



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 (CVBSC, 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.cinhc.org/programs.

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 at <u>www.bayareanrc.org/rsc</u> and click documents. (Please send signed I.P. release forms to KT at kt@cinhc.org)

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SECTION I: SCENARIO OVERVIEW

Scenario Title:	Acute Coronary Sy Prep for Cardiac Ir	
Original Scenario I (name and creden	• • •	Anne Bolter Lucero, RN, MSN anlucero@cabrillo.edu Validated by: Gina Galluchi, RN, CCRN
Date - original sce	nario	7-08-07
Validation:		8-01-07
Revision Dates:		11-15-07, 6-26-09, 4-02-12
Pilot testing:		10-15-07
QSEN revision:		4-02-12- Marjorie Miller, MA, RN

Estimated Scenario Time: 15-20 min

Debriefing time: 30-40 min

Target group: Advanced Medical Surgical Nursing students, new grads, orientees to Telemetry **Core case:** Acute Coronary Syndrome; Clinical Decision Making in evolving case

QSEN Competencies:

- Patient Safety
- Teamwork and Collaboration
- Patient Centered Care

Brief Summary of Case: (See ACS-A & B) Third part of a 4 part evolving scenario occurring several hours after the second scenario. 58 year old female with new onset chest pain and diagnosis of Acute Coronary Syndrome (ACS). Experienced 2 episodes of chest pain relieved with NTG. Experienced one episode of v. tach. Labs indicated rising troponin levels and a K or 2.6. Patient stabilized with Amiodarone and is receiving K riders, but is now experiencing EKG changes. Learners are to prepare patient for cardiac cath and intervention. Patient is anxious, repeatedly asking if husband has arrived. Husband arrives and requests private time with wife at her request. Learners are to deal with preparation issues and deal with expressed patient/family needs.

EVIDENCE BASE / REFERENCES (APA Format)

American Heart Association, (2010) Advanced Cardiovascular Life Support Provider Manual Black, J.M. & Hawks, J.H., (2009) Medical Surgical Nursing, Clinical Management for Positive Outcomes, Vol 2, 8th edition. St Louis: Elsevier Saunders.

Deglin, J.H. & Vallerand, A.H., (2009) Davis Drug Guide for Nurses, 10th edition. Philadelphia

Cronenwett, L., Sherwood, G., Barnsteiner, J. et al. (2007). Quality and safety education for nurses. Nursing Outlook, 55(3), 122-131. doi:10.1016/j.outlook.2007.02.006

SECTION II: CURRICULUM INTEGRATION

A. SCENARIO LEARNING OBJECTIVES

Learning Outcomes

- 1. Provide nursing care that promotes safety and minimizes risk of error.
- 2. Apply clinical decision making skills in interpreting and analyzing data in evolving situations.
- 3. Prioritize interventions considering multiple dimensions of patient/family centered care.
- 4. Communicate effectively with members of the inter-professional team.

Specific Learning Objectives

- 1. Applies principles of hand hygiene, infection control and personal protection.
- 2. Correctly identifies patient and introduces team.
- 3. Correctly assesses IV drips and responds appropriately to patient questions.
- 4. Correctly administer pre-procedure medications; complete pre-procedure checklist.
- 5. Correctly prioritize immediate significant interventions required for a patient being transferred to Cath Lab.
- 6. Demonstrates situational awareness and responds to patient concerns.
- 7. Communicates hand-off report to cath team using standardized SBAR tool.

Critical Learner Actions

B. PRE-SCENAR	10 L	EARNER ACTIVITIES
Prerequisit	e Co	ompetencies
Required prior to pa	rtici	pating in the scenario
Knowledge		Skills/ Attitudes
Risk factors, pathophysiology and collaborative management of Acute Coronary Syndrome		Assessment of Cardiovascular system Basic introductory monitor placement skill
Normal/abnormal cardiac rhythms.		Interpretation of basic cardiac monitor rhythms
Pharmacology of basic cardiac medications		Safe administration of medications, O ² admin.
Current National Patient Safety Goals		Therapeutic communication in acute situations
Structured communication tools (SBAR)		Strategies for decreasing patient/family anxiety
Protocols for pre-procedure preparation		Decision making skills re. family vs. nursing priorities

CSA REV template (12/15/08; 5/09; 12/09; 4/11; 1/15)

SECTION III: SCENARIO SCRIPT

Case summary

Α.

(unfolding case) (See ACS-A & B) Third part of a 4 part evolving scenario occurring several hours after the second scenario.

58 year old female with new onset chest pain and diagnosis of Acute Coronary Syndrome (ACS). Experienced 2 episodes of chest pain relieved with NTG. Experienced one episode of v. tach. Labs indicated rising troponin levels and a K or 2.6. Patient stabilized with Amiodarone and is receiving K riders, but is now experiencing EKG changes. Patient has been stable for several hours.

Learners are to prepare patient for cardiac cath and intervention. Patient is anxious, repeatedly asking if husband has arrived. Husband arrives and requests private time with wife at her request. Learners are to deal with preparation issues and deal with expressed patient/family needs.

B. Key contextual details

Acute care telemetry unit. Change of shift. Off going nurse gives accurate and complete report.

	C. Scenario Cast	
Patient/ Client	High fidelity simulator	
	Mid-level simulator	
	Task trainer	
	Hybrid (Blended simulator)	
	Standardized patient	
Role	Brief Descriptor	Actor/Confederate or Learner
	(Optional)	
RN 1		Learner
RN 2		Learner
Cath team (2)	Takes SBAR from learners to end scenario	Actor(s)
Family member	Enters room prior to patient leaving for cath lab. Asks nurses for private time with wife at her request. Insists	Actor
	if nurses refuse.	

CSA REV template (12/15/08; 5/09; 12/09; 4/11; 1/15)

		D.	Patient/Client Profi	le
Last name:	Jones		First name:	Barbara
Gender: Fe	Age: 58	Ht: 5'5"	Wt: 186#	Code Status: Full
Spiritual Practio	ce: Christian	Ethnicity:	Caucasian	Primary Language spoken: English

1. History of present illness

No previous diagnosis of ACS was noted. She has not been under the care of any general physician. Risk factors include: overweight, smokes 1 pack per day. She is married; works full time outside the home as a bank manager, has three full grown children and two grandchildren that she cares for on weekends.

Primary Medical Diagnosis

Acute Coronary Syndrome

2. Review of Syster	ns
CNS	Alert, oriented, cooperative
Cardiovascular	Regular sinus rhythm, no gallops, rubs or murmurs, apical clear, pulses +4 radial/ pedal
Pulmonary	Breath sounds clear, effortless, O2 sat 98% on room air
Renal/Hepatic	WNL Renal: voids well without incontinence; Hepatic: liver non-tender, non-palpable
Gastrointestinal	WNL GI = normal bowel sounds X 4 quads
Endocrine	WNL post-menopausal
Heme/Coag	WNL
Musculoskeletal	Well-developed muscle mass, moves all extremities equally and well
Integument	Good tone, intact, no bruises,
Developmental Hx	Middle age adult WNL
Psychiatric Hx	WNL
Social Hx	Married, mother of 3, Professional
Alternative/ Complem	entary Medicine Hx None noted; occasional visit to chiropractor for low back pain.

Medication allergies:	NKDA	Reaction:	
Food/other allergies:	NKFA	Reaction:	

	Drug	Dose	Route	Frequency
rent ition	(from Scenario A)			
Current dication				
3. c				

CSA REV template (12/15/08; 5/09; 12/09; 4/11; 1/15)

4. Laboratory, I	Diagnostic Study	Results			
Na: 136	К: 3.2	Cl: 100	HCO3:	BUN: 24	Cr: 1.2
Ca: 9.0	Mg:	Phos:	Glucose: 143	HgA1C:	
Hgb: 11.4	Hct: 32	Plt: 320	WBC: 11.6	ABO Blood	Туре:
PT: 13	PTT: 21	INR: 1.0	Troponin: 5.8	CK: 520	
Ammonia:	Amylase:	Lipase:	Albumin:	Lactate:	
ABG-pH:	paO2:	paCO2:	HCO3/BE:	SaO2:	
VDRL:	GBS:	Herpes:	HIV:		
CXR: infiltrates of	consistent w/ pul	m edema	ECG: regular si	nus rhythm w/	′ PVC′s; ST ↑ - V1
CT:		MRI:			
Other:					

	(Th		ne Simulator/Standardized rom the baseline data prov		
1. In	itial physical appear	ance			
Geno	der: Female	Attire: patie	ent gown		
Alter	ations in appearance	e (moulage):	short brown, grey, age app	oropria	ate wig, light eye, lip make-up
x	ID band present, accurate information	on	ID band present, inaccurate information		ID band absent or not applicable
	Allergy band presen accurate information	-	Allergy band present, inaccurate information	x	Allergy band absent or not applicable

2. 1	nitial Vital Signs	Moni	tor display in simulation	on ac	ction room:	
	No monitor	x	Monitor on, but no		Monitor on,	
	display		data displayed		standard display	

BP: 128/68	HR: 112	RR: 20	T: 99.2	SpO2: 94%
CVP:	PAS:	PAD:	PCWP:	CO:
AIRWAY:	ETC02:	FHR:		
Lungs:	Left: \downarrow bilaterally, cr	ackles in upper fields	Right: \downarrow bilaterally, c	rackles in upper fields
Sounds/mechanics				
Heart:	Sounds:	S1, S2 no murmu	irs	
	ECG rhythm:	Sinus Tachycardia	a with PVC's; ST↑ i	n Vı
	Other:			
Bowel sounds:	ABS x 4 quadrants		Other:	

	IV #1	Site:	RA	Fluid type:	Initia	l rat	e:		IV patent (<mark>Y/</mark> N)
х	Main			Normal Saline	20 mL/hour		our		Yes
х	Piggyback	-		KCL 10 mEq/100 mL	100	•			
	IV #2	Site:	RA	Fluid type:	Initial rate:			IV patent (<mark>Y</mark> /N)	
х	Main	1		Amiodarone drip	1 mg/min				
	Piggyback	1		1000 mg/500 ml D5W	100	nL/h	our		
4.	Initial Non-i	nvasive	moni	ors set up					
х	NIBP		x	ECG First lead: Lead II	x	E	CG Second	lea	d: V1
х	Pulse oxime	eter	x	Temp monitor/type		C)ther:		
5.	Initial Hemo	dynami	ic mor	itors set up					
	A-line Site:			Catheter/tubing Paten	cy (Y/N	1)	CVP Site:		PAC Site:
6.	Other monit	ors/dev	vices	1			1		
	Foley cathe	ter	Am	iount:	Арр	eara	ince of urine	e:	
	Epidural ca	theter		Infusion pump:		Pump settings:			
	Fetal Heart	rate mo	nitor/	tocometer	Internal				External
	1					1			
				Environment, Equipm	nent, E	ssen	tial props		
	R	ecomm	end st	andardized set ups for ea				ed e	environment
1.	Scenario set	ting: (e	xamp	le: patient room, home,	ED, lo	bby)		
Te	lemetry unit,	monito	red						

2.	2. Equipment, supplies, monitors								
(In	(In simulation action room or available in adjacent core storage rooms)								
x	Bedpan/ Urinal		Foley catheter kit		Straight cath. kit	x	Incentive spirometer		
x	IV Infusion pump		Feeding pump		Pressure bag	x	Wall suction		
	Nasogastric tube		ETT suction cath		Oral suction cath		Chest tube insertion kit		
х	Defibrillator	x	Code Cart	x	12-lead ECG		Chest tube equip		
	PCA infusion pump Epidural inf. pump Central line Kit						Dressing Δ equipment		
x	IV fluid Type:						Blood product		
	Normal Saline w/prim	ary	tubing				ABO Type:		
	Amiodarone w/filter t		# of units:						
	KCl Riders 10 mEq in 1	100	mL D5W w/PB tubing						

3. Respiratory therapy equipment/devices							
x	Nasal cannula	Face tent	x	Simple Face Mask	x	Non re-breather mask	
x	BVM/Ambu bag	Nebulizer tx kit		Flowmeters (extra supply)			

4.	4. Documentation and Order Forms						
x	Health Care Provider orders	x	Med Admin Record	x	Н&Р	x	Lab Results
	Progress Notes		Graphic record		Anesthesia/PACU record		ED Record
×	Medication reconciliation		Pre-procedure checklist		Surgical permit (completed and signed unless part of learner actions)		ICU flow sheet
	Nurses' Notes	x	Dx test reports		Code Record		Prenatal record
x	Actual medical record binder, constructed per institutional guidelines		x	Other: 12 lead EKG, monitor strip showing runs of ventricular tachycardia 5-6 beats			

5.	5. Medications (to be available in sim action room)								
#	Medication	Dosage	Route		#	Medication	Dosage	Route	
3	Nitroglycerin	0.4mg	SL		3	Nitropaste 2%	1 inch	Transderm	
2	Morphine Sulfate	2 mg	IV		3	Lorazepam	1 mg	РО	
2	Morphine Sulfate	4 mg	IV		2	EC ASA	325 mg	PO	
2	Protonix	40 mg	РО		2	Metoprolol	50 mg	PO	

CASE FLOW / TRIGGERS / SCENARIO DEVELOPMENT STATES

Initiation of Scenario : Shift Report – 2:45 pm

Ms. Barbara Jones was admitted to the Tele unit early this morning from home via the ED after an episode of severe mid-sternal chest pain that lasted at least 5 minutes. Since admission she has had 2 episodes of chest pain relieved by nitro and one episode of ventricular tachycardia. Currently she is on her 3rd K-rider piggy-backed to her main line going at 100 mL/hr for a K of 2.6. She received a loading dose of Amiodarone and is now on a maintenance drip running at 100 mL/hr. She has EKG and lab changes consistent with ACS/MI and is on call for cardiac cath with possible stent placement. She has some new pre-cath orders and the pre-cath checklist to prepare. Ms. Jones has been stable now for several hours and is a little anxious waiting for her husband. Vital Signs: B/P 128/68 HR 112 RR 28 T 99.2 Sat 94%. EKG ST with occasional unifocal PVC.

STATE / PATIENT STATUS	DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE							
1. Baseline	Operator	Learner Actions:	Debriefing Points:					
Pt sitting up 30 degrees in	B/P 128/68	1. Hand hygiene, introduce themselves	1. Environmental Assessment					
bed.	HR 112	& role; identify patient with 2	2. Strategies for maintaining					
	RR 28	patient identifiers.	safety with IV drips and					
When nurses enter the	Т 99.2	2. Divide and appropriately delegate	changing medication					
room, states "The doctor	Sat 94%	tasks to team members.	orders.					
was just here and said that I		3. Read and prioritize new orders;	3. Nursing role in obtaining					
need a heart angi	Monitor shows sinus	preparation procedures for cardiac	legal consents for					
ography or something like	tachycardia	cath.	procedures.					
that."		4. Evaluate status of existing IV sites	4. Patient centered					
		and medications for dose, rate,	care/teaching					
	Triggers:	compatibility with Amiodarone, KCl,	explanations of procedure					
		appropriate tubings	in simple terms					
	Must complete #1, 2, 3, 4	5. Reassure patient appropriately						
	to progress to next frame	regarding upcoming procedure.						
		6. Assess level of understanding of						
		procedure and answer basic						
		questions.						

STATE / PATIENT STATUS	D ESIRED ACTIONS & TRIGGERS 1	ΓΟ ΜΟΥΕ ΤΟ ΝΕΧΤ STATE	
2.	Operator:	Learner Actions:	Debriefing Points:
 Waiting for husband/or sister to arrive. Anxiously expresses need to talk with family before she goes for the heart cath. 	Operator: No change in VS; monitor demonstrates ventricular tach without PVC's @ 110 Triggers:	 Learner Actions: Administer PO meds and topical paste safely with appropriate vital sign check Explains medications and rationale for administration at this time. One nurse assesses patient while the other assesses new orders, labs 	 Debriefing Points: Significance of laboratory results Rationale for metoprolol and nitropaste pre- procedure Rationale for Protonix pre- procedure
If nurses offer to call, patient states "No, they're probably on their way."	Must complete #1, 2, 3, 4 to proceed to next frame.	 and other reports. 4. Reports laboratory changes to charge nurse. 5. Responds to patient's concerns about family member 	 SBAR communication to team members as well as physician

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE								
3.	Operator:	Learner Actions:	Debriefing Points:						
Patient asks again if husband has called back. Very anxious to see husband. Husband/sister arrives	B/P 134/78 HR 116 RR 28 Sat 92% Continue sinus tachycardia with occasional PVC's, no further runs ventricular tachycardia Triggers: must complete # 1, 2 to move to the next frame	 Recognize significance of for "on call" timing to Cardiac Cath lab Calls report to CCU/CIU for post-cath transfer Uses SBAR tool to deliver patient history and current status to receiving nurse. 	 Criteria for SBAR transfer report. Management of anxiety in pre-cath patient Decision: offer anti-anxiety agent ? What will help patient to relax? 						

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS	TO MOVE TO NEXT STATE	
4.	Operator:	Learner Actions:	Debriefing Points
Husband at patient's bedside. Holding patient's hand. Patient anxiously whispering to husband. Husband asks nurses for privacy to speak with his wife. Patient is expressing need for husband to care for	no further change Triggers: Complete #1,2,3,4 Cath team arrives to take patient to Cath Lab.	 Greet husband and answer basic questions; explain that patient will be transferred to CCU or CIU after procedure for close monitoring Retreat from bedside to afford privacy Give "hand-off" reports to cath team outside the room 	 Decision making: balance between privacy and close monitoring Priority: patient is ready for Cath Lab team arrives Need for family communication
grandchildren in case something happens.			
Scenario End Point: Cath tean	n arrives to take patient for proc	edure.	
Suggestions to <u>decrease</u> com	plexity: For novice students en	d scenario after call for help and SBAR slow	first and second frame down.
to have private time and patien physician. One more scenario follows, eac	t becomes upset. IV pump alarn h one building on the previous o	ck up patient and upset because patient is not ns. Patient and husband decide not to allow p one (unfolding) f the med reconciliation form, family support, a	rocedure until husband talks with

APPENDIX A: HEALTH CARE PROVIDER ORDERS

Patien	it Name	: Barbara Jones	Diagnosis: Acute Coronary Syndrome
	4 2 / 2 2 /	1052	
DOR:	12/23/	1953	
Age:	58		
MR#:	627350		
¹No Kn	own Alle	ergies	
		nsitivities	
Date	Time	HEALTH CARE PROVID	ER ORDERS AND SIGNATURE
		See previous orders from Scenario A	& B
		1. Metroprolol 50 mg PO every 6 hours	
		2. Nitrobid 2% paste, 1 inch every 8 hou	rs
		3. Protonix 40 mg, PO daily	
		4. Start after cath lab intervention:	
			n at 0.4 mcg/kg/min for 30 min. (40 ml/hr drip),
		then start 0.1 mcg/kg/min at 10 ml/h	r.
		5. Transfer to CCU/CIU post cardiac cath	1
		6. Consent for right and left heart cathe	terization and coronary artery angiography
Signat	ure		

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	Gro	pup	With Video	C	Without Video		
		Debrie	fing Materials				
Debriefing Guide	Obj	ectives	Debriefing Po	oints			
Q	SEN Cor	npetencies to co	onsider for debrie	fing sce	enarios		
Patient Centered Ca	re	Teamwork	/Collaboration	Evi	idence-based Practice		
Safety		Quality Imp	provement	Inf	formatics		
		Sample Ques	tions for Debriefi	ng			
1. How did the exp	erience	of caring for thi	is patient feel for	you and	the team?		
2. Did you have the	e knowle	edge and skills to	o meet the learnir	ng objec	tives of the scenario?		
3. What GAPS did y	you iden	itify in your own	n knowledge base	and/or	preparation for the		
simulation expe	rience?						
4. What RELEVANT	inform	ation was missir	ng from the scena	rio that	impacted your		
performance? H	low did	you attempt to	fill in the GAP?				
			ferently if you cou				
-	-		d to check ACCUR	ACY of t	the data you were given?		
7. In what ways die							
			uuse to validate A	CCURAC	CY of your information or		
decisions with y							
			-		to the clinical setting?		
10. At what points in		-	ir nursing actions :	specifica	ally directed toward		
PREVENTION of	-						
11. Discuss actual e	-			ons.			
12. Discuss roles an	-		-		C		
	13. Discuss how current nursing practice continues to evolve in light of new evidence.						
14. Consider potent		-			C • C • • •		
	15. Discuss the nurses' role in design, implementation, and evaluation of information						
technologies to	technologies to support patient care.						
Notes for future sessions:							