California Simulation Alliance (CSA)
Simulation Scenario Template

The California Simulation Alliance (CSA) is comprised of simulation users from all disciplines from throughout the state. Several regional collaboratives have formed totaling 7 as of March 2011: The Rural North Area Simulation Collaborative (RNASC), the Capital Area Simulation Collaborative (CASC), the Bay Area Simulation Collaborative (BASC), the Central Valley Simulation Collaborative (CVSC, the Southern California Simulation Collaborative (SCSC), the Inland Empire Simulation Collaborative (IESC), and the San Diego Simulation Collaborative (SDSC). The CINHC, a non-profit organization focused on workforce development in healthcare provides leadership for the CSA.

The purpose of the California Simulation Alliance (CSA) is to be a cohesive voice for simulation in healthcare education in the state, to provide for inter-organizational research on simulation, to disseminate information to stakeholders, to create a common language for simulation, and to provide simulation educational courses. The goals of the alliance will include providing a home within the CINHC for best practice identification, information sharing, faculty development, equipment/vendor pricing agreements, scenario development, and sharing and partnership models. More information can be found on the CSA website at www.californiasimulationalliance.org

All scenarios have been validated by subject matter experts, pilot tested and approved by the CSA before they were published online. All scenarios are the property of the CINHC/CSA. The writers have agreed to release authorship and waive any and all of their individual intellectual property (I.P.) rights surrounding all scenarios. I.P release forms can be found on the website www. (Please send signed I.P. release forms to KT at kt@healthimpact.org)

SECTION I: SCENARIO OVERVIEW

Scenario Title:	Foreign Body Aspiration-Child
Original Scenario Developer(s):	Cleona Cash, DNP, RN
Date - original scenario	February 27, 2017
Validation:	C. Meckler BSN, RN, CCRN, CEN, CFRN, CPEN, TCRN, M.Miller, MA, RN, CHSE
Revision Dates:	7/20/2017
Pilot testing:	4/03/2017
QSEN revision:	

Estimated Scenario Time: 15 -20 minutes Debriefing time: 30-40 Minutes

Target group: Inter-professional Emergency Department Team: ED Physician, Primary Registered Nurse, Respiratory Therapist, Certified Nursing Assistant, Unit Secretary

Core case: Patient Safety, Team work, communication

QSEN/IOM Competencies: Patient Centered Care

Brief Summary of Case:
3-Year-old male brought to the Emergency Depart via private car with complaints of difficulty breathing while playing at home with an older sibling. Mom states the child was playing with his toys when she called to the boys and startled the child. Immediately the child began having difficulty breathing and she brought him to the hospital. On admission to triage the child is awake appears to have difficulty breathing, skin pale and diaphoretic, patient with audible stridor. The child was immediately brought from triage and placed in ED Room # 3 for the physician to conduct an initial assessment of the child.

EVIDENCE BASE / REFERENCES (APA Format)

Samson, R. A., Schexnayder, S. M., Hazinski, M., Meeks, R., Knight, L. J., DeCaen, A., McNeil, M. A. (2016). Management of arrhythmias. In *Pediatric advanced life support* (pp. 253-276). Dallas, Texas: First American Heart Association.

Johnson, K., Linnaus, M., & Notrica, D. (2016). Airway foreign bodies in pediatric patients: Anatomic location of foreign body affects complications and outcomes. *Pediatric Surgery International- Springer*, *33*, 59-64. http://dx.doi.org/10.1007/s00383-016-3988-9

Lowe, D. A., Vasquez, R., & Maniaci, V. (2015). Foreign body aspiration in children. *Elsevier Inc*, *16*, 140-148.

Paul, S. P., Sanjeevaiah, M. K., Routley, C., & Kane, M. (2013). Ingestion or aspiration of foreign bodies by children. *Art & Science Children's Care*, *21*, 32-36.

Ulrich, B., & Manning Crider, N. (2017). Using teams to improve outcomes and performance. *Nephrology Nursing Journal*, *44*, 141-152.

SECTION II: CURRICULUM INTEGRATION

A. SCENARIO LEARNING OBJECTIVES
Learning Outcomes: Participants will be able to:
1. Evaluate patient assessment data and recognize signs and symptoms of acute respiratory distress
2. Initiate effective inter-professional team (IP) communication in emergent situation to safely care for and stabilize the patient
3. Distinguish between acute upper respiratory distress and conditions of the lower respiratory tract to safely provide care for the patient
Specific Learning Objectives
1. Recognize stridor and symptoms of acute respiratory emergency situation
2. Perform essential assessment of child for oxygenation and circulation
3. Differentiate IP roles and responsibilities in code situation
4. Implement Pediatric Advance Life Support (PALS)
5. Demonstrate team work and close loop communication
6. Perform effective hand-off communication with the IP team using SBAR tool
7. Demonstrate therapeutic communication skills when communicating with family members
Critical Learner Actions
1. Recognize signs and symptoms of acute respiratory distress and conduct a focus assessment of the oral airway, upper respiratory track and lung auscultation
2. Assess stridor breath sounds and the probability of respiratory distress as a result of upper airway obstruction
3. Recognize the need for additional assistance and call for help
4. Conduct a focus assessment of the child neurological status and oxygenation/circulation
5. Prioritize and delegate responsibilities to IP team for airway management, oxygen delivery, IV/IO access, medications using closed loop communication
6. Stabilize airway & titrate oxygen to ensure profusion
7. Communicate to the IP team using SBAR and closed loop communication
8. Reassess patient at 2 minutes intervals post interventions until stable
9. Communicate in a therapeutic manner with family members

B. PRE-SCENARIO LEARNER ACTIVITIES	
Prerequisite Competencies	
Knowledge	**Skills/ Attitudes**
❑ Complete pre-assigned reading assessment	❑ Early recognition of acute respiratory distress in children
❑ Collaborative management of signs and symptoms of Foreign Body Aspiration	❑ Safe decision making regarding patient condition and treatment methods
❑ Pharmacology of basic medications used when removing foreign body and in Pediatric code situations	❑ Safe administration and management of sedation and or PALS code medication
❑ Current Pediatric patient safety goals	❑ Role of nurse in dealing with family members during crisis situations
❑ QSEN Competency: Completed assigned reading pre-simulation scenario, current PALS certification	❑

SECTION III: SCENARIO SCRIPT

A. Case summary
A 3-year-old boy was brought into ED via private car accompanied by his mother. Mom states that the child and his older sibling were playing with toys, she called to them and the child was startled, he suddenly developed shortness of breath and difficulty breathing, she stated she immediately brought the child to the Emergency Department. No known drug or food allergies Term infant normal weight/size No significant past medical history. No history of surgery The child is of normal weight and height for his age.

B. Key contextual details
Emergency Department – busy, paramedics just brought in 2 code threes and a level one trauma

C. Scenario Cast		
Patient/ Client	X High fidelity simulator (Sim- Junior)	
	❑ Mid-level simulator	
	❑ Task trainer	
	❑ Hybrid (Blended simulator)	
	❑ Standardized patient	
Role	Brief Descriptor (Optional)	Standardized Participant or Learner (L)
Physician	Emergency services physician	Learner
Respiratory Therapist		Learner
Primary Nurse	Registered Nurses	Learner
Certified Nursing		Standardized participant
Assistant Unit Secretary		Standardized participant
Mother		Standardized participant

D. Patient/Client Profile				
Last name:	Brown		First name:	Sean
Gender: Male	Age: 3	Ht: 2 ft 3 ins	Wt: 18.5 kg	Code Status: Full
Spiritual Practice: Christian		Ethnicity: Caucasian		Primary Language spoken: English

1. Past history	
Negative: No Known past medical history	
Primary Medical Diagnosis	Acute respiratory distress

2. Review of Systems	
CNS	Anxious
Cardiovascular	Normal S_1S_2
Pulmonary	Severe retraction, use of accessory muscles, nasal flaring, stridor
Renal/Hepatic	Within Normal limits (WNL)
Gastrointestinal	Soft nontender, bowl sounds present all quadrants
Endocrine	WNL
Heme/Coag	WNL
Musculoskeletal	Moving all extremities pulses palpable 2^+ no evidence of external trauma
Integument	WNL
Developmental Hx	WNL
Psychiatric Hx	WNL
Social Hx	Lives with mother and two older and one younger sibling
Alternative/ Complementary Medicine Hx	No reports

Medication allergies:	NKDA	Reaction:	None
Food/other allergies:	None Known	Reaction:	None

3. Current medications	Drug	Dose	Route	Frequency
	None			

4. Laboratory, Diagnostic Study Results					
Na: 133	K: 3.4 mEq/L	Cl:	HCO3:	BUN:	Cr:
Ca: 9.2 mg/dl	Mg:	Phos:	Glucose:70 mg/dl	HgA1C:	
Hgb: 12.2 gm/dl	Hct: 34 %	Plt:	WBC: 5700 mm3	ABO Blood Type:	
PT	PTT	INR	Troponin:	BNP:	
ABG-pH:	paO2:	paCO2:	HCO3/BE:	SaO2:	
VDRL:	GBS:	Herpes:	HIV:	Cxr:	EKG

E. Baseline Simulator/Standardized Patient State
(This may vary from the baseline data provided to learners)

1. Initial physical appearance

Gender: Male		Attire: long sleeve T-shirt, long jeans pants			
Alterations in appearance (moulage):					
X	ID band present, accurate		ID band present, inaccurate		ID band absent or not applicable
	Allergy band present, accurate		Allergy band inaccurate		Allergy band absent or N/A

2. Initial Vital Signs Monitor display in simulation action room:

	No monitor display		Monitor on, but no data displayed		Monitor on, standard display

BP: 100/60	HR: 140	RR: 50	T: 37^0C	SpO^2: 92 %
CVP:	PAS:	PAD:	PCWP:	CO:
AIRWAY:	$ETCO^2$:	FHR:		
Lungs: Sounds/mechanics	Left: Diminish with strider	Right: Diminish with strider		
Heart:	Sounds:		S^1 S^2	
	ECG rhythm:		Sinus Tachycardia	
	Other:			
Bowel sounds:	Hyperactive		Other:	

3. Initial Intravenous line set up

	Saline lock #1	Site:					IV patent (Y/N)
	IV #1	Site: Lft A/C	CVC	Fluid type: Normal Saline	Initial rate: Bolus (20 mls/kg)		IV patent (Y/N) Yes
X	Main						
	Piggyback						
	IV #2	Site:		Fluid type:	Initial rate:		IV patent (Y/N)
	Main						
	Piggyback						

4. Initial Non-invasive monitors set up

	NIBP	X	ECG First lead:	II	ECG Second lead:
X	Pulse oximeter		Temp monitor/type		Other:

5. Initial Hemodynamic monitors set up

	A-line Site:		Catheter/tubing Patency (Y/N)		CVC Site:	PAC Site:

6. Other monitors/devices

	Foley catheter	Amount:		Appearance of urine:	
	Epidural catheter		Infusion pump:	Pump settings:	
	Fetal Heart rate monitor/tocometer			Internal	External

Environment, Equipment, Essential props Recommend standardized set ups for each commonly simulated environment
1. Scenario setting: (example: patient room, home, ED, lobby)
ED Waiting room

2. Equipment, supplies, monitors (In simulation action room or available in adjacent core storage rooms)							
	Bedpan/ Urinal		Foley catheter kit		Straight cath. kit		Incentive spirometer
X	IV Infusion pump		Feeding pump		Pressure bag	X	Wall suction
	Nasogastric tube	X	ETT suction catheters		Oral suction catheters		Chest tube kit
X	Defibrillator	X	Code Cart	X	12-lead ECG		Chest tube equip
	PCA infusion pump		Epidural pump		Central line Kit		Dressing Δ equip
X	IV fluid Type: NS		IV fluid additives:		Blood products: _____ ABO Type: ___ # of units:__		

	Nasal cannula		Face tent		Simple Face Mask		Non-rebreather mask
X	BVM/Ambu bag	X	Nebulizer tx kit		Flow-meters (extra supply)		

4. Documentation and Order Forms							
X	Provider orders		Med Admin Record	X	Hx & Physical		Lab Results
X	Progress Notes		Graphic record		Anes/PACU record	X	ED Record
	Med Reconciliatn		Transfer orders		Standing orders		ICU flow sheet
X	Nurses' Notes		Dx test reports	X	Code Record		Prenatal record
	Actual medical record binder				Electronic Medical Record		

5. Medications (to be available in sim action room)								
#	**Medication**	**Dosage**	**Route**		**#**	**Medication**	**Dosage**	**Route**
	Epinephrine	0.01 mg/kg	IV/IO			Normal Saline	500 mls	IV/IO
	Amiodarone	5mg/kg	IV/IO					
	Racemic epinephrine	0.05 ml/kg dilute with Ns to 3 mls	Nebulizer					

CASE FLOW / TRIGGERS/ SCENARIO DEVELOPMENT STATES			
Initiation of Scenario: 3-year-old child brought in from home via private care suddenly develops shortness of breath and difficulty breathing while he and his older sibling were playing with their toys. Mom stated she called to the boys and it startled the younger child, he immediately started having difficulty breathing.			
STATE / PATIENT STATUS	**DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE**		
1. **Baseline** The RN Enters the ED triage area and walks toward Mom The child is sitting on the gurney, not responding working to breathe **Cueing from patient's mother**: My baby! *Is my baby choking? What is wrong with him?*	**Operator:** B/P 100/60 HR: 140 RR: 50 T.37^{o}C $Sp0_2$: 92% The child is awake pale diaphoretic, severe respiratory distress, audible stridor, nostrils flaring, and use of accessory muscles. **Triggers:** Nurse will need to complete 1, 2, 3 & 4 before moving forward.	**Learner Actions** 1. Primary nurse washes hand prior to touching the patient 2. Introduces self & role. 3. Conducts a focused assessment of the child 4. Recognizes Patient in upper airway respiratory distress. 5. Attempts to manage child's airway, ask the patient "are you choking," 6. Performs abdominal thrust to dislodge foreign body 7. Reassures mom that they are in the right place for patient care.	**Debriefing Points:** 1. National Patient safety goal(NPSG)-approaches to minimize the risk of error and infection 2. Criteria for acute airway obstruction 3. Potential for respiratory and cardiac arrest 4. Age specific procedures to dislodge foreign body with abdominal thrusts

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
2. **Mom crying**: please help my baby! **Nurse:** I need some help in here with this pediatric patient who is having airway issues.	**Operator:** B/P: 76/40 HR: 170 RR: 56 0_2Sat: 84% Monitor: ST ED Technician brings pediatric code cart to room **Triggers:** *After 1-2* **Operator:** B/P: 60/p HR: 58 RR: 12 Monitor: SR Patient gasping & unresponsive	**Learner Actions:** 1. Recognizes the need for additional help & immediate assessment by the physician. 2. Calls for out for assistance 3. Notifies unit secretary to call respiratory therapist and have ED technician bring code cart (with broselow tape) to the room. 4. Immediately places patient in an ED bed. 5. Assigns roles, places child on the monitor, places 100% oxygen via face mask 6. Interacts positively with Mom allowing her to assist with positioning and care. 7. Patient stops breathing (Ed team manages code) **RN #2**: comes to assist Mom and keep her updated with information. 8. Performs chest compression 30:2 9. Attempts ventilation (looks in child's mouth & reposition head prior to second attempt if first attempt was unsuccessful).	**Debriefing Points:** 1. Move patient to safety 2. Knowing when to call for additional assistance 3. Management of acute respiratory distress 4. Strategies for involving the patient mother while continuing priority assessment.

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
3. **RN#2:** Stays with Mom to explain to her what is going on and asks to stay quiet and calm so the team can focus and work on her son without distraction.	**Operator:** *After 30 sec* *Patient condition continues to deteriorate, the child* stops breathing B/P: 0 HR: 0 RR: 0 Monitor: VF RR "O" **$Sp0_2$:** 69**%** **Cues:** Physician enters the room**--** while the initial 2 minutes of CPR is in progress. Physician uses Laryngoscopy and attempts to intubate, sees the object at the back of the throat and removes it. **Triggers:** ROSC ***returns within 30*** seconds of object being removed. Monitor: SR 66 Rate gradually increases ***(over15 seconds***)	**Learner Actions:** 1. Primary nurse delivers SBAR to Physician upon arrival to child's room 2. Physician uses SBAR to communicate with staff, Requests McGill's Forceps, and intubation tray. 3. Demonstrates correct AHA guidelines for PALS pulseless arrest (V-Fib) a. Five cycles CPR b. Defibrillation at 2 J/kg c. Prepares to administer epinephrine 0.01 mg/kg (0.1 ml/kg) during compressions 4. Physician attempt intubation, sees object at the back of patient's throat 5. Physician uses Magill forceps to successfully removes object 6. Ventilation continued with (BMV)	**Debriefing Points:** 1. Management of acute respiratory arrest 2. Management of cardiac arrest: 3. Administers correct medication and dosage

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
4. Nursing Assistant: Calls RN #2 and Mom back to the patient bedside *Physician & Primary Nurse stays with patient* **End Scenario**	**Operator:** B/P: 90/60 HR: 99 RR: 12 Monitor: SR $Sp0_2$: 93%	**Learner Actions:** 1. Administers ventilation (BMV) 2. Supportive Care 3. Admit/ transfer to tertiary care center **Physician:** Updates Mom on the patient status (the child had swallowed a part of a toy which lodge in his upper airway causing the blockage. There is some swelling, so we will be admitting the child for overnight observation to monitor his breathing.	**Debriefing Points** 1. Recognizes ROSC (return of spontaneous circulation) 2. Demonstrate Knowledge of providing supportive care 3. Role play communication with parent
Scenario End Point: Patient responds, transfer to tertiary care			
Suggestions to <u>decrease</u> complexity: Suggestions to <u>increase</u> complexity:			

APPENDIX A: HEALTH CARE PROVIDER ORDERS

Patient Name: Sean Brown **DOB: 2/18/2013** **Age: 3 yeas** **MR#: 0010049**		**Diagnosis: Acute Respiratory Distress**
†No Known Allergies †Allergies & Sensitivities		
Date	Time	**HEALTH CARE PROVIDER ORDERS AND SIGNATURE**
2/27/17	09:00	1. Normal Saline 500 milliliters bolus at 20ml/kg for systolic B/P less than 90
		2. Epinephrine 1:10000 give 0.01 mg/kg IV/IO every 3-5 minutes during arrest
		3. Amiodarone 5mg/kg IV/IO every 3-5 minutes during arrest for VF/VT may repeat (X1) once
		4. Racemic epinephrine 0.05 ml/kg nebulizer treatment dilute to 3 mls with normal saline, over 15 minutes X1 may repeat in 12 hours if stridor persists
Signature		Dr. Paul Marsh M.D.

APPENDIX B: Digital images of manikin and/or scenario milieu	
Insert digital photo here	Insert digital photo here
Insert digital photo here	Insert digital photo here

APPENDIX C: DEBRIEFING GUIDE

General Debriefing Plan			
☐ Individual	☐ Group	☐ With Video	☐ Without Video
Debriefing Materials			
☐ Debriefing Guide	☐ Objectives	☐ Debriefing Points	**X** QSEN
QSEN Competencies to consider for debriefing scenarios			
X Patient Centered Care	**X** Teamwork/Collaboration	**X** Evidence-based Practice	
X Safety	☐ Quality Improvement	☐ Informatics	

Sample Questions for Debriefing

1. How did the experience of caring for this patient feel for you and the team?
2. Did you have the knowledge and skills to meet the learning objectives of the scenario?
3. What GAPS did you identify in your own knowledge base and/or preparation for the simulation experience?
4. What RELEVANT information was missing from the scenario that impacted your performance? How did you attempt to fill in the GAP?
5. How would you handle the scenario differently if you could?
6. In what ways did you check feel the need to check ACCURACY of the data you were given?
7. In what ways did you perform well?
8. What communication strategies did you use to validate ACCURACY of your information or decisions with your team members?
9. What three factors were most SIGNIFICANT that you will transfer to the clinical setting?
10. At what points in the scenario were your nursing actions specifically directed toward PREVENTION of a negative outcome?
11. Discuss actual experiences with diverse patient populations.
12. Discuss roles and responsibilities during a crisis.
13. Discuss how current nursing practice continues to evolve in light of new evidence.
14. Consider potential safety risks and how to avoid them.
15. Discuss the nurses' role in design, implementation, and evaluation of information technologies to support patient care.

Notes for future sessions: