

Supplemental Digital Content A: Intervention SBEA Scenario Set-up

Scenario A

Clinical Setting: Ward

Manikin System: Laerdal sim jr

Equipment Needs:

- *Fluids/medications:* Epinephrine [1:1000 vial in medication cabinet, 1:10,000 box in ward resuscitation cart], Ranitidine, Hydrocortisone, Benadryl, IV fluids (NS)
- *Equipment/Props:* Peripheral IV, cardiorespiratory and saturation monitor, Computer (for accessing labs, on-line references)
- *Usual standard set-up:* Ward resuscitation cart, IV pump + pole, Stethoscope
- *Paperwork/protocols:* Hospital anaphylaxis pre-printed order (on-line), Hospital Resuscitation sheet at end of the bed

Actor/Standardized patient needs: see confederate notes below

Supplemental Patient Documents:

	<i>Description</i>
Picture	Picture of urticarial rash

Case Introduction:

- 13 year old Patrick, with known multiple allergies, was admitted to the ward from the emergency department 6 hours ago for observation post anaphylaxis (Requiring epinephrine x 3, IV steroids x 1, Benadryl). Patrick was at his friend's house at a sleepover and developed symptoms of anaphylaxis and was brought to the ED. The boys were sharing food and Patrick is unsure of what he might have eaten to cause his symptoms. Weight: 50 kg.
- Patient has multiple allergies (nuts, shell fish, dairy, dust, cats)
- Patrick ordered breakfast from the CHEO cafeteria. Approximately 20 minutes later, Patrick develops rash all over, throat itchiness, significant lip swelling and nausea.

Confederate notes:

Confederate will act as helper ward nurse if asked by the participant RN or resident.

Confederate will be helpful and only follow directions from the participant RN. Confederate will not offer any guidance for management.

Base Scenario, Computer notes:

- Manikin programmed to say « It's hard to breathe », « I don't feel good »
- Participants shown picture to rash
- Vital signs : HR: 145, RR 32, SaO2 92% R/A, BP 92/40, T 36.7

- Vitals remain same throughout (saturations can improve if oxygen applied). Scenario ends when epinephrine is given.

Scenario B

Clinical Setting : PICU

Manikin System: Laerdal Sim Jr

Equipment Needs:

- *Fluids/medications*: Infusions (vasopressin, fentanyl), Boluses (fentanyl, versed, rocuronium), 3% saline, mannitol, IV D5NS, NS
- *Equipment/Props* : intubated on ventilator, arterial line, IV set-up, cardiorespiratory and saturation monitor, foley catheter, oral-gastric tube, IV pumps x 2 (vasopressin and fentanyl), Computer (for accessing labs, on-line references)
- *Usual standard set-up*: PICU Medication cart, IV pump + pole, PICU Airway cart, Stethoscope
- *Paperwork/protocols*: Vasopressin pre-printed order set, Hospital Resuscitation sheet at end of the bed (as per usual PICU practice)

Actor/Standardized patient needs: See confederate notes below

Supplemental Patient Documents:

	<i>Description</i>
CT	Picture of diffuse cerebral edema (CT from 1 st day): diffuse cerebral edema, small punctate hemorrhages, no epidural/subdural
Labs	Na 138, K 4, Cl 90, 7.40/40/100/24 (3 hrs prior to simulation)

Case Introduction:

- 7 year old Jimmy, admitted to PICU 7 days ago for Traumatic Brain Injury (TBI), riding on back of ATV with dad, no helmet. GCS 7 at scene. Intubated at local hospital, and then transferred to CHEO. Weight: 30 kg.
- Initial CT: diffuse cerebral edema, small punctate hemorrhages, no epidural/subdural.
- ICP probe put in and removed 2 days ago as no longer reading appropriately.
- Prior to that, had ICP >25 approximately 2-3x during the first 24 hours – treated with sedation, narcotics, muscle relaxants and 3%NS boluses.
- Developed diabetes insipidus (DI) on and off and started on vasopressin.
- Improving clinically with weaning sedation and narcotics and wiggles toes/hands. Making respiratory effort.

Patient's nurse (confederate) is headed for break. Nurse (participant) is coming to receive handover for the bedside nurse.

Confederate Notes:

- Confederate nurse provides exact history as above.
- If participant RN asks about vasopressin, the confederate RN says “the vasopressin was turned back on 20 min ago”. If participant RN asks about dose, and rate, confederate RN says “Here’s the pre-printed order (PPO) set” and shows the RN the PPO – “The order says 0.002 U/kg/hour”.

Vasopressin Medication error:

- 1) Concentration wrong in syringe
- 2) Rate wrong – supposed to be U/kg/hr – but it is running U/kg/min (shock dosing)

Base Scenario, Computer notes:

- Hypertension (SBP 140-150), relative bradycardia (HR: 80).
- Vitals remain same throughout. Scenario ends when vasopressin error discovered AND appropriate medication (concentration, rate) initiated.