SECTION I: SCENARIO OVERVIEW

Scenario Title:	COVID-19 Code Blue
Original Scenario Developer(s):	Charity Shelton
Date - original scenario	November 14, 2020
Validation:	January 28, 2021 T. Murray, MSN, RN, RN-BC (Informatics), NEA-BC
Revision Dates:	
Pilot testing:	February 9, 2021
QSEN revision:	January 28, 2021

Estimated Scenario Time: 20 Minutes   Debriefing time: 30 Minutes.

Target group: Registered Nurses (med surg/med tele, Respiratory Therapists, Physicians

Core case: Respiratory distress with deteriorating COVID-19 positive patient on the medical surgical/ telemetry unit, resulting in code blue.

QSEN/IOM Competencies: Patient-Centered Care, Teamwork and Collaboration, Evidenced-based Practice, Safety.

Brief Summary of Case: A 71-year-old male with confirmed COVID-19 is on the medical surgical/ telemetry unit. Patient length of stay is 2 days. During dayshift nurse assessment, patient is shown to have a fever, cough, chest pain 4/10 and difficulty breathing. Patient history shows he was at a family event 9 days ago where 2 people have since tested positive for COVID. Patient medical background shows hypertension, diabetes type 2, chronic kidney disease, and obesity. Patient's physician has not rounded yet for the day. Vital signs: 170/90, heart rate, sinus tachycardia 120, respirations 24/min, temperature 103.5 Fahrenheit, O2 sat 87% on 8L nasal cannula. As the nurse continues her assessment, the patient becomes less responsive and becomes pulseless with no respiratory effort with a Junctional/PEA rhythm. The nurse calls for the code blue team to come to the room.

EVIDENCE BASE / REFERENCES (APA Format)
American College of Emergency Physicians. (2021). ACEP COVID-19 Field Guide. Lab Abnormalities. https://www.acnp.org/corona/covid-19-field-guide/assessment/laboratory-abnormalities/
American Heart Association. (2020). Advanced Cardiovascular Life Support Provider Manual. First American Association Printing
American Heart Association. (2020). Basic Life Support Provider Manual. First American Association Printing
Centers for Disease Control and Prevention. (2020). Using Personal Protective Equipment (PPE). https://www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html
Quality and Safety Education for Nurses, QSEN Institute. (2020). Graduate QSEN Competencies. https://qsen.org/competencies/graduate-ksas/

SECTION II: CURRICULUM INTEGRATION

A. SCENARIO LEARNING OBJECTIVES

Learning Outcomes

1.	Recognize patient is clinically deteriorating.
2.	Don and Doffing appropriate PPE. Following CDC guidelines
3.	Perform interventions per ACLS guidelines.
4.	Clear communication between code blue team members

Specific Learning Objectives (QSEN tip – select objectives from Competency KSA)

1.	Follows infection prevention guidelines for hand hygiene and donning and doffing of appropriate PPE
2.	Identifies patient in distress
3.	Gathers appropriate information on patient condition to successfully intervene
4.	Recognize the need to call for additional help
5.	Ensure all equipment is readily available for intubation
6.	Adhere to ACLS algorithms and AHA/ACCF guidelines for leading resuscitation efforts during a code blue
7.	Demonstrate effective leadership, commutation, and teamwork during a code blue
8.	Perform timely interventions for resuscitation and evaluate their effectiveness
9.	Perform a team debrief post code blue

Critical Learner Actions

1.	Perform hand hygiene and proper donning of appropriate PPE
2.	Identifies patient is in distress, notes patient's vital signs and unresponsiveness
3.	Activates a code blue response team
4.	Assures crash cart, PAPR cart, and glide scope arrive to room
5.	Observer checking code blue team's compliance with donning PPE
6.	Follows ACLS guidelines for resuscitation
7.	Timely compressions, medication administration, and defibrillation
8.	Accurate recognition of cardiac rhythms
9.	Perform proper offing of PPE when leaving patient room
10.	Perform post code blue debrief

B. PRE-SCENARIO LEARNER ACTIVITIES	
Prerequisite Competencies	
Knowledge	**Skills/ Attitudes**
❑ How to activate code blue response team	❑ Recognition of cardiac/respiratory arrest
❑ Location of emergency equipment	❑ ACLS protocol for code blue
❑ Infection control guidelines and recommendations for donning and doffing of PPE	❑ Cardiac rhythm recognition
❑ SBAR Communication	❑ Teamwork and communication in high stress situations
❑	❑ Donning and doffing PPE for COVID-19
❑	❑

ALL DATA IN THIS SCENARIO IS FICTICIOUS

SECTION III: SCENARIO SCRIPT

A.   Case summary

A 71-year-old male with confirmed COVID-19 is on the medical surgical/ telemetry unit. Patient length of stay is 2 days. During dayshift nurse assessment, patient is shown to have a fever, cough, chest pain 4/10 and difficulty breathing. Patient history shows he was at a family event 9 days ago where 2 people have since tested positive for COVID. Patient medical background shows hypertension, diabetes type 2, chronic kidney disease, and obesity. Patient's physician has not rounded yet for the day. Vital signs: 170/90, heart rate, sinus tachycardia 120, respirations 24/min, temperature 103.5 Fahrenheit, O2 sat 87% on 8L nasal cannula. As the nurse continues her assessment, the patient becomes less responsive and becomes pulseless with no respiratory effort with a ventricular fibrillation rhythm. The nurse calls for the code blue team to come to the room.

Learners will active the code blue response team. Learners will don PPE as entering room while primary RN initiates chest compressions. Learners will identify a shockable rhythm and administer shock per defibrator guidelines. Orders will be given for epinephrine 1mg IV, and to continue chest compressions for 2 minutes. During cycle, patient will be intubated. Learners will receive orders for amiodarone 300 mg IV. After 3 cycles of chest compressions, defibrillation, and drug therapy, patient found to be asystole and code is terminated.

Once code is terminated, learners will doff PPE appropriately and exist room to conduct post code debrief.

B. Key contextual details

Day Shift, 0800.

C. Scenario Cast

Patient/ Client	❑	High fidelity simulator	
	❑	Mid-level simulator	
	❑	Task trainer	
	❑	Hybrid (Blended simulator)	
	❑	Standardized patient/participant	
Role	Brief Descriptor		SP/Actor (SP/A) or Learner (L)
Primary Nurse	Enters room to conduct nursing assessment. Activates code blue		(L)
Code Team	Enters room, receives SBAR communication of event and performs code blue response		(L)

CSA REV template (12/15/08; 5/09; 12/09; 4/11; 1/14; 2/17; 7/20 Durham & Alderman)

ALL DATA IN THIS SCENARIO IS FICTICIOUS

D, Patient/Client Profile				
Last Name:	Williams		First Name:	George
Gender: Male	Age: 71	Ht: 5'11"	Wt: 256 lbs	Code Status: Full Code
Spiritual Practice: N/A		Ethnicity: African American		Primary Language spoken: English

1. Past history

Patient history shows he was at a family event 9 days ago where 2 people have since tested positive for COVID. Patient medical background shows hypertension, diabetes type 2, chronic kidney disease, and obesity

Primary Medical Diagnosis	COVID-19 Disease

2. Review of Systems

CNS	Within normal limits
Cardiovascular	Sinus tachycardia, HR 120. BP 170/90
Pulmonary	Short breath, bilateral crackles, O2 87% 8L nasal cannula
Renal/Hepatic	Within normal limits
Gastrointestinal	Within normal limits
Endocrine	Within normal limits
Heme/Coag	Mild thrombocytopenia
Musculoskeletal	Generalized weakness
Integument	Skin moist and intact
Developmental Hx	Normal
Psychiatric Hx	None
Social Hx	Married, 3 adult children. No alcohol lor drug use
Alternative/ Complementary Medicine Hx	None

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

3. Current medications

Drug	Dose	Route	Frequency
Remdesivir	100mg	IV	Q24 hours
Oxygen therapy for maintaining O2 saturation greater than 90%			
Lisinopril	20mg	PO	Q24 hours
Metformin HCL	1,000mg	PO	BID
Acetaminophen 650mg	650mg	PO	Q4 hours PRN temperature greater than 100.5 Fahrenheit

CSA REV template (12/15/08; 5/09; 12/09; 4/11; 1/14; 2/17; 7/20 Durham & Alderman)

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4. Laboratory, Diagnostic Study Results

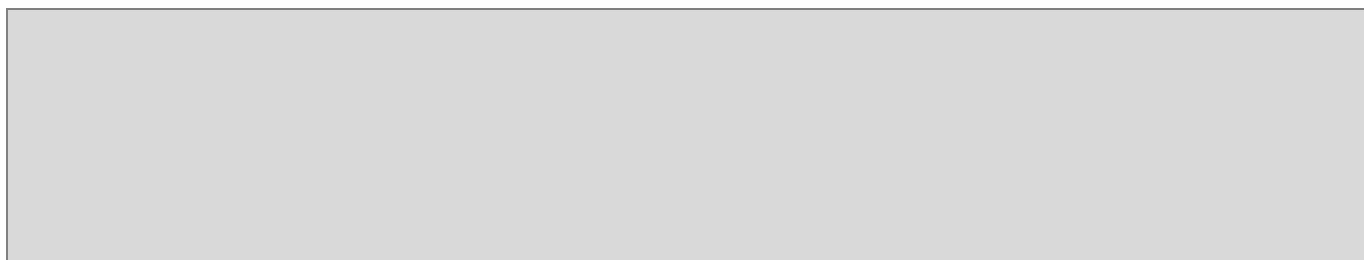|					
Na: 136	K: 3.4	Cl:	HCO3:	BUN: 30	Cr: 1.5
Ca:	Mg:	Phos:	Glucose: 132	HgA1C: pending	
Hgb: 13.6	Hct: 39.4	Plt: 343	WBC: 11.7	ABO Blood Type:	
PT: 13.5	PTT: 55	INR: 2.4	Troponin: 0.12	BNP: 150	
ABG-pH:	paO2:	paCO2:	HCO3/BE:	SaO2: 90	
VDRL:	GBS:	Herpes:	HIV:	Cxr: Patchy alveolar disease noted bilaterally in lower lobes	EKG: Sinus Tachycardia

1. Initial physical appearance

Gender: Male	Attire: Patient hospital gown

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	X	Allergy band absent or N/A

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

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

BP: 170/90	HR: 120	RR: 24	T: 103.5		SpO²: 87
CVP:	PAS:	PAD:	PCWP:		CO:
AIRWAY:	ETC0²:	FHR:			

Lungs: Sounds/mechanics	Left: Crackles at base	Right: Crackles at base
Heart:	Sounds: No Murmur, rate accelerated	
	ECG rhythm:	Sinus Tachycardia
	Other:	
Bowel sounds:	Within normal limits	Other:

	3. Initial Intravenous line set up					
X	**Saline lock #1**	Site:				IV patent (Y/N)
X	**IV #1**	Site: Left forearm	Fluid type: Remdisivir 100mg	Initial rate: 100mg/hr		IV patent (Y/N): Yes
	Main					
X	Piggyback					
	IV #2	Site:	Fluid type:	Initial rate:		IV patent (Y/N)
	Main					
	Piggyback					

	4. Initial Non-invasive monitors set up				
X	NIBP		ECG First lead:		ECG Second lead:
X	Pulse oximeter	X	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:	
	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)
Medical Surgical/Telemetry in patient room at an acute health care setting

2. Equipment, supplies, monitors
(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	X	Pressure bag	X	Wall suction
	Nasogastric tube	X	ETT suction catheters	X	Oral suction catheters		Chest tube kit
X	Defibrillator	X	Code Cart	X	12-lead ECG		Chest tube equip
	PCA infusion pump		Epidural infusion pump	X	Central line Insertion Kit		Dressing Δ equipment
X	IV fluid Type: Normal Saline		IV fluid additives:				Blood product ABO Type: # of units:

3. Respiratory therapy equipment/devices

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

ALL DATA IN THIS SCENARIO IS FICTICIOUS

4.	Documentation and Order Forms							
X	Health Care Provider orders		Med Admin Record	X	H & P	X	Lab Results
X	Progress Notes		Graphic record		Anesthesia/PACU record		ED Record
	Medication reconciliation		Transfer orders		Standing (protocol) orders		ICU flow sheet
X	Nurses' Notes		Dx test reports	X	Code Record		Prenatal record
	Actual medical record binder, constructed per institutional guidelines				Other Describe:		

5. Medications (to be available in sim action room)

#	Medication	Dosage	Route		#	Medication	Dosage	Route
1	Epinephrine	1mg	IV					
2	Amiodarone	300mg	IV					
3	Normal Saline	1-liter bag	IV					

ALL DATA IN THIS SCENARIO IS FICTICIOUS

CASE FLOW / TRIGGERS/ SCENARIO DEVELOPMENT STATES

Initiation of Scenario:

Primary RN enters room 4033 to do morning nursing assessment. PPE cart is outside of room for RN to don. Patient, Mr. George Williams, is lying in bed. Mr. Williams was admitted for COVID-19 disease they day prior.

Pt history: George Williams is a 71-year-old male who tested positive for COVID-19 after attending a family event 9 days ago. He has a history of hypertension, diabetes type 2, chronic kidney disease, and obesity.

STATE / PATIENT STATUS	DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
1. Baseline Patient is lying in bed with HOB elevated to 30 degrees. Patient is diaphoretic with labored respirations. Patients tells nurse he doesn't feel good and can't breathe.	**Operator** BP – 170/90 HR – 120 Resp – 24 T – 103.5 F. O2 saturation 87% 8L **Triggers:** Vital signs and assessment to be completed within 5 minutes	**Learner Actions** 1. Appropriately completes hand hygiene and donning of PPE prior to going into patient room 2. Introduces self and checks patient arm band 3. Completes nursing assessment, obtains vital signs 4. Formulates and verbally plans for next steps to take for patient.	**Debriefing Points:** 1. Strategies for adhering to CDC guidelines for donning PPE. 2. Identifying abnormal vital signs and possible risks associated with them. 3. Factors involved in performing a nursing assessment on patient. What benefit knowledge is gained 4. Based on assessment what are next actions the learning is considering? Why chose those actions?

CSA REV template (12/15/08; 5/09; 12/09; 4/11; 1/14; 2/17; 7/20 Durham & Alderman)

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STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
2. After assessment, patient continues to state, "I don't feel good" and becomes unresponsive.	**Operator:** Cardiac Rhythm - VFib **Triggers:** Activities completed in under 5 minutes	**Learner Actions:** 1. Identifies patient is unresponsive 2. Activates Code Blue Team 3. Begins BLS standard while waiting for team to arrive	**Debriefing Points:** 1. Significance of early activation of Code Blue Team 2.Significance of early implementation of BLS standards 3. Importance of communication that will need to be shared when team arrives

ALL DATA IN THIS SCENARIO IS FICTICIOUS

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
3. Code Blue Team arrives to unit	**Operator:** Cardiac rhythm continues to be VFib **Triggers:** Activities completed in 5 minutes	**Learner Actions:** 1. Team members bring code blue cart and PAPR cart to room. 2. Team members don PPE prior to entering 3. Primary RN provides SBAR to team on patient events 4. Team takes over and begins ACLS interventions	**Debriefing Points:** 1. Significance of teamwork in high stress and critical situations 2. Significance of using SBAR to communicate to code team members 3. Strategies and importance of performing rapid interventions (chest compressions, defibrillation, medication) 4. Strategies for ensure all team members appropriately don PPE prior to entering room 5. Strategies for ensuring all equipment needed is brought to the room

ALL DATA IN THIS SCENARIO IS FICTICIOUS

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
4. Three rounds of chest compressions, defibrillation, and medications have occurred. Patient is asystole	**Operator:** HR – 0 Resp – 0 Rhythm - asystole **Triggers:** Activities completed in less than 2 minutes	**Learner Actions:** 1. Team lead recognizes patient is asystole 2. Team lead decides to end the code 3. Time of death recorded 4. Team doffs PPE appropriately 5. Team performs post code blue debrief	**Debriefing Points** 1. Rationale for ending code blue 2. Strategies for adhering to CDC guidelines for doffing PPE 3. Strategies for debriefing after high stress and critical situations

Scenario End Point: Patient is pronounced deceased and team leaves the room to debrief.

Suggestions to <u>decrease</u> complexity: Patient only has a respiratory arrest and not both cardiac and respiratory

Suggestions to <u>increase</u> complexity: Patient can be found unresponsive in the prone position, PAPR cart is not readily available, too many people respond to the code blue

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APPENDIX A: HEALTH CARE PROVIDER ORDERS

Patient Name: DOB: Age: MR#:	Diagnosis:

†No Known Allergies
†Allergies & Sensitivities

Date	Time	HEALTH CARE PROVIDER ORDERS AND SIGNATURE
Signature		

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	x☐ Group	☐ With Video	☐ Without Video

Debriefing Materials			
x☐ Debriefing Guide	x☐ 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	x☐ Quality Improvement	☐ Informatics

Sample Questions for Debriefing

1. How did the experience of caring for this patient feel for you? the team?
2. How would you handle the scenario differently if you could?
3. In what ways did you perform well?
4. How did you validate the ACCURACY of the data you were provided? (QSEN Safety)
5. What communication strategies did you use to validate ACCURACY of your information? (QSEN Safety)
6. What communication strategies did you use to create a shared mental model for decision making with your team members? (QSEN Teamwork/Collaboration)
7. At what points in the scenario were your nursing actions specifically directed toward PREVENTION of a negative outcome? (QSEN Safety)
8. Discuss actual experiences with diverse patient populations. (QSEN Patient-centered Care)
9. Discuss roles and responsibilities during a crisis. (QSEN Teamwork/Collaboration, Safety)
10. Discuss how current nursing practice continues to evolve in light of new evidence. (QSEN Evidence-based Practice)
11. Describe actual and potential safety risks and how to mitigate them. (QSEN Safety)
12. Discuss the nurses' role in design, implementation, and evaluation of information technologies to support patient care. (QSEN Informatics; Evidence-based Practice)
13. Did you have the knowledge and skills to provide the care needed for this patient? (QSEN Quality Improvement)
14. What GAPS did you identify in your own knowledge base and/or preparation for the simulation experience?
15. How did you attempt to fill in your knowledge GAPS? Did you access evidence-based practice protocols? (QSEN Evidence-based Practice)
16. What three factors were most SIGNIFICANT that you will transfer to the clinical setting?

Notes for future sessions: