**Section 1: Case Summary**

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| **S****cenario Title:** | **Pediatric Pneumonia** |
| Keywords: | Pneumonia, respiratory distress, failure, intubation, pediatric |
| Brief Description of Case: | 4 year old has been sick for the past 5 days with cough, increased work of breathing. Scenario starts with decreased O2 sats and increased respiratory rate ultimately leading to preparation for intubation. |

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| **Goals and Objectives** |
| Educational Goal: | Recognizing signs of deteriorationRecognizing signs of impending respiratory distress and failurePreparation of RSI medications |
| Objectives:(Medical and CRM) | Clear communication between team membersEffective Team Leadership |

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| **Learners, Setting and Personnel** |
| Target Learners: | [x]  Junior Learners | [ ]  Senior Learners | [ ]  Staff |
| [ ]  Physicians | [x]  Nurses | [x]  RTs | [ ]  Inter-professional |
| [ ]  Other Learners:  |
| Location: | [ ]  Sim Lab | [x]  In Situ | [ ]  Other:  |
| Recommended Number of Facilitators: | Instructors: yes |
| Confederates: |
| Sim Techs: yes |

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| **Scenario Development** |
| Date of Development: | May 3, 2021 |
| Scenario Developer(s): | Lisa Ewart |
| Affiliations/Institutions(s): | Fraser Health |
| Contact E-mail: | Simulation@fraserhealth.ca |
| Last Revision Date: |  |
| Revised By: |  |
| Version Number: |  |

**Section 2A: Initial Patient Information**

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| 1. **Patient Chart**
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| Patient Name: James Ling | Age: 4 | Gender: M | Weight: 18kg |
| Presenting complaint: Shortness of breath, cough, decreased appetite |
| Temp: 37.1 | HR: 141 | BP: 96/50 | RR: 40 | O2Sat:90% 2LNP | FiO2: |
| Cap glucose: 5.2 | GCS: 14 (E V M ) |
| Triage note / Handover: He has been sick for 5 days with cough, noisy breathing and increased work of breathing. Admitted yesterday for pneumonia. Today he has increased SOB, cough and hasn't really been eating much. He was started on Nasal prongs at 2L/min for O2 sat of 90% |
| Allergies: Nil |
| Past Medical History: Nil | Current Medications: Cefotaxime 25mg/kg Q6 hours |

**Section 2: Technical Requirements/Room Vision**

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| **A. Patient** |
| [x]  Mannequin *(specify type and whether infant/child/adult) – 4 year old pediatric manikin* |
| [ ]  Standardized Patient |
| [ ]  Task Trainer |
| [ ]  Hybrid |
| **B. Special Equipment Required** |
| Airway box, PPE |
| **C. Required Medications** |
| Ketamine, Succinylcholine, Ventolin, Atrovent, FentanylIV: Normal Saline 250L bags, IV tubing, IV cathetersIntubation equipment, NRB, Nasal prongs, ambu bag |
| **D. Monitors at Case Onset** |
| [ ]  Patient on monitor with vitals displayed[x]  Patient not yet on monitor |
| **E. Patient Reactions and Exam** |
| *Include any relevant physical exam findings that require mannequin programming or cues from patient* Chest crackles throughout, patient becomes more agitated with decrease in O2sats,  |

**Section 5: Scenario Progression**

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| **Scenario States, Modifiers and Triggers** |
| Patient State/Vitals | Patient Status | Learner Actions, Modifiers & Triggers to Move to Next State  | Facilitator Notes |
| **1. Baseline State**Rhythm: Sinus tachHR: 141BP: 96/50RR: 40O2SAT: 90% 2LNPT: 37.1 oC GCS: 15Gluc 5.2mmol | Patient appears SOB, accessory muscle use & indrawing, ++ cough, thick sputum, patient crying, fighting the supplemental O2SIM Settings: increased compliance, BS coarse & crackles throughout | Expected Learner Actions [ ]  Have mom sit with child to hold O2[ ]  Quick head to toe assessment[ ]  Check orders – give Ventolin and atrovent[ ]  Check blood glucose[ ]  Call Physician, RT[ ] [ ]  | Modifiers*Changes to patient condition based on learner action*--Triggers*For progression to next state*- After the team has completed the initial assessment and called the physician- |  |
| **2. Inadequate oxygenation**Rhythm: Sinus tachHR: 148BP: 85/40RR: 52O2SAT: 86% FMT: 37.1 oC GCS: Aggitated Gluc 5.2mmol | Patient agitated, pulling off oxygen, parent unable to calmPatient appears pale, cap refill >3Appears to have increased indrawing and accessory muscel use | Expected Learner Actions [ ]  Call RT for highflow O2[ ]  Support oxygenation with BVM[ ]  Appropriate PPE[ ]  Prep meds for Intubation – Rocuronium, Fentanyl, Ketamine[ ]  Ensure IV access[ ]  call Code Blue pediatrics | Modifiers---Triggers- END after RSI meds given- |  |

**Appendix A: Facilitator Cheat Sheet & Debriefing Tips**

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| *Include key errors to watch for and common challenges with the case. List issues expected to be part of the debriefing discussion. Supplemental information regarding any relevant pathophysiology, guidelines, or management information that may be reviewed during debriefing should be provided for facilitators to have as a reference.*  |

**References**

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| 1. 2. 3.  |