LRI Emergency Department

Children's ED Sepsis Guideline

Staff relevant to:	All medical and nursing staff employed by UHL, including bank, agency and locum staff working in the Children's Emergency Department
Team approval date:	November 2024
Version:	1
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Written by:	D Roland
Trust Ref:	C76/2024

Contents

1. Introduction and Who Guideline applies to

This document provides guidance to staff on the initial recognition and management of sepsis in children and young people presenting to the Children's Emergency Department within University Hospitals of Leicester.

This guideline is relevant to all medical and nursing staff employed by UHL, including bank, agency and locum staff.

This guideline applies to all infants and children presenting to UHL as acute admissions to the Paediatric Emergency Department (PED).

This guideline **does NOT** apply to neonates within the UHL Maternity Services (Labour Ward, Neonatal Units, Post Natal Ward) or Children on wards.

Infants and Children with cancers on chemotherapy, following a haematopoietic stem cell transplant (bone marrow transplant), or neutropenic sepsis should be treated using this guidance alongside NICE clinical guidance on neutropenic sepsis (NICE CG151) and the UHL Children's Oncology Unit guidelines.

2. Background & guideline standards

Sepsis is a life-threatening illness caused by the body's response to an infection.

2.1 Recognition of sepsis in children is often very difficult as clinical signs and symptoms can be similar to self-limiting or less severe conditions. Early recognition coupled with early antibiotic administration and protocolised management saves lives, reduces morbidity, and reduces hospital length of stay (1).

2.2 Bacterial infections are by far the most common cause of sepsis, but it can also be caused by viral or fungal infections. Common causes include: respiratory tract infections, urinary tract infections, congenital infections, bloodstream infections, abdominal infections, infected wounds or indwelling lines and catheters, and cellulitis.

2.3 Previously sepsis has been defined as a suspected or proven infection associated with a Systemic Inflammatory Response (SIRS) and Severe Sepsis, sepsis with organ dysfunction. (2). SIRS is the presence of at least 2 of the following: Core temperature > 38.5°C or < 36°C, tachycardia or tachypnoea for age and white cell count elevated or depressed.

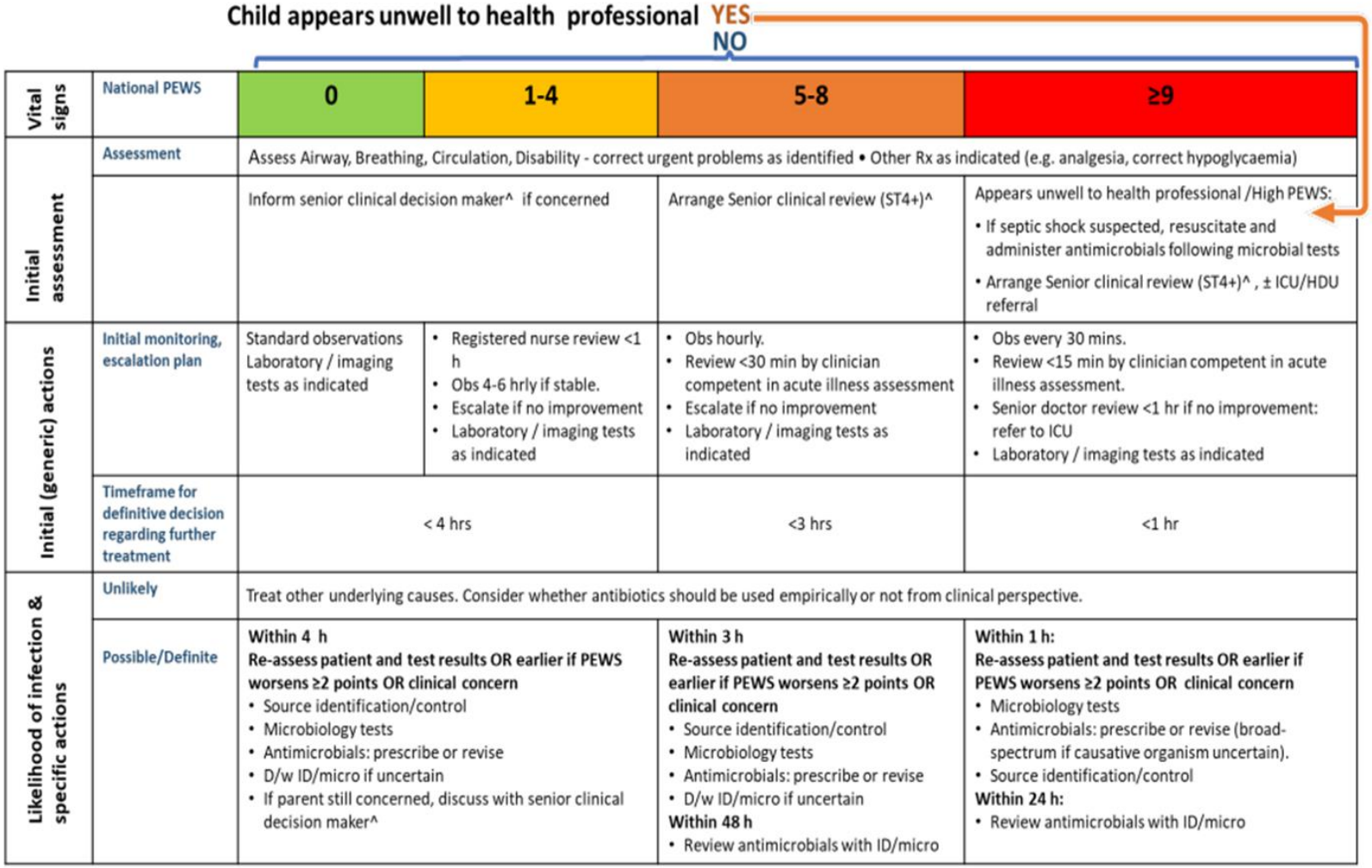
2.4 More recently evidence suggests the SIRS approach is poorly specific for Sepsis and in 2024 the Society of Critical Care Medicine Paediatric Sepsis Definition Task Force (3) released a new definition of sepsis, the Phoenix

criteria (Appendix A). This approach affirms the need to demonstrate organ dysfunction to confirm the presence of sepsis.

2.5 A new definition of sepsis is useful for case ascertainment and audit purposes but does not solve the challenge of identification in acute settings such as primary care and emergency departments. In order to address the poor specificity of previous NICE (4) guidance, the Academy of Medical Colleges (AoMRC) released guidance on initial antimicrobial treatment of sepsis (5) (Table 1).

2.6 The AoMRC guidance utilises early warning scores, as opposed to individual physiological variables, as a track and trigger to highlight to staff when either sepsis or septic shock should be considered.

Table 1: AoMRC approach to sepsis recognition in children



Vital signs	National PEWS	0	1-4	5-8	≥9
Initial assessment	Assessment	Assess Airway, Breathing, Circulation, Disability - correct urgent problems as identified • Other Rx as indicated (e.g. analgesia, correct hypoglycaemia)			
		Inform senior clinical decision maker^ if concerned		Arrange Senior clinical review (ST4+)^	Appears unwell to health professional /High PEWS: • If septic shock suspected, resuscitate and administer antimicrobials following microbial tests • Arrange Senior clinical review (ST4+)^ , ± ICU/HDU referral
Initial (generic) actions	Initial monitoring, escalation plan	Standard observations Laboratory / imaging tests as indicated	• Registered nurse review <1 h • Obs 4-6 hrly if stable. • Escalate if no improvement • Laboratory / imaging tests as indicated	• Obs hourly. • Review <30 min by clinician competent in acute illness assessment • Escalate if no improvement • Laboratory / imaging tests as indicated	• Obs every 30 mins. • Review <15 min by clinician competent in acute illness assessment. • Senior doctor review <1 hr if no improvement: refer to ICU • Laboratory / imaging tests as indicated
	Timeframe for definitive decision regarding further treatment	< 4 hrs		<3 hrs	<1 hr
Likelihood of infection & specific actions	Unlikely	Treat other underlying causes. Consider whether antibiotics should be used empirically or not from clinical perspective.			
	Possible/Definite	**Within 4 h** **Re-assess patient and test results OR earlier if PEWS worsens ≥2 points OR clinical concern** • Source identification/control • Microbiology tests • Antimicrobials: prescribe or revise • D/w ID/micro if uncertain • If parent still concerned, discuss with senior clinical decision maker^		**Within 3 h** **Re-assess patient and test results OR earlier if PEWS worsens ≥2 points OR clinical concern** • Source identification/control • Microbiology tests • Antimicrobials: prescribe or revise • D/w ID/micro if uncertain **Within 48 h** • Review antimicrobials with ID/micro	**Within 1 h:** **Re-assess patient and test results OR earlier if PEWS worsens ≥2 points OR clinical concern** • Microbiology tests • Antimicrobials: prescribe or revise (broad-spectrum if causative organism uncertain). • Source identification/control **Within 24 h:** • Review antimicrobials with ID/micro

3. Guideline Statements

This guideline is based around 3 practice tools:

- **Paediatric Sepsis POPS Pathway** - Appendix B
- **Paediatric Sepsis Antibiotic Crib Cards** - Appendix C

Answers to Frequently Asked Questions on Paediatric Sepsis are available. – Appendix C

Paediatric Sepsis POPS Pathway are based on:

- International guidelines on the management of paediatric sepsis (5,6)
- The UK Sepsis Trust Paediatric Sepsis 6 Tool (7)

The Paediatric Sepsis Antibiotic Crib Cards are based on local microbial prevalence and resistance patterns, UHL antibiotic prescribing policies and drug monographs, and has been approved by the UHL Antimicrobial Working Party.

3.1 The Paediatric Sepsis POPS Pathway

- **It is the responsibility of the attending clinical team (nurse or doctor) to identify sepsis in children.**

- It is the responsibility of the attending clinical team to document all care and treatment on the Paediatric Sepsis Assessment on Nervecentre.

- **The Paediatric Sepsis POPS Pathway** provides details of the patient care, monitoring and actions that are required to recognise and treat sepsis / severe sepsis / septic shock in children.

- **The Paediatric Sepsis POPS Pathway** should be used in ALL children who have medical / family concerns, or have threshold observations. The tool must be initiated as soon as these concerns have been identified.

- Note that POPS is used in the Emergency Department (PED) and PEWS in all other areas to help identify infants and children who need to be screened for sepsis.

- **A POPS of 8+ should prompt immediate review by a clinician at ST4 level or above (ST4+), and have the Paediatric Sepsis 6 actions completed within 1 hour of Time Zero if sepsis is felt to be present.**

- The Paediatric Sepsis is a care bundle which is a useful checklist to ensure critical interventions are undertaken.

- Time Zero is the time at which secondary nurse assessment occurs in the PED.

- **The clinical team should consider calling for additional assistance** to ensure the treatment timeline is adhered to, particularly for sick children.

- If there is to be a delay in senior review (ST4+) in patients with septic shock the **Paediatric Sepsis Six** actions should be commenced by the clinical team as soon possible to enable completion within 1 hour.

- **Note that de-escalation or variation from the Paediatric Sepsis 6 is acceptable.**

- Some conditions may mimic sepsis (e.g. bronchiolitis), and children identified as having or being at high risk of sepsis may not always require all 6 elements of Sepsis Six. This assessment and decision should be made by a senior (ST4+) and reasons documented on the tool.

- **It is very important for children identified as having septic shock to receive antibiotics within 1 hour.** (NICE [NG51])

4. The Children's Sepsis Box

The Children's Sepsis Boxes are available and contain appropriate antibiotics and equipment to carry out the Paediatric Sepsis 6 actions. This was designed to aid in delivering the Paediatric Sepsis 6 actions within 1 hour. Whenever possible, the sepsis box should be utilised to complete actions.

Paediatric Sepsis Antibiotic Crib Cards are available within the Children's Sepsis Boxes.

For Children who are already on an antibiotic, consider whether a change is needed - discuss with the most experienced available Paediatrician or microbiologist.

The empirical antibiotics listed in Appendix C may not be active against multi-drug resistant organisms. Children colonised with resistant organisms should have an alert in the 'Infection Prevention' section of their nervecentre record. To prevent delays in antibiotic, children who have an alert can still receive the empirical antibiotic regimes listed, but should then be urgently discussed with a microbiologist to ensure it is appropriate.

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5. Education and Training

Training and raising awareness are ongoing processes. Ongoing awareness is promoted through the ward based sepsis champions, whose role will be to promote timely, effective sepsis care through use of the **Paediatric Sepsis POPS Pathway**, the Paediatric Sepsis Antibiotic Crib Cards, and the Paediatric Sepsis Box.
Training is provided for medical staff during lunchtime teaching and other sessions, and at junior doctors' induction training.
Nursing education is supported by the Practice Development teams, and by ward based sepsis champions.

6. Monitoring Compliance

Key Performance Indicator	Method of Assessment	Frequency	Lead
Infants and children who meet criteria are screened for sepsis.	Audit of children with POPS ≥5 for use of the paediatric sepsis screening and action tool.	Quarterly	UHL Paediatric Sepsis lead
Children identified as having Septic Shock have antibiotics within 1 hour	Documentation of administration times for antibiotics.	Quarterly	UHL Paediatric Sepsis lead
Children identified as having Sepsis have antibiotics within 3 hour	Documentation of administration times for antibiotics.	Quarterly	UHL Paediatric Sepsis lead
.	Paediatric patients in ED are audited separately alongside adult patients		UHL Paediatric Emergency Department Sepsis lead
Continued involvement of Paediatric Sepsis champions.	Annual confirmation from each champion. To attend annual training update.	Annual	UHL Paediatric Sepsis lead

7. Supporting References

Paul R, Neuman MI, Monuteaux MC, Melendez E. Adherence to PALS Sepsis Guidelines and Hospital Length of Stay. Pediatrics. 2012 Aug; 130(2):e273–80.

Goldstein B, Giroir B, Randolph A, International Consensus Conference on Pediatric Sepsis. International pediatric sepsis consensus conference: definitions for sepsis and organ dysfunction in pediatrics. Pedi Critic Care Med. 2005 Jan; 6(1):pp. 2–8.

Sanchez-Pinto LN, Bennett TD, DeWitt PE, et al. Development and Validation of the Phoenix Criteria for Pediatric Sepsis and Septic Shock. JAMA. Published online January 21, 2024. doi:10.1001/jama.2024.0196

NICE Guideline [NG51] Sepsis: recognition, diagnosis and early management. July 2016 **https://www.nice.org.uk/guidance/ng51**

Statement on the initial antimicrobial treatment of sepsis. Version 2.0 Academy of Medical Royal Colleges 2022

Brierley J, Carcillo JA, Choong K, Cornell T, DeCaen A, Deymann A, et al. Clinical practice parameters for hemodynamic support of pediatric and neonatal septic shock: 2007 update from the American College of Critical Care Medicine. Crit Care Med. 2009 Feb; 37(2):666–88.

The UK Sepsis Trust Paediatric Sepsis 6 **http://sepsistrust.org/clinical-toolkit/** last accessed 16 Jun 2016

8. Key Words

Paediatric sepsis, Paediatric Sepsis 6, sepsis, septic child, septic infant, septic shock, severe sepsis, septicaemia, children, infant, POPS, PEWS, antibiotic

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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) Dr D Roland	**Executive Lead** Chief Medical Officer
Details of Changes made during review: New Document	

Appendix A : The Phoenix Sepsis Score

Table 2. The Phoenix Sepsis Score[a]

	0 Points	1 Point	2 Points	3 Points
Respiratory (0-3 points)				
	Pao_2:FIO_2 ≥400 *or* Spo_2:FIO_2 ≥292[b]	Pao_2:FIO_2 <400 and any respiratory support[c] *or* Spo_2:FIO_2 <292 and any respiratory support[c]	Pao_2:FIO_2 100-200 and IMV *or* Spo_2:FIO_2 148-220 and IMV	Pao_2:FIO_2 <100 and IMV *or* Spo_2:FIO_2 <148 and IMV
Cardiovascular (0-6 points)				
		1 point each (up to 3) for:	**2 points each (up to 6) for:**	
	No vasoactive medications[d]	1 Vasoactive medication[d]	≥2 Vasoactive medications[d]	
	Lactate <5 mmol/L[e]	Lactate 5-10.9 mmol/L[e]	Lactate ≥11 mmol/L[e]	
Mean arterial pressure by age, mm Hg[f,g]				
<1 mo	>30	17-30	<17	
1 to 11 mo	>38	25-38	<25	
1 to <2 y	>43	31-43	<31	
2 to <5 y	>44	32-44	<32	
5 to <12 y	>48	36-48	<36	
12 to 17 y	>51	38-51	<38	
Coagulation (0-2 points)[h]				
		1 point each (maximum of 2 points) for:		
	Platelets ≥100 × 10^3/μL	Platelets <100 × 10^3/μL		
	International normalized ratio ≤1.3	International normalized ratio >1.3		
	D-dimer ≤2 mg/L FEU	D-dimer >2 mg/L FEU		
	Fibrinogen ≥100 mg/dL	Fibrinogen <100 mg/dL		
Neurologic (0-2 points)[i]				
	Glasgow Coma Scale score >10[j]; pupils reactive	Glasgow Coma Scale score ≤10[j]	Fixed pupils bilaterally	

Abbreviations: FEU, fibrinogen equivalent units; FIO_2, fraction of inspired oxygen; IMV, invasive mechanical ventilation; Spo_2, pulse oximetry oxygen saturation.

[a] The Phoenix Sepsis Score may be calculated in the absence of some variables (eg, even if lactate level is not measured and vasoactive medications are not used, a cardiovascular score can still be ascertained using blood pressure). It is expected that laboratory tests and other measurements will be obtained at the discretion of a medical team based on clinical judgment. Unmeasured variables contribute no points to the score.

[b] Calculated only when Spo_2 is ≤97%.

[c] Respiratory dysfunction of 1 point can be assessed in any patient receiving oxygen, high-flow, noninvasive positive pressure, or IMV respiratory support, and includes Pao_2:FIO_2 <200 and Spo_2:FIO_2 <220 in children who are not receiving IMV.

[d] Vasoactive medications include any dose of epinephrine, norepinephrine, dopamine, dobutamine, milrinone, and/or vasopressin (for shock).

[e] Lactate can be arterial or venous. Lactate reference range is 0.5-2.2 mmol/L.

[f] Use measured mean arterial pressure preferentially (invasive arterial if available or noninvasive oscillometric), and if measured mean arterial pressure is not available, a calculated mean arterial pressure (⅓ × systolic + ⅔ × diastolic) may be used as an alternative.

[g] Age is not adjusted for prematurity, and the criteria do not apply to birth hospitalizations, children with postconceptional age <37 weeks, or those aged ≥18 years.

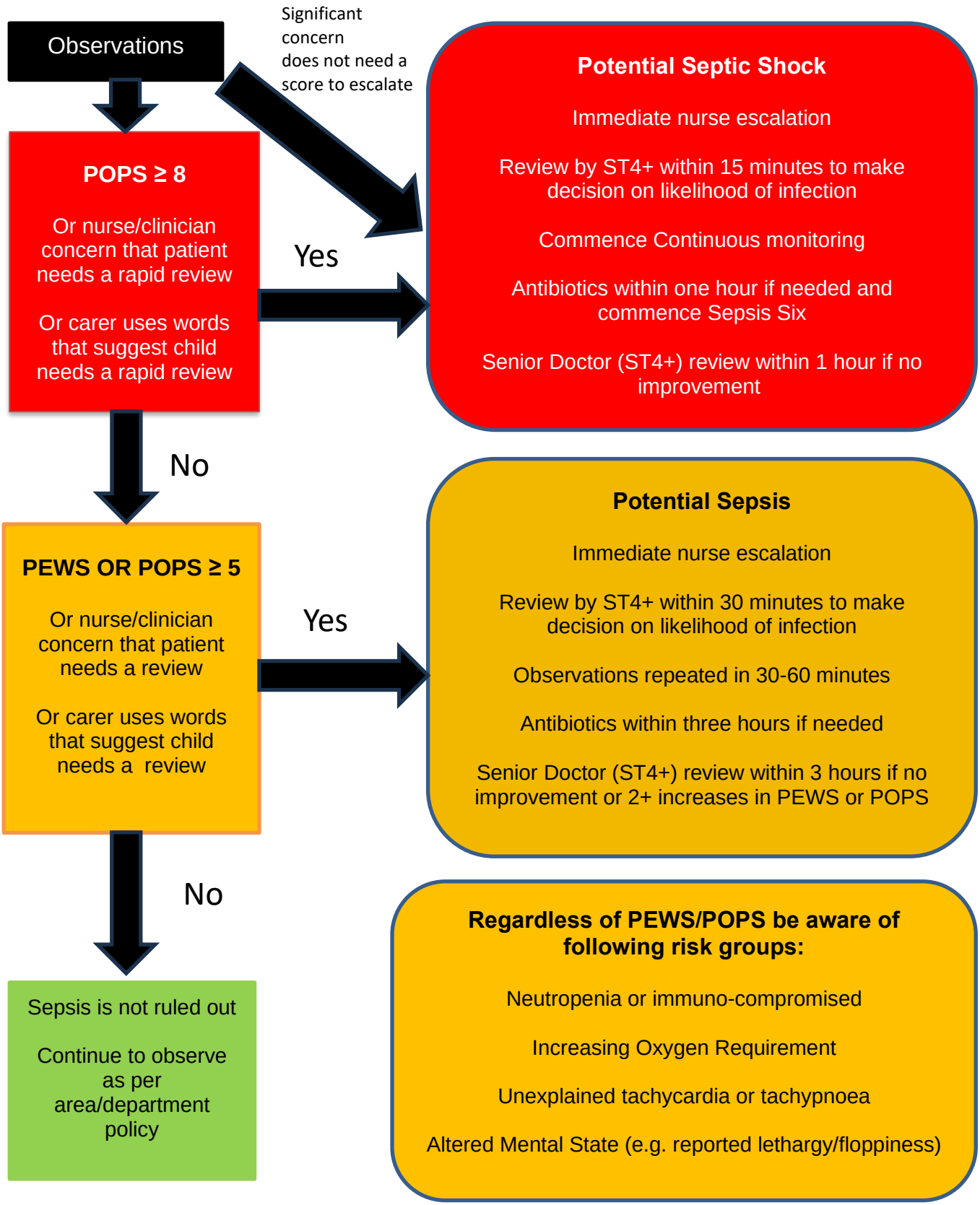
[h] Coagulation variable reference ranges: platelets, 150-450 × 10^3/μL; D-dimer, <0.5 mg/L FEU; fibrinogen, 180-410 mg/dL. International normalized ratio reference range is based on local reference prothrombin time.

[i] The neurologic dysfunction subscore was pragmatically validated in both sedated and nonsedated patients and those with and without IMV support.

[j] The Glasgow Coma Scale score measures level of consciousness based on verbal, eye, and motor response and ranges from 3 to 15, with a higher score indicating better neurologic function.

Appendix B : POPS Pathway

This tool is for use on any child who presents with a potential infection or risk of infection who is receiving observations in the Children's Emergency Department or in patient areas.



Paediatric Sepsis Six Bundle

Use the department sepsis box and work together to complete all elements within 1 hour.
Record time of completion for each actions. Take observations every 15 - 30 min.

Record Time Zero	PED/CAU: booking in time. Inpatients: time when red flag sepsis signs/obs develop.			
	Print Name	Grade	Sign	Date

De-escalation or variation from the Sepsis Six is acceptable as some conditions may mimic sepsis (e.g. bronchiolitis), and children identified as having or being at high risk of sepsis may not always require all 6 elements of Sepsis Six. This assessment and decision should be made by a senior clinician (ST4 and above) and reasons documented here:

Print Name | Grade | Sign | Date | Time

1	**Administer supplementary oxygen** • Via rebreathing facemask or equivalent. Titrate oxygen aiming for SpO_2 > 94%	Time started	Name
2	**Obtain IV / IO access & take blood tests** a. Blood culture b. Blood gas for glucose & lactate c. FBC, CRP, coagulation, U & E d. Lumbar puncture unless contraindicated in: • less than 1 month • 1 - 3 months and looks unwell or has WBC < 5 or > 15 x 10^9 Consider further investigations but DO NOT DELAY TREATMENT for these:	Time IV/IO access Time blood culture taken Time LP taken	Name Name Name
3	**Give IV or IO antibiotics** • Broad spectrum cover as per UHL policy (use sepsis box) • Prescribe first dose in STAT dose section and document time	Time given	Name
4	**Consider Fluid resuscitation** • Aim to restore normal circulating volume and physiological parameters • If Lactate > 2mmol/l: Give 20 ml/kg (10 ml/kg if < 1 month) of 0.9% Sodium Chloride over 5 - 10 minutes, and repeat if necessary • Be aware of risk of fluid overload (esp. in < 1 month)	Time started	Name
5	**Escalation** • Review by a senior clinician ST4 or above or equivalent • Discuss with Consultant Paediatrician and PICU if: • Lactate > 4 mmol/l • No clinical improvement following second fluid bolus	Time seen	Name
6	**Consider inotropic support early** • If normal physiological parameters are not restored after 40 ml/kg fluids • NB adrenaline infusion may be given via peripheral IV or IO access	Time started	Name

Appendix C: Antimicrobial Crib Sheet

Sepsis < 1 Month age
Dosing and Administration information 1/2

Amoxicillin

Dose	Frequency	Administration
50mg/kg/dose IV	**12 hourly (under 7 days old)** **8 hourly (over 7 days old)**	250mg vial add 4.8ml water for injection (50mg/ml) **IVI over 30 minutes** Flush with 0.9% sodium chloride

** Consider 100mg/kg/dose for Listeria meningitis

CefoTAXime

Dose	Frequency	Administration
50mg/kg/dose IV	**12 hourly (under 7 days old)** **8 hrly (7 to 20 days old)** **6 hrly (over 20 days old)**	500mg vial add 4.8ml water for injection (100mg/ml) **IV bolus over 3 - 5 minutes** Flush with 0.9% sodium chloride

*** Ceftriaxone may be used as an alternative to cefotaxime once clinical recovery is evident, but ceftriaxone should **not** be used in premature babies or in babies with jaundice, acidosis or hypoalbuminaemia.

*** Always prescribe 1st dose in once only/stat section on front of prescription chart**

Sepsis < 1 Month age recommendations continued next page

Sepsis < 1 Month age
Dosing and Administration information 2/2

Gentamicin

ONLY for the following indications:

1. **Haemodynamic instability**
   - E.g., Raised lactate / inotrope requirement / > 40 ml/kg fluid resuscitation / ICU care
2. **Concern / high risk for multi-drug resistant organisms**
   - Risk factors: Frequent hospitalisations / Previous NICU or ICU admission / Previous treatment for NEC / Recent foreign travel/hospitalisation
   - Previous known multi-resistant gram-negative organisms – to discuss with microbiology if empiric treatment needs to be adjusted esp. if cefotaxime and/or gentamicin resistant

Post Conceptional age	Dose	Frequency	Administration
< 34 weeks CGA	Use NNU dosing		Slow bolus (over 3 - 5 minutes) Plan to measure levels pre & post third dose
≥ 34 to < 38 weeks CGA	5 mg/kg	36 hourly	
≥ 38 weeks CGA, up to 7 days old	5 mg/kg	36 hourly	
≥ 38 weeks CGA. 7 – 28 days old	5 mg/kg	24 hourly	

Refer to prescription chart for further information

Aciclovir

Indicated for Concerns for Herpes Simplex Virus (HSV) infection

- Risk factors: Maternal HSV or cold sores / peri partum fever or PROM / Scalp electrode monitoring / History of contact / Cutaneous vesicles and/or mucosal ulcers / Seizures – particularly focal seizures / Elevated transaminases

Dose	Frequency	Administration
20mg/kg/dose IV	**8 hourly**	250mg vial in 10ml (**25mg/ml)** Or 250mg powder - add 10ml water for injection **(25mg/ml)** **IVI over 60 minutes** Flush with 0.9% sodium chloride

*** Always prescribe 1st dose in once only/stat section on front of prescription chart**

Sepsis 1 - 3 Month age
Dosing and Administration information

Amoxicillin		
Dose	**Frequency**	**Administration**
50mg/kg/dose IV	**6 hourly**	500mg vial add 9.6ml water for injection (50mg/ml) **IVI over 30 minutes** Flush with 0.9% sodium chloride

CefTRIAXone		
Dose	**Frequency**	**Administration**
80mg/kg/dose IV **(max 2g)**	**Once daily**	1g vial add 9.3ml water for injection (100mg/ml) **IVI over 30 minutes** Flush with 0.9% sodium chloride

*** Always prescribe 1st dose in once only/stat section on front of prescription chart**

Sepsis > 3 Month age
Dosing and Administration information

Version 2.1
UHL AWG 2015

Authors: J Tong / D Harris

CefTRIAXone		
Dose	**Frequency**	**Administration**
80mg/kg/dose IV **(max 2g)**	**Once daily**	1g vial add 9.3ml water for injection (100mg/ml) **IVI over 30 minutes** Flush with 0.9% sodium chloride

*** Always prescribe 1st dose in once only/stat section on front of prescription chart**

Paediatric Haematology / Oncology Sepsis
Dosing and Administration information

Piperacillin - Tazobactam

Dose	Frequency	Administration
90 mg/kg/dose IV **(max. 4.5g)**	**Age > 1 month: 6 hourly** **Age < 1 month: 8 hourly**	Reconstitute with a 16.5 ml of water for injection. (225mg/ml) **IV bolus over 3 - 5 minutes** May be further diluted with 0.9% sodium chloride or 5% dextrose for 30 minute infusion

Teicoplanin - refer to IV Monograph

Dose	Frequency	Administration
Age > 1 month: 10 mg/kg IV **(max 600mg)**	**12 hourly FOR FIRST 3 DOSES ONLY THEN DAILY**	Slowly add the provided ampoule of water for injection. Gently roll the vial to dissolve all the powder. Avoid shaking as this may cause foaming. If this occurs allow to stand for 15 minutes before using. Final concentration is 400mg in 3ml. **IV bolus over 3 - 5 minutes** May be further diluted with 0.9% sodium chloride or for 30 minute infusion

*** Always prescribe 1st dose in once only/stat section on front of prescription chart**

Appendix D: Frequently asked questions about sepsis in children

When should Sepsis or Septic Shock be considered?

- National PEWS/POPS of 5+.
- If you are concerned your patient looks or is unwell.
- If your patient's family is concerned their child may have sepsis.

Who should screen children for Sepsis?

All health care professionals reviewing patients or measuring PEWS or POPS should be aware of the above criteria. You should be prepared to escalate quickly.

What is screening for Sepsis in children?

An assessment of the child using the **Paediatric Sepsis NPEWS and POPS Pathway** available from the UHL intranet.

Any concern of Septic Shock should prompt an immediate review by a doctor at middle grade/registrar (ST4) level or above in experience. If there is to be a delay in senior review, the Paediatric Sepsis Six actions should be commenced as soon possible to enable completion within 1 hour of time zero.

** Note not all children screened will have sepsis. Conditions such as asthma, anaphylaxis, DKA, bronchiolitis etc. may mimic signs of sepsis. If unsure, ask someone more experienced.*

Do I need to consider sepsis in any child with a POPS or PEWS ≥ 5?

Yes, if there is a change in clinical condition or their PEWS is triggering for different parameters.

If it is obvious that your patient is triggering due to on-going oxygen requirements or other chronic disease, then clinical judgement should be used. This decision should be made by the most senior resident doctor and be documented in the medical record/NerveCentre as: "no evidence of infection/sepsis"

** Ensure there is an appropriate escalation plan documented e.g. if the child is known to score high then document at what point further action is required.*

What is time zero for red flag sepsis?

For patients admitted directly to PED: The time of initial assessment

For inpatients with signs of infection: **time when the patient develops observations consisted with sepsis**

Effective care requires the Paediatric Sepsis Six to be completed within 1 hr of time zero in patients with septic shock. Use a paediatric sepsis box and work together with colleagues to help meet this goal. Patients identified as sepsis and receiving

treatment should continue to be monitored. Further deterioration requires prompt review.

How do I know if my patient has an infection?

A **raised temperature is not essential** to suspect infection.

Consider sepsis if they have been admitted with a suspected/proven infection such as pneumonia, urinary tract infection, appendicitis/abdominal infection, cellulitis/septic arthritis or other sources of infection. Lower the threshold of suspicion for children under 3 months age, with chronic disease, recent surgery or the immunocompromised. Consider if they have new symptoms during hospital stay, e.g. wound redness/erythema, or abdominal pain. Consider infections from indwelling lines or devices.

Which antibiotics do I give to children with sepsis?

Follow UHL paediatric antimicrobial guidelines. Appropriate age based antibiotic choices and directions for administration are available in the paediatric sepsis boxes.

What if my patient is on antibiotics and sepsis is considered?

Patient deterioration with new red flag(s) requires escalation as per the paediatric sepsis six care bundle. Discuss antibiotic changes with most experienced available registrar/consultant paediatrician/microbiologist. Any outstanding elements of the Paediatric Sepsis Six should also be completed.

Do all elements of the Paediatric Sepsis Six need to be carried out?

A clinical decision should be made by the registrar assessing the child as to whether it is appropriate to carry out each element of the Paediatric Sepsis Six. De-escalation or variation from the Sepsis Six is acceptable as some conditions may mimic sepsis (e.g. bronchiolitis), and children identified as having or being at high risk of sepsis may not always require all 6 elements of Sepsis Six. This assessment and decision should be made by a senior clinician (ST4 and above) and reasons documented here:

My patient is DNAR and is triggering PEWS scores – what should I do?

These children will most often be for **active treatment** of sepsis. All escalation actions (PEWS/Sepsis etc) **must** be adhered to unless there is a clear plan for limitation of treatment documented.

My patient is on an end of life care plan – what should I do?

The medical team will need to decide what management for sepsis is appropriate.

Where do I put the Sepsis Screening tool?

File it in the patient's medical record please.