Case Study 3 - Instructor Summary Card

Bronchiolitis

- **Bridget, aged 11 weeks, admitted with respiratory distress**

- Bronchiolitis is a common lower respiratory tract infection that affects babies and young children. The early symptoms are similar to those of a common cold, such as runny nose or cough. As bronchiolitis develops, it can cause:
    - mild fever (raised temperature)
    - dry and persistent cough
    - increased work of breathing
    - difficulty feeding

- Bronchiolitis is most commonly **caused** by respiratory syncytial virus (RSV) but may be caused by several other respiratory viruses. This causes the small airways in the lungs (the bronchioles) to become infected, inflamed (swollen) and blocked with secretions. The inflammation reduces the amount of air entering the lungs, making it more difficult for the child to breathe

- It is estimated that one third of infants develop bronchiolitis in the first year of their life. The condition is most common in infants aged 3-6 months old. By 2 years of age, almost all infants have been infected with RSV and 40-50% will have had bronchiolits. Most cases of bronchiolitis occur during the winter months, from November to March, when the viruses that cause bronchiolitis are more common. It is possible to get bronchiolitis more than once during the same winter season

- There is no medication to kill the viruses that cause bronchiolitis, but the infection usually clears up within 2 weeks without any treatment. Most infants can be cared for at home by ensuring they get enough fluid, and by monitoring their condition. Around 3% of infants who are under one and have bronchiolitis will need to be admitted to hospital. This is because they develop more serious symptoms, such as difficulty breathing. However, this is more likely to occur in premature babies (born before 37 weeks gestation) and those born with a heart or lung condition

- The **symptoms** of bronchiolitis usually get worse over the first three days, then gradually improve. During this time, the child may experience some of the following symptoms: rasping or persistent dry cough; rapid or noisy breathing; brief pauses in breathing (apnoea); changes in effort of breathing; feeding less and having fewer wet nappies; vomiting after feeding; being irritable

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Aim: Recognise a deteriorating patient

Learning Outcomes:
- Obtain adequate history
- Obtain appropriate vital signs at appropriate time intervals
- Refer appropriately
- Communicate effectively

Equipment:
- Instructor summary card
- Instructor prompt card
- Completed medication chart
- PEWS chart 0-3 months
- ISBAR/escalation poster
- Sepsis 6 poster

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. Encourage discussion around the clinical requirements of the child and the appropriate escalation pathway
7. When the nurse telephones the doctor, place two players back to back to simulate communication via the phone
8. Allow the scenario to build on itself prompting other players to enter as called for or prompt as necessary
9. Debrief & summarise learning clearly

Present the case history below:

Scenario history
Bridget, aged 12 weeks, admitted with respiratory distress

Initial candidate briefing
Infant Bridget was admitted at 2am with respiratory distress, reduced feeding and low SpO$_2$ (90%)

Medical Hx: ex 32/40 SVD, 2/52 SCBU, 1/52 CPAP.
Feeding 4 hourly EBM, 75-100ml.

On 1LO$_2$ via nasal prongs. Comfort feeding at present but for review at morning rounds. IV access established and receiving half maintenance fluids IV.

Medical instructions are to monitor, provide O$_2$ and maintain SpO$_2$ >94%.

Mum has just fed Bridget 110ml EBM and calls you because she is worried about how she looks.

'As the nurse, you should carry out your assessment on Bridget now'

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
- 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	O₂ T	HR	AVPU	SpO₂	CRT	BP	Total PEWS Score
√ (1)	60 (1)	M (1)	1L (1)	170 (1)	V (1)	92% (1)	>2 (1)		8

- o Vital signs (understand the trends for this patient)
- o Blood Glucose level (provide result if tested)
- o Urine output (nappy dry)

2. Who would you notify and why?
Prompt: what is your level of concern?

PART B – ISBAR communication
Facilitator should discuss mechanism for URGENT PEWS CALL in your hospital *or* place 'Nurse' and 'Doctor' back to back to simulate handover

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?
- o Vital signs (understand the trends for this patient)
  RR ___ RE ____ O₂T ____ SpO₂ ___% HR ___ CRT___ BP ___/___ AVPU ___ Temp ___Urine output (give relevant information)
- o Urine output (give relevant information)
- o Blood Glucose level (provide information if requested)

Note: PEWS ___
2. What is your management plan?

PART 4 - Summary
- What did the group think went well?
- Are there any suggestions for improvement in their roles?
- Summarise learning for the group