

## PEWS TRAINING– CASE STUDY 5

### Case Study 5 - Instructor Summary Card

#### Urinary tract infection (UTI)

##### ▪ Holly , 3 years old, admitted with Urinary tract infection (UTI)

UTI in children is an illness caused by infection of the lower urinary tract (cystitis), the upper urinary tract (pyelonephritis) or both.

##### **Upper UTI (pyelonephritis) is diagnosed in children presenting with:**

- Fever  $\geq 38^{\circ}\text{C}$  and bacteriuria
- Fever  $< 38^{\circ}\text{C}$ , loin pain/tenderness and bacteriuria

##### **Lower UTI (cystitis) is diagnosed in children with:**

- Bacteriuria and localised symptoms including lower abdominal or suprapubic pain, dysuria, urinary frequency and urgency
- No systemic symptoms or signs.

##### Symptoms/signs of a UTI in children **<3 months** include:

- Fever
- Vomiting
- Lethargy
- Irritability
- Poor feeding and failure to thrive

##### Symptoms/signs of a UTI in children **$\geq 3$ months** include:

- As above (fever, vomiting, lethargy, irritability, poor feeding)  
**plus**
- Abdominal pain, or,
- Loin tenderness

##### Symptoms/signs of **Sepsis** include signs of organ dysfunction secondary to infection

- Parental concern
- Tachycardia- unexplained by fever/pain/crying
- Prolonged CRT
- Hypotension
- Non –blanching rash
- Altered mental status- irritability or lethargy
- Decreased urinary output
- Altered functional status
- Inappropriate tachypnoea

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**Aim:** Recognise a deteriorating patient and refer appropriately to a senior clinician

**Learning Outcomes:**

- Obtain adequate history
- Obtain appropriate vital signs at appropriate time intervals
- Screen for sepsis
- Escalate appropriately
- Communicate effectively

**Equipment:**

- Instructor summary card
- Instructor prompt card
- Completed medication chart
- PEWS chart (age)
- ISBAR/escalation poster
- Paediatric Sepsis Form
- Intake/Output chart
- Scoring parameter table

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### Instructor Prompt Card (1 of 2)

#### **Facilitating the desktop case study:**

1. Explain aim/learning outcomes for the practical discussion
2. Divide the class into smaller groups (max 6- you may need additional trainers)
3. Present the initial information and give the candidate group the paperwork
4. Facilitate the candidate(s) to discuss an ABCDE assessment and complete the observation chart
5. The group should identify additional PEWS criteria that may be clinically relevant and include these in the Total PEWS Score
6. Once vital sign derangements are identified, prompt candidates to consider sepsis if they have not already identified the need to initiate the sepsis form to screen for sepsis
7. Encourage discussion around the clinical requirements of the child and the appropriate escalation pathway
8. When the nurse alerts the senior nurse or doctor, place two players back to back to simulate communication via the phone
9. Allow the scenario to build on itself prompting other players to enter as called for or prompt as necessary
10. Debrief & summarise learning clearly

#### **Present the case history below:**

##### **The situation is:**

3yr old previously healthy female

##### **Initial Candidate briefing**

Holly, 3 yrs old, admitted post representation to ED with UTI after no response to PO antibiotics. Lethargic, off form and decreased PO intake

##### **The background is:**

Medical history- No significant medical history, vaccinations up to date, NKDA. Last presentation to ED 4 days ago with UTI.

##### **The assessment is:**

RR-40, RE-Normal, O2-RA, SpO2-95%, HR-148, CRT-3, BP-110 (systolic), AVPU-Alert, Temp 37.6, Colour-Pale, Mum is concerned that Holly is more tired than usual.

**Recommendation is:** .....

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### Part A- Initial assessment, recording observations and calculating PEWS score

- Candidate/ candidate group should complete ABCDE assessment
- Complete Paediatric Observation Chart
- Calculate Total PEWS score
- Use sepsis form to screen for sepsis
- Identify sepsis flags
- Refer appropriately using ISBAR to frame the conversation

#### **If the candidate(s) need prompting:**

##### **1. What other signs would you look for in this patient?**

Concern	RR	RE	O <sub>2</sub> T	HR	AVPU	SpO <sub>2</sub>	CRT	BP	Colour	Temp	Total PEWS Score

- Vital signs (understand the trends for this patient) note: colour- pale, temp – afebrile, tachycardia
- Blood Glucose level (provide result if tested)
- Urine output (information here if relevant)

*Additional notes for discussion: when vital signs trend to upper limits of normal , the value of a score for concern to initiate a clinical review*

##### **2. Who would you notify and why**

##### **3. What interventions are required at this point?**

### PART B – ISBAR Communication

**Facilitator should place candidates back to back to simulate phone conversation**

### PART C - Medical candidate briefing

Updated clinical presentation of the child to be given to the candidate

- Doctor should complete ABCDE assessment
- Refer appropriately using ISBAR to frame the conversation

#### **If the doctor needs prompting**

##### **1. What other signs would you look for in this patient?**

- Vital signs (understand the trends for this patient)  
RR \_\_\_ RE \_\_\_ O<sub>2</sub>T \_\_\_ SpO<sub>2</sub> \_\_\_% HR \_\_\_ CRT \_\_\_ BP \_\_\_/\_\_\_ AVPU \_\_\_ Temp \_\_\_ Urine output  
(give relevant information)
- Blood Glucose level (provide information if requested)

*Note: PEWS \_\_\_*

*Any additional notes for prompting / discussion here*

##### **2. What is your management plan?**

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#### **PART 4 - Summary**

- What did the group think went well?
- Are there any suggestions for improvement in their roles?
- Summarise learning for the group

#### **Key points:**

- If there is a clinical suspicion of infection and the child appears unwell– initiate the sepsis form.
- Every time you interact with a child reconsider if Red/Amber flags or risk factors present?
- Listen to the parent/carer in determining what is normal for their child and what may have changed.
- In order for patients to have the best opportunity to survive, they need to have sepsis recognised and managed in an appropriate and timely manner.
- Sepsis/Septic shock can cause significant morbidity and mortality in children. Early recognition and treatment are vital to improving patient outcomes.