**SIMULATION SCENARIO**

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| **CASE TITLE:** | Status epilepticusApnea post-benzodiazepinesSeven month old with Status Epilepticus by Dr Keith Gregoire |

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| **TARGET LEARNING GROUP:** | Pediatric Residents |

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| **LEARNING OBJECTIVES:** |  |  |
| ***Knowledge:***1. Assessment and management of ABCs in seizing patient2. Pharmacologic Treatment of Status Epilepticus3. Potential complications of anti-epileptic medications |  |
| ***Skills:***1. Bag-mask ventilation |  |
| ***Attitudes/Behaviours:***1. Professionalism2. Team work3. Communication with parents |  |

**SCENARIO ENVIRONMENT:**

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| ***Location*** | * Small Community Emergency Department
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| ***Monitors*** | * Cardiac, Respiratory, O2 sat
 |
|  ***Props/Equipment*** | * Infant mannequin (Seven months old)
* Medications (lorazepam, diazepam, phenytoin, Phenobarbital)
* Equipment for IV, IPPV
 |
| ***Make-Up/Moulage*** | * None
 |
| ***Multi-Media*** | * None
 |
| ***Personnel*** | * See page 6
 |
| ***Potential Distractors*** | * Mother is present and worried
 |

**INITIAL SIMULATOR SETUP:**

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| ***Mannikin Position*** | Lying supine, seizing |
| ***Pupils****Size:**Reactivity:**Blinking:* | **Seizing****Eyes rolled back or closed** |
| ***Breathing****Resp Rate:**Resp Pattern:**Chest Rise:**Breath Sounds:**Airway Sounds:**% Cyanosis:**Oxygen Saturation:* | **20****Erratic****Good****Gurgly****Transmitted upper airway noise****98% on 2 lpm O2** |
| ***Cardiovascular****Heart Rate:**Cardiac Rhythm:**Blood Pressure:* | **120****Regular****90/50** |
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**SCENARIO PROGRESSION:**

***Case Introduction:*** *(initial information provided to participants)*

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| * Seven month old child brought by parents from home to ER seizing for the past five minutes.
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***Available Collateral Information:*** *(information given if requested)*

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| * Previously well child. Had runny nose today. Went down for nap this afternoon and parents heard him making funny noises, so checked on him and found him having generalized tonic-clonic convulsion. They live close to hospital, so his mother bundled him up and brought him to ER.
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***The Script:*** *(Scenario flow & management outcomes)*

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| **Scenario Transitions****& Evolution** | **Effective Management** | **Ineffective Management** | **Notes** |
| 1. Arrival | Call for help. Attach to monitors. Ensure airway stable. Provide 100% O2. Assess circulation. | Failure to assess and manage ABCs |  |
| 2. Establish IV access requires 2 attempts and 60 to 90 seconds | Start treatment with rectal lorazepam, intranasal or sub-lingual benzodiazepine | Immediate IO insertion. Postponing treatment awaiting iv |  |
| 3. IV established, second dose benzo given. Continues to seize | Start infusion (phenytoin or phenobarbital).  | Pushing either medication (rather than infusing).  | If phenobarb pushed, go to 5.If phenytoin pushed, either patient goes hypotensive and/or the scenario is stopped. |
| 4. Patient continues to seize  | Third dose of benzodiazepine. Prepare alternative medication(s). |  | Seizure then stops |
| 5. Patient has apneic event with desaturations | Support with good airway positioning and effective IPPV  | Ineffective bagging. Immediate intubation. Use of flumazenil. Failure to recognize patient needs ongoing monitoring. | After 30-60 seconds of bagging, patient resumes normal respirations; drowsy |

**INSTRUCTIONS FOR PERSONNEL:**

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| ***Personnel A****(specify role)* | * **Triage Nurse**

**Initially receives the child at arrival** |
| ***Personnel B****(specify role)* | * **Emerg Physician**

**Present in ER** |
| ***Personnel C****(specify role)* | * **Emerg nurse(s) 1-3**

**Available to help with care if called** |
| ***Personnel D****(specify role)* | * **Parent (PLANT)**

**Brings child to triage, explains the situation. Asks “Why is he still seizing? Can’t you make it stop?” (et cetera) a few times.** |

**SUGGESTIONS FOR DEBRIEFING:** *(Link to Objectives)*

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| ***Knowledge:***1. Assessment and management of ABCs in seizing patient2. Pharmacologic Treatment of Status Epilepticus3. Potential complications of anti-epileptic medications |
| ***Skills:***1. Bag-mask ventilation |
| ***Attitudes/Behaviours:***1. Professionalism2. Team work3. Communication with parents |
| ***Other:***1. Duration of medication infusions |