responsible clinician will contact the patient by telephone on each agreed 'data transmission' day (Monday-Sunday) to assess the well-being and obtain health vital signs if available until the problem with their unit is resolved.
- If the patient is unwell, they will be advised to take their vital signs and this information will be taken over the phone and compared to the patient's documented parameters. The responsible clinician will exception report any alerts as previously described. This will be documented on the EPR.

Onboarding:

- Patients deemed appropriate for the paediatric virtual ward will be introduced to the service by the UHL PVW nursing team, who will ask the parent/carer if they are willing to use the remote monitoring equipment
- On day of admission to Virtual ward the PVW staff will register the patient with technical provider and they will add them to the dashboard.

UHL PVW Team will complete:

- Registration page including patient demographic details
- Adding the caseload manager as "Paediatric Virtual Ward"
- Care plan set up
- Record equipment details in patient notes section

Subsequently:

- The UHL PVW staff will provide the patient/patient/carer with the observation equipment and show them how to use them correctly.
- The PVW staff will assist the patient/parent/carer to access the patient portal and complete the informed consent data sharing questions together with the first Paediatric Virtual Ward question set via the technical support.
- Then they will ensure the patient/carer is confident and competent with the program and daily monitoring schedule of completing the Paediatric pathway question set as instructed in their care plan the initial set daily before 08.00 until discharged from the service.
- Information on safety-netting out of hours will be provided at this stage prior to discharge (Paediatric VW leaflet to be provided).
- The UHL onboarding staff will confirm the patient has the contact details for the UHL Paediatric Virtual Ward team for clinical concerns and the technical support for equipment/website issues.
- Where a patient is discharged from the Children's hospital the above is still required and the discharging children's hospital ward team will document the outcome of the discharge (paediatric virtual ward) onto the Nervecentre discharge summary and ensure ward clerks add to discharge coding on HISS. At the point of discharge the

PVW staff completed referral form and a copy of the patients Nervecentre discharge letter.

- On day 1 of referral, the PVW nurse will arrange a video consultation determined by clinical need, PVW team will record on system one.
- Additional consultations will be arranged as clinical need determines, these are undertaken by UHL PVW team, if a home visit is required this will be carried out by a senior paediatric nurse.
- All (red / amber) escalations of concern within 9-5 Mon – Fri will be referred to senior Paediatric clinician on (consultant of the week) for virtual ward. Outside of these times the escalation plan will be adhered to as previously documented.
- All UHL Paediatric clinicians will provide an escalation plan for out of hours at each consultation.
- Discharge plan will be provided when suitable and communicated to on-going healthcare provider/GP.

Patient management and monitoring:

Following the initial telephone call with the parent/carer, the PVW nurse will complete the full question set as per their individual care plan, initial set prior to 0800 Data from all patients' technical dashboard will be reviewed regularly by the PVW nursing team.

The review regime after discharge from hospital can be modified at the responsible clinician's discretion based on clinical concerns. The patients can access urgent, on-going medical support for any concerns highlighted when completing the question set and clinical observations within the technical platform. Mon – Fri 08.00-20.30 a senior paediatric nurse will be available. Out of hours patients/carers will be advised to contact the phone held by the Bleepholder who will liaise with the on-call paediatric registrar as appropriate. **Patient monitoring alerts**

The data uploaded by the patient/parents/carers is automatically flagged by the technical platform using a 'red, amber, green' (RAG) colour coded alert system. The responsible clinician will review the patient data daily 7 days a week. Any overdue patient goal sessions will be flagged by a blue colour coded alert system. The system generates patient related tasks, which are explained below:

Frequent Tasks

- **Question Sets History** – the complete data of the patient's answers for that day.
- **Patient Alert** – a specific alert, related to a specific symptom, measurement or answer.
- **Biometric Change Over Time** – Patient's weight (if applicable) has changed.

Infrequent Tasks

- **Question Sets History Overdue** – Patient has failed to input their data within their specified timeframe.
- **Care Plan Review** – The patient's CMP needs review (auto-generated at set timescales)
- **Care Plan Requires Approval** –The user who created the new care plan cannot authorise it due to audit-requirements.

- **Scheduled Task** – A free-text, user inputted tasks that can be one off or repeat on specific days.

Tasks are categorised using a RAG system and should be auctioned accordingly:

- **Red** – Highest priority, action and reviewed on the day
- **Amber** – Moderate priority, action and mark as reviewed within 24 hours
- **Green** – Lowest priority, action and mark as reviewed where appropriate
- **Blue** – for patient overdue question set

The responsible clinician to document deviations (**Red** / **Amber**) in EPR.

The responsible clinician will, following escalation, review the patient data and determine the appropriate intervention which may include:

- Instant message to patient/parent/carer through technical support system
- Video consultation or telephone assessment of the patient to complete a more detailed assessment or repeat biometric readings (video-consultation preferred)
- Signposting to GP for non-related or non urgent health care issues that would have not otherwise been dealt with during current admission.

Any clinical intervention(s) will be documented on the patient's EPR by the clinician. This may include:

- Completing the Prescribing Template and advising the patient's GP within 24 hours using the EPR GP Communication.
- Updating the patient's DC and clinician will discuss with patient

9. Clinical responsibility

Medical oversight for the Paediatric virtual ward monitoring service will be provided by the Senior Paediatrician team at UHL (Clinical Lead Dr Srini Bandi & Dr Razi Paracha)

Where staff are unable to access the medical support required and the patient has clinical needs that the service cannot meet they should escalate to urgent care services as appropriate. All patients will be instructed on red flag symptoms of deterioration that should prompt seeking urgent medical advice including contacting 111 For non-urgent medical advice out of hours, the patient/ parent/ carer will be instructed to contact 111 and inform them they are admitted to the PVW.

For non-urgent chronic health concerns, medical advice should be sought from primary care team.

9.1 Effective communication

Effective communication - Daily virtual rounds/MDT; contact points provided for parents/carers; Out of hours service – PVW emergency phone held by the bleep holder.

Clinical huddles including handovers

At 0830, 1230, 1630 and 2030 hours (including weekends) the nurse will undertake clinical 'huddles' with the Consultant Paediatrician / Paediatric Registrar. These 'huddles' are short multidisciplinary briefings designed to highlight potential problems and possible discharges form the service.. The huddle allows the consultant to anticipate future risk and to ensure patient safety and care. The exchange of essential information is rapid (within 20 minutes) and follows the Situation, Background, Assessment and Recommendation (SBAR) format. The 0830 and 2030 huddle will include all CYP on PVW.

The 0830 huddle

The inpatient morning handover occurs every morning in Wren Hoskyns seminar room. During the normal working week (Monday to Friday) this is led by COW. At weekends this is led by the on-call consultant. At 0830 the virtual ward nurse attends a handover huddle to discuss patients currently looked after by the team with the Consultant covering the ACE service, using the **SCONESSS** acronym:

Staffing **C**apacity
On the books (patients currently being looked after)
New referrals
Early discharges
Sick patients
Safeguarding concerns
Safety issues.

The 1630 huddle

The VW Nurse uses a modified version of the morning handover huddle to discuss patients currently being looked after by the team using the **ONESSS** acronym

On the books (patients currently being looked after)
New referrals
Early Discharges
Sick patients
Safeguarding concerns and
Safety issues.

Information about all patients looked after by the PVW team is updated on the system one at least once per shift by the nurses. This will enable ward nurse/on-call team to view patient information if the CYP becomes unwell and is referred. The record is updated between 0730-2030 each day.

9.2 Consultant Cover and Escalation between 0900-2100 hours (7 days a week)

A range of tools, Paediatric Early Warning Score (PEWS) and clinical parameters for specific pathways (e.g. wheezy child) are used to clinically assess the CYP in the home.

1. No nurse concerns exist BUT where parameters are abnormal and/ or there are parental concerns.

The nurse will decide if a discussion with the Consultant is required immediately or if the discussion can wait until the next planned huddle. If a discussion is required with the Consultant urgently this is recorded as an 'unplanned huddle'.

2. Clinical concerns exist AND there are abnormal parameters and or parental concerns

The nurse will contact the Consultant for an 'unplanned huddle' and management advice. Occasionally, further home visits or telephone consultations are arranged between the nurse and the family. The time of the nurse review will have an impact on this decision e.g. a CYP reviewed at home in the late evening will require a referral to Paediatric ED and be reviewed by the Paediatric Reg on call and possibly a short stay for observation. Appropriate transport to hospital must also be discussed between the nurse and the family.

Note the nurses will not transport CYP to hospital- The patient will be required to attend Children's A & E for review using their own transport.

- **Unable to contact the Consultant**

If the nurse is unable to make contact with the Paediatric Consultant then the on –call Paediatric Registrar must be contacted to provide advice in exceptional circumstances. The ST4-8 must be contacted directly on the on-call mobile phone. If the CYP is felt to be seriously unwell, following discussion with the parent/carer, an emergency 999 call must be made and the paediatric on-call Registrar and Consultant must be informed.

- **Translation services decision support**

Translation services is available to support decision making and escalation as well as providing a 3-way interpreting facility if required during service hours. Families will have access to this facility from the point of admission to PVW. This service is only available during working hours 0900- 2100.

9.3 Documentation

Electronic/paper, patient leaflet, on InSite.

9.4 Pathway for urgent review and readmission

Pathway for urgent review and readmission-

The Paediatric Virtual Ward (PVW) Nursing team will liaise with the COW/Registrar on call for any patient who needs a clinical review during Monday to Friday 0730 – 2000. Any issues at night the patient/parent should contact the On-call virtual ward

phone held by the Nursing team on ward 14/11 they will then liaise with the Paediatric Consultant/Registrar on call at the time.

Any Patient escalated outside normal parameters or triggering any alert will receive a high priority call from the PVW nursing team. Following this if deemed necessary the PVW nurse could do a home visit or the parent/carer will be informed to bring the child to Children's Accident and Emergency for reassessment.
The PVW Nurse will liaise with the COW/Registrar to review the patient on their readmission to Children's A&E. Once the COW/Registrar has seen the patient they will either be readmitted to the children's hospital or return home with another care plan in place.

10. Education and Training

The technical database and System one Use

11. Monitoring Compliance

- Monitor and measure hospital admissions for patients whilst on Paediatric Virtual Ward
- Monitor and measure causes for readmission of patients from virtual ward
- Collect patient satisfaction survey for patients admitted to virtual ward
- Monitor and review any unplanned discharges
- Number of patients safely managed by the paediatric virtual ward team
- Monitor and report any adverse events whilst on the paediatric virtual ward
- Monitor types of patients admitted to paediatric virtual ward under the defined pathways

All incidents will be recorded as per UHL organisation's process.

12. Supporting documents Related Guidelines and SOP's

- UHL/LPT Cleaning Decontamination of equipment, medical devices and the environment
- Infection Control policy- Infection Prevention UHL Policy
- Children's Safeguarding policy- Safeguarding Children UHL Policy
- Data Protection and GDPR- Data Protection and Confidentiality UHL Policy
- Lone working UHL Policy- Lone Worker UHL Policy
- Discharge policy- Discharge Home UHL Childrens Hospital Policy
- Escalation SOP-
- Safety netting leaflet
- University Hospitals of Leicester (UHL) Virtual Wards Systm1 Standard Operating Procedure.

*Feed/fluid requirements when well

2 months-6months: 150ml/Kg/day (or quantify their normal breast feeds)

6m- 1yr: 120ml/Kg/day (If weaned/breastfed, quantify their usual normal fluid intake)

Appendix

1

Paediatric Virtual Ward Pathways

Bronchiolitis:

This pathway is for patients with Bronchiolitis who are medically stable and continue monitoring at home. The patients will be monitored remotely, using pulse oximetry to

monitor patient's oxygen levels. The median length of stay in Paediatric Virtual ward (PVW) is expected to be 3 days within this service, with observation collected 3 times a day, one health question set completed and a least one phone/video call a day.

Patient cohort

Children aged 2 months -24 months (corrected gestation) with mild symptoms who are clinically improving and require clinical review(s) for up to 7 days after discharge. The babies should be over the 'peak' of bronchiolitis which is usually by day 4 or day 5 of the illness.

Referral to the virtual ward has to be approved by the respective Consultant of the Week (COW) or the on-call Consultant (weekends).

The following criteria should be fulfilled:

Respiratory Rate	2 m – 1 year: < 50/min 1 yr – 2 yr: < 40/min
Work of breathing	Mild recessions
Apnoea	Absent for > 48 hours
Oxygen saturations	>90%
Heart Rate	2m – 1yr: <160/min 1 yr-2yr: <150/min
Capillary refill time	< 2seconds
Feeds	>50% of normal >3 wet nappies in 24 hours
Conscious level	Alert

Parent/Carer – Consent for home care and sign smoking/vaping disclaimer, completion of parent assessment booklet.

Exclusion criteria:

- <2 months corrected gestational age
- Prematurity <34/40
- Congenital heart disease
- History of Neuromuscular or Metabolic disease
- Previous ICU admission

Home care (Virtual ward)

- Patients will have saturation monitoring at home.
- Observations – HR, sats, RR, temp recorded by parents/carers and uploaded onto the dashboard
- Daily virtual ward rounds (by the respective Paediatric Registrar/COW)
- Once a day minimum- Call/video call from PVW team
- Question set answered daily by family

Safety netting: (common for all patients on PVW)

- Dedicated telephone line to contact PVW nurse during working hours (0730-2030)
- Contact Paediatric Virtual ward emergency number – out of hours (direct mobile number) (21:00 – 09:00) 07483966819
- Call 999 for any emergencies

Appendix/supporting Information-

1. Bronchiolitis parent leaflet :

   Caring for your child when bronchiolitis affects their breathing

2. Parent/Carer Consent form/smoking/vaping disclaimer form.
3. Paediatric Virtual ward SOP
4. Information Parent/Carer education pack-

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Paediatric Virtual Ward Pathways

Viral wheeze:

Patient cohort

Children and Young People aged 1 -16 years with mild/moderate wheeze who require clinical review for up to 3 days. CYP should **not be needing oxygen** and stable on 3 hourly salbutamol inhalers.

Referral to the Paediatric virtual ward has to be approved by the respective Consultant of the Week (COW) or the on-call Consultant (weekends).

The following criteria should be fulfilled:

Respiratory Rate/minute	12-18 months 25-40 18 - 24 months 25-35 2 to under 5 years 25-30 5-12 years 20-25 >12 years 15-20
Work of breathing	Mild or no recessions
Oxygen saturations in air	>92%
Heart Rate	18-24 months 100 – 155 2 to under 5 years 95-140 5 to 12 years 80-120 >12 years 60-100
Auscultation	Good air entry bilaterally with minimal wheeze
Speech	Able to speak in sentences
Conscious level	Normal

Exclusion criteria:

- Brittle Asthma i.e. CYP with a history of sudden, severe, life threatening attacks, usually without an obvious trigger
- Previous PICU admission
- Lower Respiratory Tract Infection/ Pneumonia
- Known failure to respond to inhalers
- History/suspicion of neuromuscular or metabolic disease

Parent/Carer – Consent for home care

Home care (Virtual ward)

- Patients will have saturation monitoring at home.
- Observations – HR, sats, RR, temp recorded by parents/carers and uploaded onto the dashboard
- Daily virtual ward rounds (by the respective Paediatric Registrar/COW)
- Once a day minimum- Call/video call from PVW team
- Question set answered daily by family

Safety netting: (common for all patients on PVW)

- Dedicated telephone line to contact PVW nurse during working hours (0730-2030)
- Contact Paediatric Virtual ward emergency number – out of hours (direct mobile number) (21:00 – 09:00) 07483966819

- Call 999 for any emergencies

Appendix/ Supporting documents:

1. Viral wheeze patient leaflet-

   Managing your child's viral wheeze

2. Parent/Carer Consent form/smoking/vaping disclaimer form
3. Virtual ward service SOP/Information
4. Information Parent/Carer education pack-

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Paediatric Virtual Ward Pathways

Croup:

This pathway is for patients with Croup who are medically stable and continue monitoring at home. The patients will be monitored remotely, using pulse oximetry to

monitor patient's oxygen levels. The median length of stay in Paediatric Virtual ward (PVW) is expected to be 3 days within this service,

Patient cohort

Children aged 2 months -24 months (corrected gestation) with mild symptoms who are clinically improving and require clinical review(s) for up to 7 days after discharge. The patient should have received its first dose of steroid and be saturating in Air.

Referral to the virtual ward has to be approved by the respective Consultant of the Week (COW) or the on-call Consultant (weekends). CYP has tolerated the oral dose(s) of steroid as required in the children's hospital

Croup leaflet given and content explained including warning symptoms and signs and when and where to seek medical attention if deteriorates.

The following criteria should be fulfilled:

Respiratory Rate	2 m – 1 year: < 50/min 1 yr – 2 yr: < 40/min
Work of breathing	Mild recessions
Apnoea	Absent for > 48 hours
Oxygen saturations	>90%
Heart Rate	2m – 1yr: <160/min 1 yr-2yr: <150/min
Capillary refill time	< 2seconds
Feeds	>50% of normal >3 wet nappies in 24 hours
Conscious level	Alert

- Absent/mild intermittent stridor with saturations above 92%
- Other diagnosis considered (i.e. foreign body, epiglottis etc) and excluded
- Parents confident that they can manage the child Dexamethasone given unless croup score 0.

Parent/Carer – Consent for home care and sign smoking/vaping disclaimer, completion of parent assessment booklet.

Safety netting: (common for all patients on PVW)

- Dedicated telephone line to contact PVW nurse during working hours (0730-2030)

- Contact Paediatric Virtual ward emergency number – out of hours (direct mobile number) (21:00 – 09:00) 07483966819
- Call 999 for any emergencies

Appendix/supporting Documents-

1. Treating your child's cough and breathing in croup-

Treating your child's cough and breathing in croup

2. Parent/Carer Consent form/smoking/vaping disclaimer form.
3. Paediatric Virtual ward SOP
4. Information Parent/Carer education pack-

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Paediatric Virtual Ward Pathways

Gastroenteritis:

This pathway is for patients with Gastroenteritis who are medically stable and continue monitoring at home. The patients will be monitored remotely, using pulse oximetry to monitor patient's oxygen levels, heart rate and respirations. The median length of stay in Paediatric Virtual ward (PVW) is expected to be 3 days within this service, with observation collected 3 times a day, one health question set completed and a least one phone/video call a day.

Patient cohort

Children aged 2 months -24 months (corrected gestation) with recovering symptoms who are clinically improving and require clinical review(s) for up to 7 days after discharge. The patient should be over the worst of the illness which is usually by day 2/3.

Referral to the paediatric virtual ward has to be approved by the respective Consultant of the Week (COW) or the on-call Consultant (weekends).

Respiratory Rate	2 m – 2 year: 30-50 2 yr – 4 yr: 15-30 5yr- 12yr; 15-20 12yr + : 10-15
Oxygen saturations	>92%
Heart Rate	2m – 1yr: <160/min 1 yr-4yr: <100/min 5-12: <100/min 12+: <90
Capillary refill time	< 2seconds
Feeds	>50% of normal >3 wet nappies in 24 hours
Conscious level	Alert

Parent/Carer – Consent for home care and sign smoking/vaping disclaimer, completion of parent assessment booklet.

*Feed/fluid requirements when well approx.-

2 months-6months: 150ml/Kg/day (or quantify their normal breast feeds)

6m- 1yr: 120ml/Kg/day (If weaned/breastfed, quantify their usual normal fluid intake)

>12months: 100ml/Kg/day (or quantify their normal fluid intake)

Infants 4-8: 1200 ml/day

Infants 9-13: 1600ml/day

Exclusion criteria:

- <2 months corrected gestational age
- Prematurity <34/40
- Congenital heart disease

- History of Neuromuscular or Metabolic disease
- Previous ICU admission

Home care (Virtual ward)

- Patients will have monitoring at home.
- Observations – HR, sats, RR, temp recorded by parents/carers and uploaded onto the dashboard
- Daily virtual ward rounds (by the respective Paediatric Registrar/COW)
- Once a day minimum- Call/video call from PVW team
- Question set answered daily by family

Safety netting: (common for all patients on PVW)

- Dedicated telephone line to contact PVW nurse during working hours (0730-2030)
- Contact Paediatric Virtual ward emergency number – out of hours (direct mobile number) (21:00 – 09:00) 07483966819
- Call 999 for any emergencies

Appendix/Supporting documents:

5. Gastroenteritis parent leaflet:

Managing diarrhoea and vomiting in children (leicestershospitals.nhs.uk)

6. Parent/Carer Consent form/smoking/vaping disclaimer form.
7. Paediatric Virtual ward SOP
8. Information Parent/Carer education pack-

5

Paediatric Virtual Ward Pathways

Constipation:

This pathway is for patients with chronic constipation who are medically stable and continue monitoring at home. The patients will be monitored remotely, using pulse oximetry to monitor patient's oxygen levels, heart rate and respirations. The median length of stay in Paediatric Virtual ward (PVW) is expected to be 3 days within this service, with observation collected 3 times a day, one health question set completed and a least one phone/video call a day.

Patient cohort

Children aged 2 months – 16 years (corrected gestation) with constipation symptoms who are clinically improving and require clinical review(s) for up to 7 days after discharge. The patient should be compliant with clenprep or DE compaction regime.

Referral to the paediatric virtual ward has to be approved by the respective Consultant of the Week (COW) or the on-call Consultant (weekends).

Respiratory Rate	2 m – 2 year: 30-50 2 yr – 4 yr: 15-30 5yr- 12yr; 15-20 12yr + : 10-15
Oxygen saturations	>92%
Heart Rate	2m – 1yr: <160/min 1 yr-4yr: <100/min 5-12: <100/min 12+: <90
Capillary refill time	< 2seconds
Feeds	>50% of normal >3 wet nappies in 24 hours
Conscious level	Alert

**Feed/fluid requirements when well approx.-*

2 months-6months: *150ml/Kg/day (or quantify their normal breast feeds)*

6m- 1yr: *120ml/Kg/day (If weaned/breastfed, quantify their usual normal fluid intake)*

>12months*: 100ml/Kg/day (or quantify their normal fluid intake)*

Infants 4-8: *1200 ml/day*

Infants 9-13*: 1600ml/day*

Parent/Carer – Consent for home care and sign smoking/vaping disclaimer, completion of parent assessment booklet.

Exclusion criteria:

- <2 months corrected gestational age

- Prematurity <34/40
- Congenital heart disease
- History of Neuromuscular or Metabolic disease
- Previous ICU admission

Home care (Virtual ward)

- Patients will have monitoring at home.
- Observations – HR, sats, RR, temp recorded by parents/carers and uploaded onto the dashboard
- Daily virtual ward rounds (by the respective Paediatric Registrar/COW)
- Once a day minimum- Call/video call from PVW team
- Question set answered daily by family

Safety netting: (common for all patients on PVW)

- Dedicated telephone line to contact PVW nurse during working hours (0730-2030)
- Contact Paediatric Virtual ward emergency number – out of hours (direct mobile number) (21:00 – 09:00)
- Call 999 for any emergencies

Appendix:

9. Constipation parent leaflet:

Treating childhood constipation and soiling with a laxative regime (disimpaction)

10. Parent/Carer Consent form/smoking/vaping disclaimer form.
11. Paediatric Virtual ward SOP
12. Information Parent/Carer education pack-

6

Paediatric Virtual Ward Pathways

Respiratory Tract Infection:

Patient cohort

Children and Young People aged 18mths -16 years with Upper or lower respiratory tract infection, who require clinical review for up to 7 days. CYP should **not be needing oxygen** and stable on oral antibiotics and/or inhalers.

Referral to the Paediatric virtual ward has to be approved by the respective Consultant of the Week (COW) or the on-call Consultant (weekends).

The following criteria should be fulfilled:

Respiratory Rate/minute	18 - 24 months 25-35 2 to under 5 years 25-30 5-12 years 20-25 >12 years 15-20
Work of breathing	Mild or no recessions
Oxygen saturations in air	>92%
Heart Rate	18-24 months 100 – 155 2 to under 5 years 95-140 5 to 12 years 80-120 >12 years 60-100
Auscultation	Good air entry bilaterally with minimal wheeze
Speech	Able to speak in sentences
Conscious level	Normal

Exclusion criteria:

- Brittle Asthma i.e. CYP with a history of sudden, severe, life threatening attacks, usually without an obvious trigger
- Previous PICU admission
- Known failure to respond to inhalers
- History/suspicion of neuromuscular or metabolic disease

Parent/Carer – Consent for home care

Home care (Virtual ward)

- Patients will have saturation monitoring at home.
- Observations – HR, sats, RR, temp recorded by parents/carers and uploaded onto the dashboard
- Daily virtual ward rounds (by the respective Paediatric Registrar/COW)
- Once a day minimum- Call/video call from PVW team
- Question set answered daily by family

Safety netting: (common for all patients on PVW)

- Dedicated telephone line to contact PVW nurse during working hours (0730-2030)
- Contact Paediatric Virtual ward emergency number – out of hours (direct mobile number) (21:00 – 09:00)
- Call 999 for any emergencies

Appendix/ Supporting documents:

13. Parent/Carer Consent form/smoking/vaping disclaimer form
14. Virtual ward service SOP/Information
15. Information Parent/Carer education pack-

7

Paediatric Virtual Ward Pathways

Consultant Lead:

This pathway is for patients which the COW requires further monitoring, who are medically stable that require a further period of monitoring at home. The patients will be monitored remotely, using pulse oximetry to monitor patient's oxygen levels, heart rate and respiration rate. They will be required to also take the patients temperature. The median length of stay in Paediatric Virtual ward (PVW) is expected to be 3 days within this service, with observation collected 3 times a day, one health question set completed and a least one phone/video call a day, to support the patients.

Patient cohort

Children aged 2 months - (corrected gestation) – 16 yrs with mild symptoms who are clinically improving and require clinical review(s) for up to 7 days after discharge. The patients should be over the 'peak' of their illness/symptoms or have a specific plan inplace from the consultant.

Referral to the virtual ward has to be approved by the respective Consultant of the Week (COW) or the on-call Consultant (weekends).

The following criteria should be fulfilled:

Respiratory Rate	2 m – 1 year: < 50/min 1 yr – 2 yr: < 40/min 2 yr – 4 yr: 15-30 5yr- 12yr; 15-20 12yr + : 10-15
Work of breathing	Mild recessions
Apnoea	Absent for > 48 hours
Oxygen saturations	>92%
Heart Rate	2m – 1yr: <160/min 1 yr-4yr: <100/min 5-12: <100/min 12+: <90
Capillary refill time	< 2seconds
Feeds	>50% of normal >3 wet nappies in 24 hours
Conscious level	Alert

*Feed/fluid requirements when well

2 months-6months: 150ml/Kg/day (or quantify their normal breast feeds)

6m- 1yr: 120ml/Kg/day (If weaned/breastfed, quantify their usual normal fluid intake)

>12months: 100ml/Kg/day (or quantify their normal fluid intake) **Infants 4-8:** 1200 ml/day

Infants 9-13: 1600ml/day

Parent/Carer – Consent for home care and sign smoking/vaping disclaimer, completion of parent assessment booklet.

Exclusion criteria:

- <2 months corrected gestational age
- Prematurity <34/40 (if under 2 years old)
- Congenital heart disease
- History of Neuromuscular or Metabolic disease
- Previous admission to ITU in past year.

Home care (Virtual ward)

- Patients will have saturation monitoring at home.
- Observations – HR, sats, RR, temp recorded by parents/carers and uploaded onto the dashboard
- Daily virtual ward rounds (by the respective Paediatric Registrar/COW)
- Once a day minimum- Call/video call from PVW team
- Question set answered daily by family

Safety netting: (common for all patients on PVW)

- Dedicated telephone line to contact PVW nurse during working hours (0730-2030)
- Contact Paediatric Virtual ward emergency number – out of hours (direct mobile number) (2030-0730)
- Call 999 for any emergencies

Appendix:

16. Parent/Carer Consent form/smoking/vaping disclaimer form.
17. Paediatric Virtual ward SOP
18. Information Parent/Carer education pack-

8

Ground rules for the admission to the Paediatric Virtual Ward (PVW)

The Paediatric Virtual Ward (PVW) team provides enhanced monitoring and assessment for paediatric patients who are deemed appropriate to use the service and meet a defined criteria pathway. It provides remote monitoring, video and telephone consultations as well as support and follow-up for patients who would normally require hospitalisation.

• The family must have a LLR registered GP and a fixed address where the PVW nurses can visit if required.

• The PVW nurses will conduct at least one phone call or video consultation every day.

• The nurse will undertake clinical assessments according to defined pathways and provide the family with appropriate advice, support and education.

• At each assessment the team will decide on appropriate follow up or when to discharge/escalate and discuss this with the family.

• The clinical responsibility for on-going management is with the respective Consultant
Paediatrician of the Week who covers the children wards during normal working hours i.e. 0830-1700 Monday to Friday inclusive.

• The Paediatric Consultant covering the service out of hours i.e. between 1700-2100 and at weekends/national holidays between 0900-2100 is the 'On Call' Consultant.

• Parents/carers must agree to provide observations between certain hours of the day
and to complete a health questionnaire for assessment purposes each day.

• Parents/carers are advised to seek appropriate help as needed between nursing assessments.

• Parents/carers are provided with contact details for the PVW team. They are able to
access the on-call PVW emergency phone directly 24/7 for their current illness episode only.

• If the PVW team feel at any stage that the home environment is inappropriate or unsafe for treatment to be administered, the parent/carer will be expected to bring the
child back into Children's A&E for reassessment/readmission if required.

• Parents/ carers must agree to maintain a health home environment, refraining from smoking/vaping around their child.

• If parents/carers fail to submit question sets/observations within the agreed time frame, when asked to do so or if the family is unable to be contacted, a home visit/safeguarding referral may be necessary.

By signing below, I agree to comply with the terms and conditions above:-

Patient name……

NHS number……DOB……

Parent / guardian name……..…..

Signature……..

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

Contact and review details	
Guideline Lead (Name and Title) S Bandi – Consultant HoS	**Executive Lead** Chief Nurse
Details of Changes made during review: New document	