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 become 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, sharing and partnership models. More information can be found on the CSA website at www.californiasimulationalliance.org

CSA REV template (12/15/08; 5/09; 12/09; 4/11)

TABLE OF CONTENTS

SECTION I   SCENARIO OVERVIEW

      A.   Title
      B.   Summary
      C.   Evidence Base

SECTION II   CURRICULUM INTEGRATION

      A.   Learning Objectives
          1.   Primary
          2.   Secondary
          3.   Critical Elements
      B.   Pre-scenario learner activities

SECTION III   SCENARIO SCRIPT

      A.   Case Summary
      B.   Key Contextual Details
      C.   Scenario Cast
      D.   Patient/Client Profile
      E.   Baseline patient/client simulator state
      F.   Environment / equipment / essential props
      G.   Case flow /triggers / scenario development

SECTION IV   APPENDICES

      A.   Health Care Provider Orders
      B.   Digital Images of Manikin / Milieu
      C.   Debriefing Guide

SECTION I: SCENARIO OVERVIEW

Scenario Title:	Respiratory distress in 5 year old child in school setting
Original Scenario Developer(s):	Charlotte Sense MSN RN CNS; Debra Brady DNP RN CNS; Dian Baker PhD, APRN;
Date - original scenario	Nov 7, 2013
Validation:	Marjorie Miller, MA, RN Charlotte Sense MSN RN CNS; Dian Baker PhD, APRN; Mariann Cosby MPA, MSN, RN
Revision Dates:	Nov 21, 2013; Jan 17, 2014; 2-25-2014
Pilot testing:	March 27, 2014
QSEN revision:	Included in original scenario

<u>Estimated Scenario Time</u>:   12-15 minutes   <u>Debriefing time</u>: 15 minutes

<u>Target group</u>: School Nurses

<u>Core case</u>: 5 year old boy, history of asthma; at school exposed to carpet cleaning material, develops shortness of breath and is taken to the health office.

<u>QSEN Competencies</u>: Patient Centered Care; Patient Safety; Teamwork and Collaboration

<u>Brief Summary of Case</u>: The client is a 5 year-old male student who has a 3 year history of asthma. This information is noted on the emergency card in the school office. He also has an Emergency Care Plan/Action Plan for asthma, stating rescue inhaler "Xopenex" to be used in case of emergency. He has been healthy and has had not asthma attacks at school. The student was at school today and in a classroom with carpet that was cleaned by the janitor the night before and had slight "chemical" smell. After 2 hours in the classroom he told the teacher he "could not breathe". He was sent to the office with an adult aide who noted that he was coughing and wheezing. The office staff could not locate his inhaler and called the school nurse. The school nurse was in another classroom when her cell phone rang. Learners must recognize signs of acute asthma, develop an immediate plan to assess and treat, and determine if a 911 is required.

EVIDENCE BASE / REFERENCES (APA Format)
Black, K. J. L., Correll, R., Coyle, D., Bhatt, M., Gouin, S., Johnson, D.W., Joubert, G., Mitton, C., Patel, H., Plint, A.C., Turner, T., Whitehouse, S., (2010) Cost-effectiveness of epinephrine and dexamethasone in children with bronchiolitis. *Pediatrics* 126 (4) 623-631
Burns, C.E. et al. (2009). Pediatric primary care 4e. Saunders: Elsevier. ISBN: 978-1-4160-4087-3
Chiocca, E.M. (2010). Advanced pediatric assessment. ISBN: 0-7817-91650
George M., Stoloff, S., (2012) Teaching patients the critical components of asthma self-management**.** *Journal of Asthma & Allergy Educators.* 3 (1) 10-19
Hegenbarth, M.A., and the Committee on Drugs. (2008) Preparing for pediatric emergencies: drugs to consider. *Pediatrics.* 121 (2) 433-443.

ALL DATA IN THIS SCENARIO IS FICTICIOUS

Jones, S.E., Mcmanus, T., Smith, A.M., Wheeler, L.S. (2009) Adherence to national asthma education and prevention program's "how asthma-friendly is your school?" recommendations. *The Journal of School Nursing.* 25 (5) 382-394

Kesslet, K.R., (2011) Relationship between the use of asthma action plans and asthma exacerbations in children with asthma: a systematic review. *Journal of Asthma & Allergy Educators*. (2) 11-21.

Taylor, S. (2011). *The green book: Guidelines for specialized physical healthcare services in school settings* (2ed). Sacramento California: California School Nurses Association

.

.

ALL DATA IN THIS SCENARIO IS FICTICIOUS

SECTION II: CURRICULUM INTEGRATION

A. SCENARIO LEARNING OBJECTIVES

Learning Outcomes

1. Utilizes critical analysis/clinical decision making to interpret data & implement appropriate care.
2. Communicates in a compassionate and client centered manner.
3. Synthesizes case study data to determine need for additional medications and medical treatment
4. Utilizes effective communication protocols with emergency response personnel

Specific Learning Objectives

1. Implements pediatric assessment triangle (PAT) and respiratory assessment
2. Recognizes symptoms of acute asthma and progressing respiratory distress
3. Prioritize administration of emergency medication
4. Administer rescue inhaler medication and continuously monitors patient
5. Initiates the appropriate communication with emergency personnel, parents, and administrator
6. Manages emergent situation with school staff

Critical Learner Actions

1. Greets child in calm, open manner, initiates verbal assessment.
2. Completes PAT and focused respiratory assessment
3. Reviews Emergency Response Card and Emergency Care/Action Care Plan
4. Administers rescue inhaler
5. Determines respiratory status and need for further care; arranges for school personnel to call 911
6. Calls or delegates call to parent and administrator to notify of the situation and determine where the child will be taken
7. Reassesses and recognizes declining respiratory status
8. Administers Epi-Pen
9. Deliver SBAR verbal report and written copy of Emergency Care/Action Plan to emergency services
10. Manages emergent situation in a calm, professional manner
11. Initiate required documentation of student event and subsequent care.

B. PRE-SCENARIO LEARNER ACTIVITIES	
Prerequisite Competencies	
Required prior to participating in the scenario	
Knowledge	Skills/ Attitudes
❑ Pediatric Assessment Triangle	❑ Physical assessment skills
❑ Signs/Symptoms of acute asthma and respiratory distress	❑ Continued use of systemic assessment and use of O2 Sat if available
❑ MDI Inhaler for children	❑ Use of rescue inhaler
❑ Epi-Pen for rescue	❑ Use of Epi-Pen
❑ SBAR communication (Situation-Background-Assessment-Recommendation)	❑ Professional leadership and management of emergent situation

CSA REV template (12/15/08; 5/09; 12/09; 4/11)

ALL DATA IN THIS SCENARIO IS FICTICIOUS

SECTION III: SCENARIO SCRIPT

A.	Case summary

The client is a 5 year-old male student who has a 3 year history of asthma.   This information is noted on the emergency card in the school office. He also has an Emergency/Action Care Plan for asthma, stating rescue inhaler "Xopenex" to be used in case of emergency. He has been healthy and has had not asthma attacks at school. The student was at school today and in a classroom with carpet that was cleaned by the janitor the night before and had slight "chemical" smell. After 2 hours in the classroom he told the teacher he "could not breathe". He was sent to the office with an adult aide who noted that he was coughing and wheezing. The office staff could not locate his inhaler and called the school nurse. The school nurse was in another classroom when her cell phone rang. Learners must recognize signs of acute asthma, develop an immediate plan to assess and treat, and determine if a 911 is required. Inhaler was not used immediately and the asthma progressed quickly. Inhaler was in ineffective. School nurse administers epi-pen. Student improves slowly. EMT arrives and care in handed to EMT. School nurse calls the parent.

B. Key contextual details

- School Nurse Office setting with access to student files and medications
- Student with known history of asthma, Emergency Action Care Plan and Medications

C. Scenario Cast		
Patient/ Client	X High fidelity simulator Sim Jr,	
	❑ Mid-level simulator	
	❑ Task trainer	
	❑ Hybrid (Blended simulator)	
	X Standardized patient (age range (5-8)	
Role	Brief Descriptor (Optional)	Confederate (C) or Learner (L)
RN 1	School Nurse	Learner
RN 2	School Nurse	Learner
School Secretary	Voice on Phone	Computer Programmer
EMT	Voice on Phone	Computer Programmer

ALL DATA IN THIS SCENARIO IS FICTICIOUS

D.	Patient/Client Profile		
Last name:	Tagene	First name: William	
Gender: Male	Age: 5 yr	Ht: 40 "	Wt: 40 lbs.	Code Status: Full
Spiritual Practice: none		Ethnicity: Middle Eastern	Primary Language spoken: English

1. History of present illness

3 year history of asthma with 2-3 acute asthma attacks per year; last one at age 4, has not required hospitalization.

Primary Medical Diagnosis	Late preterm infant

2. Review of Systems

CNS	Alert appropriate 5 year old
Cardiovascular	None no murmur
Pulmonary	States he "cannot breath" , audible wheeze with cough
Renal/Hepatic	NA
HEENT	No cold symptoms; normal
Gastrointestinal	normal
Endocrine	NA
Heme/Coag	NA
Musculoskeletal	Use of auxiliary muscles
Integument	Pale
Developmental Hx	WNL
Psychiatric Hx	
Social Hx	Cared for at home by mom and dad; has 1 older brother age 7.
Alternative/ Complementary Medicine Hx	none

Medication allergies:	None	Reaction:	
Food/other allergies:	Dust, pollens & environmental allergies	Reaction:	

	NONE Drug	Dose	Route	Frequency
3. Current medications	Xopenex	2 puffs every 4 – 6 hours as needed	Inhaled	PRN

CSA REV template (12/15/08; 5/09; 12/09; 4/11)

ALL DATA IN THIS SCENARIO IS FICTICIOUS

4. Laboratory, Diagnostic Study Results NON					
Na:	K:	Cl:	HCO3:	BUN:	Cr:
Ca:	Mg:	Phos:	Glucose:	HgA1C:	
Hgb:	Hct:	Plt:	WBC:	ABO Blood Type:	
PT	PTT	INR	Troponin:	BNP:	
Ammonia:	Amylase:	Lipase:	Albumin:	Lactate:	
ABG-pH:	paO2:	paCO2:	HCO3/BE:	SaO2:	
VDRL:	GBS:	Herpes:	HIV:		
CXR:			ECG:		
CT:			MRI:		
Other:					

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

1. Initial physical appearance	
Gender: Male	Attire: jeans and tee shirt, sneakers

2. Initial Vital Signs Monitor display in simulation action room:			
x	No monitor display		Monitor on, but no data displayed	Monitor on, standard display

BP:	HR: 140	RR: 50	T: 98.4 F	SpO²:
CVP:	PAS:	PAD:	PCWP:	CO:
AIRWAY:	ETC0²:	FHR:		

Lungs: Sounds/mechanics	Left: Wheezes→ stridor		Right: Wheezes--→stridor
Heart:	Sounds:	**normal**	
	ECG rhythm:	Sinus Tach	
	Other:		
Bowel sounds:	normal		Other:

3. Initial Intravenous line set up					
Saline lock #1	Site:				IV patent (Y/N)
IV #1 Main	Site:	Fluid type:	Initial rate:		IV patent (Y/N)
IV #2 Main	Site:	Fluid type:	Initial rate:		IV patent (Y/N)

CSA REV template (12/15/08; 5/09; 12/09; 4/11)

ALL DATA IN THIS SCENARIO IS FICTICIOUS

4. Initial Non-invasive monitors set up					
x	NIBP		ECG First lead:		ECG Second lead:
x	Pulse oximeter		Temp monitor/type		Other:

5. Initial Hemodynamic monitors set up				
	A-line Site:	Catheter/tubing Patency (Y/N)	CVP Site:	PAC Site:

6. Other monitors/devices				
	Foley catheter	Amount:		Appearance of urine:
	Epidural catheter	Infusion pump:	Pump settings:	

Environment, Equipment, Essential props
Recommend standardized set ups for each commonly simulated environment

1. Scenario setting: (example: patient room, home, ED, lobby)

School office setting; gurney and 2 chairs, small table. Thermometer, BP cuff, School nurse supply cabinet. School nurse supply cabinet where medications are stored (label various medications with various student's names including a "stock epi-pen" and Xopenex Inhaler with MDI labeled with William Tagene name.

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
	IV Infusion pump		Feeding pump		Pressure bag		Wall suction
	Nasogastric tube		ETT suction catheters		Oral suction catheters		Chest tube insertion kit
	Defibrillator		Code Cart		12-lead ECG		Chest tube equip
	PCA infusion pump		Epidural infusion pump		Central line Insertion Kit		Dressing Δ equipment
	IV fluid Type:		IV fluid additives:		Blood product ABO Type:_____ # of units:_____		

3. Respiratory therapy equipment/devices

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

ALL DATA IN THIS SCENARIO IS FICTICIOUS

4. Documentation and Order Forms						
	Health Care Provider orders		Med Admin Record	H & P		Lab Results
	Progress Notes		Graphic record	Anesthesia/PACU record		ED Record
	Medication reconciliation		Transfer orders	Standing (protocol) orders		ICU flow sheet
	Nurses' Notes		Dx test reports	Code Record		Prenatal record

Actual medical record binder, constructed per institutional guidelines • Actual medical record binder, constructed per institutional guidelines • Binder with emergency procedures guidelines for school personal • Binder has all emergency care plans for students (that nurse is aware of)	Other: See below Describe: 1) Student Emergency Contact Card: has parents phone numbers, addresses and back up people phone numbers, addresses and permission to pick up student from school; Protocols for Treatment of Hyper/Hypoglycemia in school setting. 2) MD order sheet for schools found crumpled up in back pack. MD order sheet has sliding scale for insulin administration and also carbohydrate to insulin ratio for meals. Includes name and dose of Insulin for bedtime dose. Includes Glucagon dosing for PRN (as needed) dosing for severe hypoglycemia. Will be placed in medical record binder at end of case. 3) Emergency Procedures for urgent issues for school personal

5. Medications (to be available in sim action room)							
#	Medication	Dosage	Route		#	Medication	Dosage	Route
	Xopenex Inhaler	2 puffs Q 4 hrs prn	Inhaler with MDI					
	Epi-pen	0.3 mg	IM into outside thigh					

ALL DATA IN THIS SCENARIO IS FICTICIOUS

CASE FLOW / TRIGGERS/ SCENARIO DEVELOPMENT STATES			
Initiation of Scenario : School Nurse RN is called into health office at school from another classroom to assess a 5 year old boy who is complaining of not being able to breathe and has audible wheezes and is coughing, and the smell from the carpet is irritating him. The school secretary says they can't find an inhaler for the student. When nurse arrives she uses the PAT (Pediatric Assessment Triangle) to assess the patient and to obtain an immediate history. Secretary hands her the emergency card and the Emergency Care /Action Plan. RN proceeds with treatment. Scenario ends when Paramedics arrive to assume care.			
STATE / PATIENT STATUS	**DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE**		
1. **Baseline** Sitting up on gurney in the school office. States he "can't breathe" Child increases respiratory distress and says "I'm having a harder time breathing. The carpet smell is bothering me." Uses interrupted speech in one –two word sentences/ monotone	**Operator** Trend vital signs over 3 minutes: HR 140 - 150; RR 40 – 50 (trend up over 2 min) O2 sat 93-91 trend down over 2 min. Breath sounds: wheezing (volume level on simulator 5) Supra/sub sternal, intercostal retractions.	**Learner Actions** Asks how things are going in calm voice, engaging child Observes environment Initiates assessment questions Reviews the Emergency Plan Assesses use of accessory muscles, asks operator about this; assesses struggling respiratory sounds, and increase in HR RR.	**Debriefing Points:** What did the school secretary say that concerned you? How did you adjust your communication tone and technique to obtain the information you need from the boy when he seemed panicked? What physical assessment findings concerned you most?

CSA REV template (12/15/08; 5/09; 12/09; 4/11)

ALL DATA IN THIS SCENARIO IS FICTICIOUS

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
2. Starts with stridor and gets; voice become staccato to demonstrate increasing respiratory distress. Responsive to directions for pursed lip breathing.	**Operator:** Continue with strider and wheezes, increase volume on strider on sim program. HR 150-160; RR 50-55 (trend up over 2 min) O2 sat 91-90 trend down over 2 min.	**Learner Actions:** Obtains inhaler with MDI Assists client to sit up Coaches client with pursed lip breathing RN determines need for inhaler and locates the inhaler in the medication cabinet. RN administers Xopenex with MDI reassessment of respiratory rate, pulse, skin signs/color and capillary refill Delegates secretary or someone else to initiate phone call to 911, Parents, Administrator	**Debriefing Points:** What did you do to help calm and focus the child? Strategies for calming and focusing distressed child Expected outcomes following inhaled medication Tell us about your assessment and the criteria for further intervention
Complains "I am having a harder time breathing of increased difficulty breathing even after use of inhaler		Repeats inhaler treatment/administration; continues to calm the student. RN uses SBAR to communicate with 911 dispatcher; requests an ETA (estimated time of arrival).	

CSA REV template (12/15/08; 5/09; 12/09; 4/11)

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
3. Continues to have wheezes; stridor increases **"I am having a harder time breathing"** If Epi Pen not administered trigger to encourage epi pen adminstration: **"I really need my Epi Pen now"**	**Operator:** Continue current VS setting Increase severity of cardiac and respiratory findings to RR 55-60 and HR 160-170	**Learner Actions:** Patient not improving Emergency Department and explains need for respiratory precautions RN notes that emergency care states he has environmental allergies. Administers stocked-Epi Pen in response to student complaint of having difficulty breathing per protocol.	**Debriefing Points:** Were there key aspects of the assessment data helped you determine the level of transport you requested? Where there other treatments you wanted to consider?
4. 1 min after epi pen **"I feel a little better, it is starting to open up."**	Trend vital signs over 2 minutes: HR 120; RR 40 O2 sat 94 trend down over 2 min.	Reassess VS and Lung sounds, color starts to improve from pale to pink; respiratory effort/accessory muscle use Checks with admin support of status of contacting Paramedics and parents. RN uses SBAR for hand off report to Paramedics .	What key assessment findings let you know the medication was effective. When would you consider a second dose? What are 3 significant learnings you can take forward into your clinical practice.

CSA REV template (12/15/08; 5/09; 12/09; 4/11)

ALL DATA IN THIS SCENARIO IS FICTICIOUS

If no Epi Pen: Student lethargic, not responding; Paramedics arrive, end scenario and address issues of failure to treat in debriefing. Consider redo of scenario.	If epi pen not given: Student become lethargic, Trend vital signs over 2 minutes: HR 70; RR 20 O2 sat 84 trend		Debrief with Tone of Advocacy/Inquiry: Advocacy: I am concerned that you did not administer the Epi Pen given the students clear respiratory distress. Can you help me understand your thought process related to this? What would you do differently if faced with a similar situation next time?
Scenario End Point: EMT arrives and hand off occurs/ RN should verbalize the necessary documentation for school records;			
Suggestions to <u>decrease</u> complexity: Remove Epi-Pen; make it not available Suggestions to <u>increase</u> complexity: Include acute, anaphylactic exacerbation reaction to the carpet cleaner with Saturation to 80%			

Additional Notes for Debriefer

Quick PAT assessment and assessment of immediate MOI (mode of injury/onset) are critical in management of pediatric emergencies

Focused secondary assessments are used to pinpoint the intervention required.
Asthma inhalers use can be repeated as needed for rescue

Epi-Pen can be used to relief asthma signs and symptoms in acute situations
This scenario could include a significant acute, anaphylactic exacerbation reaction to the carpet cleaner

Clear, concise communication is critical.
School staff was not aware of what to do or how to locate the inhaler. Indicates need for teaching and further planning

CSA REV template (12/15/08; 5/09; 12/09; 4/11)

APPENDIX A: HEALTH CARE PROVIDER ORDERS

Patient Name: Williiam Tagene	Diagnosis: Asthma
DOB: March 1, 2009	
Age: 5 year old	
MR#: 56789	

†No Known Allergies
†Allergies & Sensitivities

Date	Time	HEALTH CARE PROVIDER ORDERS AND SIGNATURE
	9:00 AM	**Xopenex HFA Inhaler, 2 puffs every 4 hours as needed for cough, wheeze, shortness of breath**
Signature		

APPENDIX B: Digital images of manikin and/or scenario milieu

Insert digital photo here

About XOPENEX HFA®(levalbuterol tartrate) Inhalation Aerosol

XOPENEX HFA® (levalbuterol tartrate) Inhalation Aerosol (pronounced zō-pen-eks) is a quick-relief medicine that is used to treat or prevent the narrowing of airways (bronchospasm) caused by asthma and chronic obstructive pulmonary disease (COPD) with reversible obstructed airway disease.

Insert digital photo here

APPENDIX C: DEBRIEFING GUIDE

General Debriefing Plan			
☐ Individual	X Group	☐ With Video	X Without Video

Debriefing Materials			
☐ Debriefing Guide	☐ Objectives	X Debriefing Points	X QSEN

QSEN Competencies to consider for debriefing scenarios		
X Patient Centered Care	X Teamwork/Collaboration	☐ 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 school nurse roles and responsibilities during an emergency
Notes for future sessions: