

The First “Five” Minutes of a Mock Code Assessment Instrument

The *First “Five” Minutes Mock Code Assessment Instrument* is designed to assess effective management of the initial four minutes of a cardiac arrest prior to the arrival of the Code Team. Our goals are for participants to: (1) successfully start compressions in less than or equal to 30 seconds, (2) manage the airway effectively in less than or equal to 30 seconds, and (3) deliver the first shock in less than two minutes from the time the patient becomes pulseless. (Neumar et al. 2015).

In December 2009, HealthPartners Clinical Simulation was asked to assist with mock codes in one patient care area using simulation methodology and a wireless/teatherless high-fidelity mannequin. By first quarter of 2010, the simulation program was facilitating mock codes in all nursing units and procedural area each shift, every quarter.

This instrument was developed one month after starting quarterly mock codes. After facilitating the first few mock codes, we recognized the importance of capturing data related to best practice timing, AHA correct actions, and institution specific expectations. The attached instrument was developed and formatted to capture the necessary critical actions. The rationale and definitions for the instrument are included in this document.

Our approach in conducting the mock code is similar regardless of the unit. For most inpatient units, we arrive on the unit with a patient or visitor in distress, who quickly deteriorates into a pulseless state. The pre-arrest respiratory distress and subsequent cardiac arrest occurs the same regardless of location. The only change that occurs in the scenario is the reason for admission/transfer. The scenario and process is tailored for procedural areas (GI Lab, Interventional Radiology, Cardiac Cath Lab, etc).

We have a minimum of two facilitators. One facilitator focuses on documenting participants’ correct and incorrect actions. The second facilitator operates the mannequin and manages the stopwatch to document time of actions. The stopwatch begins at the moment the patient becomes pulseless. The Code Team leader arrives three minutes from the time pulselessness is recognized. The scenario ends after handoff to the team leader. During the initial three minutes, participants do CPR, obtain the code cart, complete a first shock followed by 2 minutes of CPR and sometimes a second shock. Each mock code is followed by a debriefing to touch on learning opportunities. The participants complete a brief Likert-scale evaluation of their experience at the conclusion of the debriefing session.

Participant performance is documented on the instrument. Names of participants are obtained on a separate document for proof of participation. This document and their evaluation are collected on separately to maintain confidentiality.

Addendum A provides clarification of specific data required to collect for leadership.

Terminology for the First “Five” Minutes Mock Codes Assessment Instrument

1. The first actions are to determine stability of the patient and activate help utilizing available resources.
2. The zero time mark is the beginning and occurs when the patient becomes pulseless.
3. Staff identification of pulselessness goal is ≤ 30 seconds.
4. The process in our facility for notifying the appropriate staff of a Code Blue are to: push the code button, or (1) dial “1111” for the emergency switchboard, (2) inform the switchboard personnel of the location and peds/adult information, and (3) remain on the line for the correct repeat back of location and peds/adult information from the switchboard personnel before hanging up.
5. Correct action of Backboard placement is to place it prior to compressions or soon after the code cart arrives yet prior to the first shock.
6. Bag-Valve Mask is fully expanded: The bag-valve mask comes packaged in a collapsible manner. To expand the bag-valve mask correctly, a person must pull both ends open and connect the mask.
7. Power on the machine section was included to capture our institutions practice to turn the defibrillator knob to AED for the first rhythm analysis and shock before the Code Blue Team has arrived regardless of the location of the mock code.
8. Efficient connection process section was developed to capture data related to struggles identified with disconnecting the *Test Load* device from the cord and connecting the cord to the defibrillator pads. Initially, we found participants challenged by this process due to the historical use of rhythm generators in educational classes and previous low-fidelity mock codes.
9. No pause after the AED voice: Our institution’s practice is to turn the defibrillator to AED for the first analysis of the rhythm and shock, if determined. Therefore, participants should not pause after a shock to begin compressions as instructed by the AED voice.
10. CPR Cycle (number 18) section is specific to the CPR cycle resumed after the first shock. The goal is to assess whether or not CPR is continued without interruptions for two minutes following a shock. A common error found was the tendency to stop and check for a pulse more frequently than two minute intervals.
11. Scenario end is the stopwatch end time of the scenario.
12. Debrief end is the stopwatch end time of the debriefing for administrative use.

References

Duff, J. P., Pachcahl, A. R., & Hazinski, M. F. (2018). *Highlights of the 2018 focused updates to the American Heart Association*. American Heart Association. Retrieved from <https://ecguidelines.heart.org/index.php/guidelines-highlights/>

Neumar, R. W., Shuster, M., Callaway, C. W., Gent, L. M., Atkins, D. L., Bhanji, F., ... Hazinski, M. F. (2015). *2015 American Heart Association guidelines update for cardiopulmonary resuscitation and emergency cardiovascular care*. American Heart Association. Retrieved from <https://ecguidelines.heart.org/index.php/guidelines-highlights/>

Addendum A

The First "5 minutes" Adult Mock Code Observation Instrument

Unit _____ Date _____ Time on Unit _____ Time off Unit _____ Mannequin _____

Sim Facilitator(s) _____ Educator Present Name _____ Rater _____ Timer _____

Start stopwatch when mannequin becomes unresponsive.

Indicate the performance of the following actions. Offer critique and coaching during post session de-brief. Offer prompts only if staff unable to progress.

When finished, check Code Cart and equipment before returning it to unit location.

	Time	Correct Critical Actions	Incorrect Critical Actions	Comments
1.	Assess patient/establish patient stability	<input type="checkbox"/> Obtain history/report, if available <input type="checkbox"/> Assess ABCs <input type="checkbox"/> Determine instability	<input type="checkbox"/> No history/report obtained <input type="checkbox"/> Only partial assessment of ABCs <input type="checkbox"/> Does not recognize instability	<input type="checkbox"/> Prompt required
2.	Call for help/Get assistance	<input type="checkbox"/> Uses Vocera to call for help <input type="checkbox"/> Uses call outs for help <input type="checkbox"/> Uses emergency light (pull cord out) for help <input type="checkbox"/> Delegates staff for help	<input type="checkbox"/> Leaves patient to get help or supplies <input type="checkbox"/> Does not use established methods for emergency notification <input type="checkbox"/> No delegation for assistance/supplies	<input type="checkbox"/> Prompt required
3.	When mannequin becomes pulseless	0000		
4.	Staff establish pulselessness	0000 <input type="checkbox"/> ≤ 30 seconds	<input type="checkbox"/> Not done <input type="checkbox"/> > 30 seconds	
5.	Call Code /Call Operator	<input type="checkbox"/> Push the code blue button OR <input type="checkbox"/> Call operator	<input type="checkbox"/> Does not push code blue button <input type="checkbox"/> Does not call operator	
6.	Patient positioned	<input type="checkbox"/> Patient in a flat and supine position prior to compressions <input type="checkbox"/> Patient in a flat and supine position after compressions started	<input type="checkbox"/> Patient not in a flat and supine position	<input type="checkbox"/> Prompt required
7.	Backboard	<input type="checkbox"/> Backboard placed prior to chest compressions <input type="checkbox"/> Backboard placed after compressions started	<input type="checkbox"/> Backboard not placed during mock code	<input type="checkbox"/> Prompt required <input type="checkbox"/> N/A On floor
8.	DNAR status verified	<input type="checkbox"/> Done	<input type="checkbox"/> Not done	
9.	Chest compressions started	<input type="checkbox"/> Time to compressions ≤ 30 sec <input type="checkbox"/> Compressions at rate 100-120/min <input type="checkbox"/> Compression depth @ 2 inches <input type="checkbox"/> Compression hand positioning at the mid-nipple line on sternum <input type="checkbox"/> Recoil <input type="checkbox"/> Performs 2 min uninterrupted CPR until defib is connected	<input type="checkbox"/> Time to compressions >30 sec <input type="checkbox"/> Compression rate too slow <input type="checkbox"/> Inadequate compression depth <input type="checkbox"/> Hand positioning too high or low <input type="checkbox"/> No recoil <input type="checkbox"/> Stops CPR before 2 min (any reason)	<input type="checkbox"/> Prompt required <input type="checkbox"/> Pause for BVM assembly

Actions and Recommendations:

Unit: Nursing Unit
Facilitator: Names of the facilitators
Rater: The facilitator identifying correct and incorrect actions
Timer: The facilitator entering stopwatch times for actions as well as the team leader at the end of the scenario
Time on and off Unit: Is the clock time
DNE: Is a Decentralized Nurse Educator. We check this box and write the name of the DNE if they are present for administrative uses
Mannequin: We note the mannequin for realism aspects of blinking or no blinking. In addition, this tool allows us to track mannequin use.