**Section 1: Case Summary**

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| **S****cenario Title:** | **Infant Aspiration** |
| Keywords: | Aspiration, choking, pediatrics, infant |
| Brief Description of Case: | An infant recovering from pneumonia will be breastfeeding when she aspirates. She will quickly become cyanosed. The case focuses on management and follow-up care after aspiration. |

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| **Goals and Objectives** | |
| Educational Goal: | Aspiration management and follow-up |
| Objectives:  (Medical and CRM) | * Identify, treat and assess an infant who has aspirated * Practice positioning, suctioning, and deep suctioning of infant who has aspirated * Perform focused respiratory, and general head-to-toe assessment to identify suspected severity of aspiration * Call for help and mobilize resources early * Communicate effectively using SBAR, closed-loop communication, and clear requests * Remain calm throughout scenario |

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| **Learners, Setting and Personnel** | | | | | | |
| Target Learners: | Junior Learners | | Senior Learners | | | Staff |
| Physicians | Nurses | | RTs | Inter-professional | |
| Other Learners: | | | | | |
| Location: | Sim Lab | | In Situ | | | Other: |
| Recommended Number of Facilitators: | Instructors: 1 | | | | | |
| Confederates: 1 (play the part of mother; physician on phone if none available) | | | | | |
| Sim Techs: 1 | | | | | |

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| **Scenario Development** | |
| Date of Development: | 2020.01 |
| Scenario Developer(s): | Christina Choung |
| 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** | | | | | | |
| Patient Name: Molly Almasi | | | | Age: 2 months | Gender: F | Weight: 5.2kg |
| Admitting Diagnosis: Pneumonia | | | | | | |
| Temp: 36.4°C | HR: 120 | BP: 70/45 | | RR: 50 | O2Sat: 97% | FiO2: RA |
| Cap glucose: 5.6 | | | | GCS: normal | | |
| History of presenting illness:  Molly was admitted six days ago with pneumonia requiring antibiotics. Since then, she’s recovered well and should be going home tomorrow. She was weaned off of supplemental O2 three days ago, and switched to oral antibiotics yesterday.  Her assessment this morning was completely normal.  Mum is at the bedside with Molly.  (start with participants outside of room) | | | | | | |
| Allergies: NKA | | | | | | |
| Past Medical History:   * None; full-term * First born; no siblings * Mum has been with Molly whole admission | | | Current Medications:   * Amoxicillin 40mg/kg PO BID | | | |

**Section 2B: Extra Patient Information**

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| **A. Further History** |
| *n/a* |
| **B. Physical Exam** |
| Previously, all normal. See Section 3F for simulator settings and patient physical exam findings at start of case. |

**Section 3: Technical Requirements/Room Vision**

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| **A. Patient** |
| Mannequin: infant. Monitor set to big numbers/simple vital signs machine setting |
| Standardized Patient |
| Task Trainer |
| Hybrid |
| **B. Special Equipment Required** | |
| * All O2 delivery modalities * Deep suction catheter (if in-centre; if in-situ, participants can retrieve) * Fine tip suction catheter | |
| **C. Required Medications** | |
| n/a | |
| **D. Moulage** | |
| * Picture of cyanosed child * Video of gagging toddler <https://youtu.be/uRrbZuP-pjk?t=18> | |
| **E. Monitors at Case Onset** | | |
| Patient on monitor with vitals displayed  Patient not yet on monitor | | |
| **F. Patient Reactions and Exam** | | |
| Neuro: upset  Resp: coarse crackles, coughing  Cardio: cyanosed face, lips, tongue | | |

**Section 4: Confederates and Standardized Patients**

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| **Confederate and Standardized Patient Roles and Scripts** | |
| Mother | Very worried from the beginning of case; has not seen this happen before, doesn’t know what went wrong. As soon as healthcare practitioner walks in, frantically state that Molly was breastfeeding and then started coughing uncontrollably. You could see breastmilk bubbling in and out of her mouth at first. Keep cradling Molly supine until you’re told otherwise. You’re really worried about Molly’s colour, wants to know what’s happening, if she’ll be okay. When interventions begin, you’ll be concerned about how invasive/aggressive the interventions are and whether they’re hurting Molly. |
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**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  HR: 190  BP: 79/48  RR: 65  O2SAT: 68%  T: 36.7oC  GCS: normal | Neuro: upset  Resp: coarse crackles, coughing  Cardio: cyanosed face, mouth, tongue | Expected Learner Actions  Ask/listen to mum about what has happened  Suspect aspiration – verbalize this in plain language to mother  Ensure Molly is held sideways with anterior tilted towards floor, or head down with head lower than body  Call for help, including RT  Delegate tasks; use closed-loop communication  Suction mouth, nose  Consider/perform deep suctioning  Reassure mother; inform of what’s happening and why  Obtain SpO2, VS  Apply O2 and titrate to effect  Continually re-assess after interventions: patient status, VS  As SpO2 increasing and cyanosis fading, re-assess head to toe  Note coarse crackles and sustained need for therapeutic FiO2  Call physician with SBAR report, including interventions, changes in status, and current status  Report orders/plan of care back to team  Update mother with next steps | Modifiers  -When FiO2 applied/increased:  🡪if no change in positioning or suctioning also done🡪 SpO2 does not rise beyond 76%; cyanosis remains  🡪if change in positioning done but no suctioning 🡪 SpO2 does not rise above 82%; cyanosis to lips remains (tongue, forehead eliminated)  🡪if change in positioning and suctioning done 🡪 SpO2 goes to 86%; cyanosis eliminated  -if code blue called, arrive as the code team physician and direct the participants to do the interventions listed in “Expected Learner Actions”  Triggers  -Case ends after physician orders have been relayed back to team and mother has been updated | Have video of gagging child playing; have available photo of cyanosed child; direct participants to these as references for what they’re seeing  Will have to verbalize to group whether cyanosis is changing |

**Appendix A: Laboratory Results**

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| CBC  WBC  Hgb  Plt  Lytes  Na  K  Cl  HCO3  AG  Urea  Cr  Glucose  Extended Lytes  Ca  Mg  PO4  Albumin  TSH  VBG  pH  pCO2  pO2  HCO3  Lactate | Cardiac/Coags  Trop  D-dimer  INR  aPTT  Biliary  AST  ALT  GGT  ALP  Bili  Lipase  Tox  EtOH  ASA  Tylenol  Dig level  Osmols  Other  B-HCG |

**Appendix B: ECGs, X-rays, Ultrasounds and Pictures**

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| *Paste in any auxiliary files required for running the session. Don’t forget to include their source so you can find them later!* |

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

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| For choking, we don’t intervene in “mild choking” where the child can make sounds and cough forcefully. We allow them to try to clear it themselves.  Severe choking (when we intervene and I would call a code here):   * the infant makes no sound (is unable to speak/cry or cough) * poor/no air exchange * makes high pitched noises with inhalation or no noise and increased WOB   Under 1 year:   1. Confirm mild or severe obstruction (above) 2. 5 back slaps held face down on angle (hold face at cheekbones between your fingers so no floppy head) 3. 5 chest compressions while holding prone 4. Repeat until airway clear or infant is unresponsive   If infant goes unresponsive:   1. Call for help 2. If no breathing/only gasping begin compression with no pulse check 3. Compressions 15:2. Compressions are fingertip or thumbs encircling, whatever gets you 1/3 AP diameter 4. Each time you open airway to give a breath, look for FB. No blind finger sweeps, only scoop out what you can get   Your resources for this are Heart & Strike BLS or PALS.  Also, under 3 months, babies are obligatory nose breathers. They need any boogers or snot sucked out with a “little sucker” (like a mini turkey baster) or a soft suction. Although this FB is below the nose, babies create a ton of snot when they cry/choke, so might be worth a teaching point. |

**References**

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| 1.  2.  3. |