Template script for instructional video

**Introduction:** Emergent cardiac resternotomy is performed in 0.8-2.7% of all adult patients who have undergone cardiac surgery.1 The number of emergent cardiac resternotomies performed in the pediatric cardiac surgical population is not well known. but time to resternotomy is very important.

To make this process easier we have developed this educational tool to identify key roles that need to be performed. We will review each individual role then demonstrate the actual procedure of resternotomy in this video. The goal of this intervention is for our team to practice this high-acuity clinical situation. Although resternotomy happens infrequently and most interventions will occur when the surgical team is readily available you may be asked to perform one of these roles until they arrive. In addition, many standard code roles are critical for effective team performance.

**The first role is:**

1. **Code Cart**
Review responsibilities (bring code cart to room, draw up epinephrine, calcium chloride, prepare epinephrine drip)
2. **Omnicell runner**

Review responsibilities (bring fentanyl, versed rocuronium, 3-4 bottles of 5% albumin and hemotaps, Sodium bicarbonate and calcium)

1. **Cardiac cart**

Review responsibilities: bring cart and 2 bedside tables to the room (can delegate this)

Open prep bag, open resternotomy tray sterilely, get sterile gloves/gowns ready, setup sterile suction

**Now let’s go over the cart in more detail:**

Let’s review what is available in each drawer (show equipment list and labels for each drawer)

These are the most important things to be able to find in an acute scenario:

1. Sterile bag
2. Scalpel (may be referred to as knife or blade during an emergent procedure)
3. Wire Cutter
4. Heavy needle holder
5. Sternal retractor
6. Sterile suction
7. Thoracic sterile drape
8. Sterile scissors
9. Internal Zoll defibrillator paddles

 **Cardiac Cart Role will prepare sterile supplies** (charge nurse or surgical PA/NP)

**Steps to prepare:** *(demonstrate in video)*

Get out a bedside table and put the resternotomy kit, sterile gowns, gloves, hats, masks, scalpel, sterile suction, and appropriate size zoll defibrillator internal paddles on the table.

Open the resternotomy tray on the table sterilely

Drop the thoracic sterile drape on the sterile field

Drop the scalpel sterilely on the sterile field

Open the sterile cover of the zoll internal paddles and place this on the sterile field

Put on hat, mask, and wash hands and get sterile gown and gloves on

Have someone open sterile suction and take this from them (sterilely) to connect to suction canister

**Now the surgeon or surgical PA/NP has arrived.** *(scrub and put on sterile PPE)*

Surgeon preps and drapes patient (low or high-fidelity simulator) explains steps verbally and performs resternotomy with assistance of Cardiac cart nurse. *(Clearly ask for specific equipment to allow nurse to practice handing and serving as surgical assist.)*

**Additional needed roles that should be performed simultaneously with the prior roles are:**

4.) **Phone list**

 Review responsibilities: call CICU attending/fellow if they are not already at the code, call cardiothoracic surgeon, call advanced practice provider, call blood bank, OR charge nurse, if needed ECMO (you may delineate these calls but you are responsible for making sure all the key people on the phone list are contacted)

5.) **Zoll/Paddles**

 Bring the Zoll defibrillator to the bedside

 Get the pads on the patient

Get the correct size internal zoll paddles out of the cart and ready for when the chest is open

6.) **Family Support**

Call family if they are not at the bedside, “hello mr/mrs smith I am calling to tell you that baby had a cardiac arrest, we are doing everything we can to resuscitate your child. Please drive safely and as soon as you arrive I will update you on his/her status.”

If the family is at bedside please ask them to come out of the room with you so the team can resuscitate the baby. Escort them to the bereavement room tell them that we are doing everything we can to help their child and if you can sit with them then stay and try to update periodically. If you cannot stay with them due to patient responsibilities please ask the unit clerk to page social work or the chaplain to come and support them.

7.) **Blood Bank Runner**

If the child was admitted after cardiac surgery they will have an active Type and screen, if you need emergency blood you will take the pink emergency release slip out of the top drawer of code cart, label with patient sticker and take it to blood bank for 1 unit of PRBCs (this may not be enough so talk to the ICU attending to clarify which protocol) If they want Massive transfusion protocol then you take the same sheet and call blood bank and tell them it is massive transfusion protocol and a physician can place the Massive transfusion protocol order. It is VERY important that you say massive transfusion protocol when you call the blood bank if this is what we want because then you will get PRBCs, platelets and FFP.

1. Society of Thoracic Surgeons Task Force on Resuscitation After Cardiac Surgery. The Society of Thoracic Surgeons expert consensus for the resuscitation of patients who arrest after cardiac surgery. Ann Thorac Surg 2017;103(3):1005–1020.