

Simulation Design Template

Course ADN 2B

Primary Health Condition Code Blue

Simulation Learning Objectives

Students participating in the Simulated Clinical Experience will:

1. Assemble an organized code blue team response following ACLS guidelines. **(GLO #2)**
2. Perform duties appropriate to the participants' role on the interdisciplinary team. **(GLO # 5)**
3. Identify the heart rhythm on monitor. **(GLO #1)**
4. Exhibit competent role performance under stressful conditions. **(GLO #4)**
5. Demonstrate therapeutic communication with team in care of the patient and family. **(GLO #5)**
6. Document the assessment data, patient changes, and intervention completed. **(GLO # 4)**

Client Information:

Age: 68 Date of Birth: 4/1/XXX Gender: M Setting: Med/Surg

Name: John Goldman Race/Ethnicity: Caucasian

Weight: 218 lb Height: 6'1"

Allergies: Betadine, Ink

Brief Description of Patient:

68 yo male with a history of coronary artery disease, hypertension, and HF was admitted last evening to the Telemetry Care unit for heart palpitations and anxiety. Early this morning he had sudden onset of confusion, bradycardia, and hypotension. He lost consciousness and a code blue was currently called.

History of Present Illness:

Palpitations with anxiety

Social History:

40 pack year smoker – none in 20 years, drinks alcohol occasionally. He is retired and lives with his wife in an apartment in a 65+ community

Past Medical History:

Coronary artery disease, Hypertension, HF

Surgeries/Procedures & Dates:

None

Social History:

Religion: Christian

Major Support: Wife

Healthcare Provider: Dr. Smith

Admission Date: Last evening

SBAR Report

John Goldman is a 68 yo male with a history of coronary artery disease, hypertension, and HF who was admitted last evening to the Telemetry Care unit for heart palpitations and anxiety reaction with shortness of breath. Early this morning he had sudden onset of confusion, bradycardia, and hypotension. He lost consciousness and a code blue was currently called.

Code Team member roles will be assigned.

His wife is his main support

Healthcare Provider Orders:

Furosemide 20 mg PO daily
Lovastatin 20 mg PO daily
Lisinopril 10 mg PO daily
Atenolol 50 mg PO daily
ASA 81 mg PO daily
Alprazolam 0.25 mg PO daily
0.9% NaCl at TKO 30 mL/h
Telemetry
EKG stat and prn dysrhythmias or chest pain
2 gm Low Sodium Diet
NPO after midnight for Cardiac Cath in AM
Electrolytes, CBC, Type and Screen 2 units PRBC in AM
Activity as tolerated

ACLS Cardiac Arrest Algorithm & ROSC Algorithm

Primary Medical Diagnosis:

Palpitations with Anxiety reaction and shortness of breath

Surgeries/Procedures and Dates:

None

Labs:

CBC

Value	Patient Result	Reference Range
WBC	12	4-10
RBC	5.2	4.2-5.3
HgB	10	14-16.5
Hct	31	40-50
Plt	250,000	130,000-400,000

BMP

Value	Patient Result	Reference Range
Na ⁺⁺	142	135-145
K ⁺	3.8	3.5-5.0
Chl	94	96-104
BUN	40	7-20
Creatinine	1.5	0.8-1.4
Glucose	128	70 - 110

Cardiac Enzymes

Value	Patient Result	Reference Range
CK	100	0-150
CKMB	0	0-2.5%
Troponin	0.03	<0.05

Value	Patient Result	Reference Range
BNP	1000	<125

Simulation Room Set- up:

Setting Med/Surg Type of Manikin Used SimMan Essential

Props : (available for all simulations – BP cuff, pulse ox, glucometer, O2 set-up)

Additional Props:

IV of NS at 30 mL/h with double lumen IV access

Crash Cart with CODE RECORD

Initial Manikin Settings (sitting with Head of Bed Semi-Fowlers (elevated/flat):

Vitals	Lungs	Heart	Abdomen	Other
97.0 - - - -80/40	absent	V Fib <i>-this will change all other vitals</i> Set “waiting rhythm” to SR <i>-rate in 50’s</i> <i>-BP 89-90/60’s</i>		

Additional Moulage:

Intubated ~ discuss in prebrief

Uncheck stomach distention

Set Lung resistance to Zero

Close manikin eyes

Turn compressor on

Push “Play” right before students enter as rhythm of V fib will then change all other vital signs

Mock Medications Required:

Epinephrine 1 mg IVP

Amiodarone 300 mg IVP (vials of 150mg/3mL)

Documents Required (indicate what information will need to be handwritten on forms):

****CODE RECORD on crash cart**

Scenario Progression Outline

Name: John Goldman

Age: 68

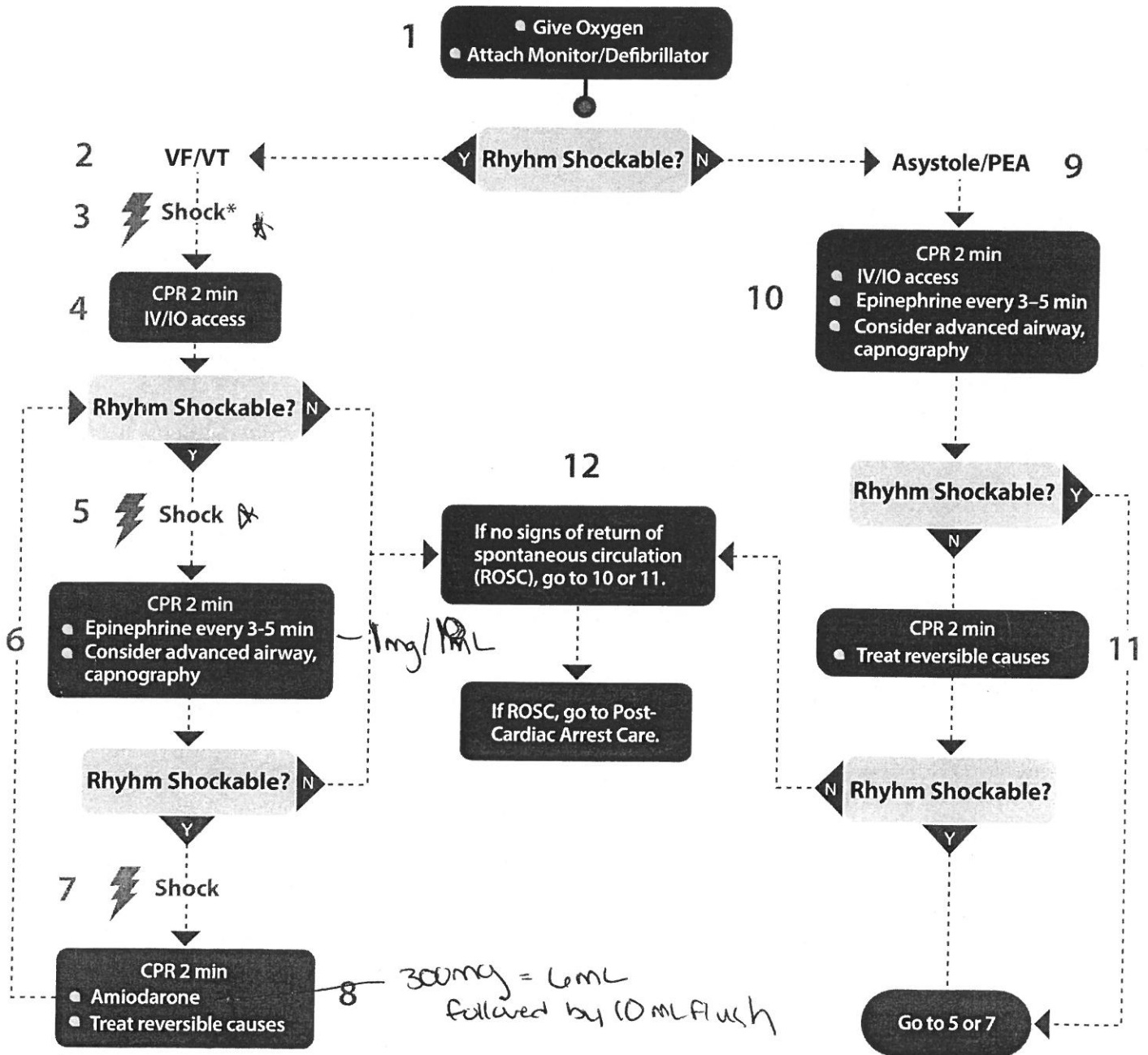
Date of Birth: 4/1/XXXX

Timing (approximate)	Manikin Actions	Expected Interventions	Comments/Meds
Phase 1	Not breathing; Cardiac monitor: V-Fib	Defib pads on Backboard -CPR initiated: - Compress >100/min - 6-8 breaths/min <i>*start with shock of 200 joules*</i>	Team Leader provides cues: Shock
Phase 2	-Manikin not breathing. -Monitor shows V-Fib. -Change B/P 50/30	Continue with roles CPR x 2 minutes: reassess EVERY 2 MINUTES: -Switch compression -Recheck rhythm and pulse -Recorder: follows protocol <i>*Defib at 300 joules</i>	Team Leader giving cues: -Repeat Defib -I'm clear, You're clear, We're all clear -Give Epinephrine 1 mg IVP and instruct the recorder student to let know when to give the epi again (3-5 minutes)
Phase 3	-Manikin not breathing -Monitor shows V-Fib	Continue with roles <i>*Defib with 360 joules</i>	Instructor giving cues: -Repeat Defib -I'm clear, You're clear, We're all clear -Give Amiodarone 300 mg IVPB

Cardiac Arrest Algorithm

 **Shout for Help/Activate Emergency Response**

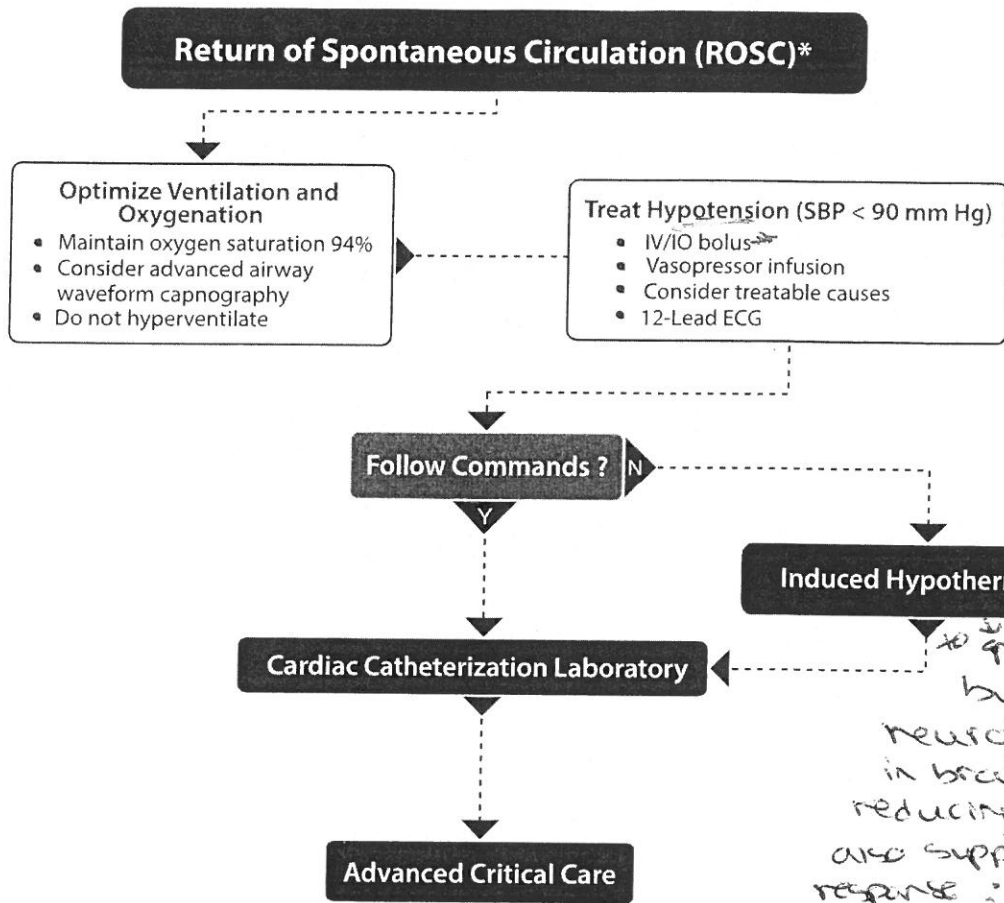
Start CPR



* Link MS, Atkins DL, Plassman RS, Halperin HR, Samson RA, White RD, Cudnik MT, Berg MD, Kudenchuk PJ, Kerber RE. "Part 6: electrical therapies: automated external defibrillators, defibrillation, cardioversion, and pacing." 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation. 2010;122(suppl 3):S706-S719. http://circ.ahajournals.org/content/122/18_suppl_3/S706

Version control: This document is current with respect to 2015 American Heart Association Guidelines for CPR and ECC. These guidelines are current until they are replaced on October 2020. If you are reading this page after October 2020, please contact ACLS Training Center at support@acsls.net for an updated document. Version 2016.02.a

Immediate Post-Cardiac Arrest Care Algorithm



89.6-93.
 → ↓ neuro deficits by counteracting neuro excitation in brain cells; reducing cell death; also suppresses inflam response; ↓ cerebral edema

Doses/Details

Ventilation/Oxygenation

- Avoid excessive ventilation
- Start at 10 94% breaths/min and titrate to target PETCO₂ of 35–40 mm Hg.
- When feasible, titrate FIO₂ to minimum necessary to achieve SpO₂ ≥ 94%.

IV Bolus

- 1–2 L normal saline or lactated Ringer's.
- If inducing hypothermia, may use 4°C fluid.

Epinephrine IV Infusion

0.1–0.5 mcg/kg per minute
 (in 70-kg adult: 7–35 mcg per minute)

Reversible Causes

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/Hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

Dopamine IV Infusion

2–10 mcg/kg per minute

Norepinephrine IV Infusion

0.1–0.5 mcg/kg per minute
 (in 70-kg adult: 7–35mcg per minute)

* Sasson C, Rogers MA, Dahl J, Kellermann AL. Predictors of survival from out of hospital cardiac arrest: a systematic review and metaanalysis. *Circ Cardiovasc Qual Outcomes*. 2010;3:63-81.
 ** Bruel C, Parienti JJ, Marie W, Arrot X. Mild hypothermia during advanced life support, a preliminary study in out of hospital cardiac arrest. *Crit Care*. 2008;12: R31
 *** Callaway CW, Donnino MW, Fink EL, Geocadin RG, Golan E, Kern KB, Leary M, Meurer WJ, Peberdy MA, Thompson TM, Zimmerman JL. Part 8: post-cardiac arrest care: 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation* 2015;132(suppl2):S465-S482

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