

RESUS DRILLS



CAESAREAN
SECTION

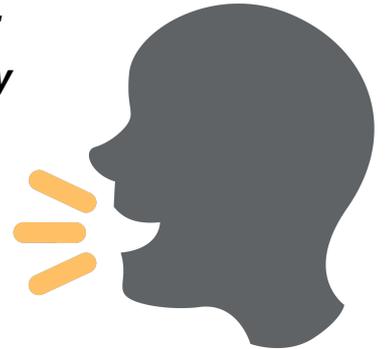
#3

Drill pre-brief (instructor to read out)

“Welcome to this Resus Drill. Drills are for situations which happen quickly, are not common, and need a time-critical response.

They need practice, so when the time comes, you’ve already had the dress rehearsal. This is not a Simulation. Drills are for practising teamwork and speed.

We will run a scenario for 5 minutes, chat and reflect on it, then run the same scenario again for another 5 minutes.”



Assurances

Learning, NOT assessment: The drill is for practice and for learning. We’re concentrating on how fast you can think, and how well you work as a team.

Safe zone: Learning and mistakes are shared here, not any further.

5-min reflection rules: Please be constructive in the debrief. We’re all here to learn. These are deliberately tough scenarios. That’s the whole point of a drill.

Pretend it’s real: we’ll try to make the drill realistic, but this is not meant to be a high fidelity Simulation. Although it’s not real, we need you to help us by acting as you’d do in real life, in your normal role, and we’ll try to run it in real time.

Take-away pack: there is some information that you can take away for further learning. We recommend “spaced repetition” for the best learning:

- make some reflective notes while it’s fresh in your mind
- make yourself read them again in a couple of weeks

How does it work?

These ER drill packs will be laminated and left in the Simulation Bay (Bay 5) for teaching purposes, as well as “take-home” cards for those who want to brush up on their learning. The team can then choose a scenario or roll the dice to decide!

Each Resus drill pack contains: location of equipment, “Red call” sheet (optional), decision algorithm, scenario script, debrief questions, procedure and additional learning resources.



S.E.T.U.P. (before patient arrives)

SELF... physical readiness (*stay calm*) & cognitive readiness (*accept the challenge*)

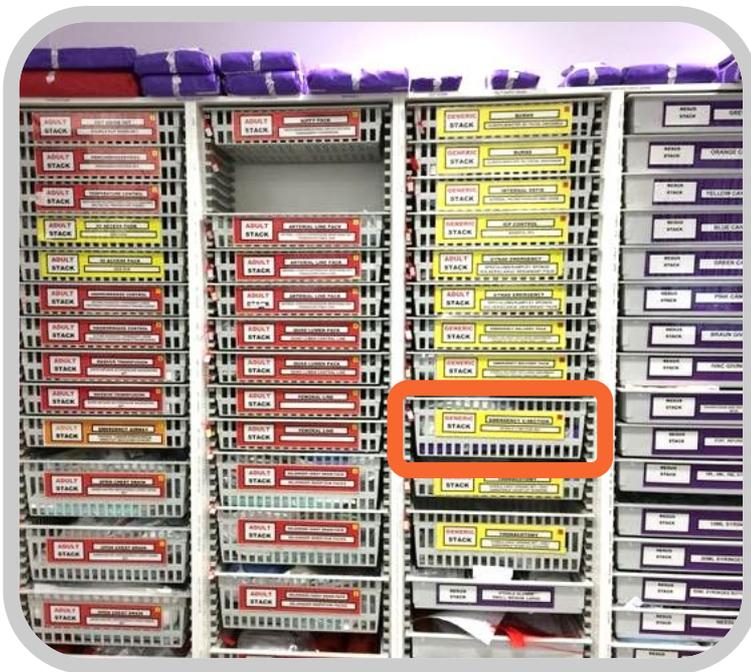
ENVIRONMENT... dangers, space, lighting, crowd control, appropriate equipment?

TEAM... initial briefing, identify Team Leader, allocate team roles

UPDATE... if possible, recap for the team (*and yourself*) before patient's arrival

PATIENT... the patient has now arrived

Location of Equipment



The **c-section kit** can be located inside of the Resus/ER equipment stacks next to Bay 9 and opposite Bay 10.

Syntometrine can also be found on the mid-shelf of the refrigerator inside the *Clean Utility*.

Syntometrine



Indications

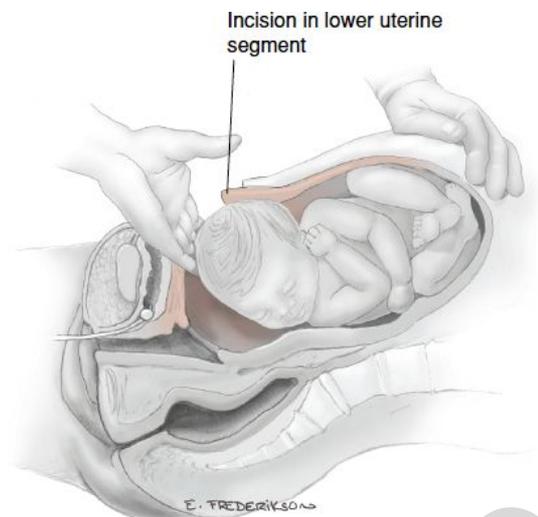
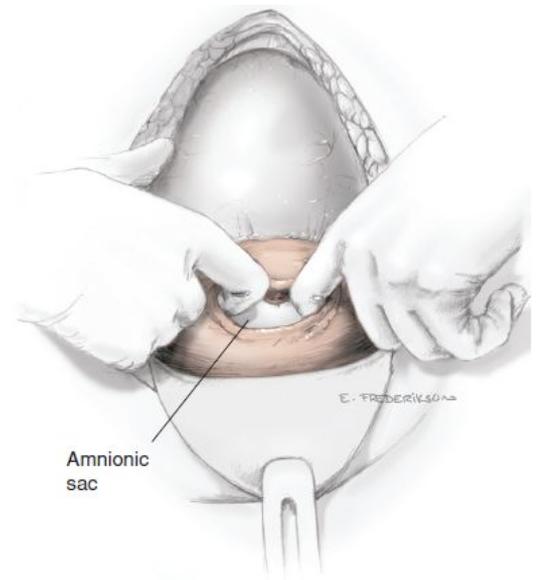
Confirmed MATERNAL CARDIAC ARREST with NO RESPONSE TO ALS IN 4 MINUTES and gestational age >20 weeks (fundal height at or above umbilicus).

Equipment Required

- | | |
|--|---|
| <input checked="" type="checkbox"/> Scalpel | <input checked="" type="checkbox"/> Celox gauze |
| <input checked="" type="checkbox"/> Clamp x 2 | <input checked="" type="checkbox"/> Large dressings |
| <input checked="" type="checkbox"/> Tough-cut shears | <input checked="" type="checkbox"/> Cling film |

Landmarks and Techniques

1. Vertical incision: xiphisternum to pubis
2. Continue down through abdominal wall and peritoneum
3. Push bowel out of the way
4. 4cm vertical incision of uterus
5. Blunt extension of incision using fingers
6. Deliver foetus
7. Clamp and cut umbilical cord
8. Remove placenta and membranes
9. Pack abdomen with Celox gauze and dressing
10. Wrap with cling film



Cardiac Arrest Decision Algorithm

- ✓ Woman of known gestation >20 weeks **OR** unknown + uterus above umbilicus
- ✓ Loss of vital signs ≤15 minutes

In parallel:

- Intubate
- Start standard ALS with left lateral tilt of 20 degrees
- Call **2222** obstetric emergency + paediatric cardiac arrest teams

Perform emergency C section & deliver baby <5 mins

Emergency C section tray from stack
Suction
Inco pads on floor
Trolley to receive baby



ROSC within 5 mins of delivery?

Manually separate and deliver placenta
Stimulate uterine fundus
Clamp bleeding vessels and give syntometrine 500 mcg (1ml) IM
Pack with wet gauze, large dressing and cover with cling film

DEAD

Caesarean Section

#3

Emergency Department: Pre-Hospital Pre-Alert Report Form

CALL SIGN OF THE VEHICLE / TEAM

1234

A ge (and sex)	AGE 28	SEX F	(Marie)
T ime (of incident / onset of symptoms)	30 mins		
M echanism of Incident (injury / illness)	Severe SOB PMH PE		35/40
I njuries / Symptoms (suspected or present)			
S igns (Observations, Clinical Stability)	HR	140	GCS 14
	RR	20	BM 6
	BP	80/40	TEMP 36.6
	SPO ₂	86%	PEAK FLOW -
NEWS score total			EMAS TRAUMA TRIAGE TOOL POSITIVE? YES / NO
Red Flag Sepsis	CLINICAL CONDITION		STABLE / UNSTABLE
T reatment (Given so far – In brief!)	IV access & 500ml saline		
E TA (Time of arrival in ED)	3 mins		
R equirements (Circle – specify where required)	TRAUMA MASSIVE BLOOD LOSS PROTOCOL TRAUMA TEAM ACTIVATION		MEDICAL STROKE THROMBOLYSIS CARDIAC SPECIALIST NURSE SEPSIS PATHWAY
	Call taken by; V. Pregnant	Date;	Time; : HRS
Information passed to;	PRINT NAME	Date;	Time; : HRS

Patient Addressograph Label

(MUST BE ADDED ONCE PATIENT REGISTERED)

TURN FORM OVER AND COMPLETE CHECKLIST ON REAR

PLEASE ATTACH TO PATIENT NOTES – INSIDE FRONT SHEET

Scenario Script

“You have received a 3-minute warning of a 28-year-old female who has had 30 minutes of severe shortness of breath, and has a past medical history of PE. She is 35 weeks pregnant. Here is the Red Call form.” (give to Team Leader)

Minute One

Team Leader designates team members and uses **S.E.T.U.P.** (Self, Environment, Team, Update, Patient arrives). Ensure if help is being called, that the team does this time-real (e.g. each phone call takes 20-30 secs). Team needs to call the ITU reg and the obstetric emergency team at this stage. Team needs to get the C-section pack (*not normal delivery pack*) from the ER stacks. *Do not prompt if incorrect.*



Minute Two

Your patient has arrived. She has a poor colour, is gasping, and not very responsive. So far the ambulance crew have established IV access and started a 500ml bag of saline). Keep time real for getting obs, obtaining 2nd access, putting on O2 etc. Obs unchanged, but patient unable to answer questions.

Minute Three

She has just gone floppy and rolled her eyes. If asked about the monitor it is PEA. Someone needs to check pulse. Prompt if necessary. **Team Leader** should initiate lateral tilt, CPR and airway control. *Do not prompt tilt.*

Minute Four

The obstetric team has not arrived, she remains in PEA arrest. **Team Leader** should make decision to do section. *Do not prompt if is still waiting.* For baby, either Paeds ED staff or paediatric arrest call are both appropriate.

Minute Five

The paed ED team are available for the baby. An ED consultant should be here in a minute but isn't here now. Prompt **Team Leader** to take action and describe what they would do. Should include putting Inco pads on floor, turning on suction, someone to fetch syntometrine.

Debrief and Feedback

You should aim to cover the following points within 5 minutes, then rerun the scenario:

1. Did the **Team Leader** explain the situation in a way that everyone understood it was a time-critical operative procedure?
2. Were roles allocated and followed?
3. Did the team make the right emergency calls (obstetric emergency team and ITU registrar – only these are appropriate at this time)
4. Did the **Team Leader** rapidly reach a decision to proceed (self)?
5. Did the **Team Leader** ask for the right equipment (C-section stack rather than normal delivery stack – either before arrival or as soon as decision taken to do C-section)?
6. Was the right equipment provided quickly?
7. Was the right action taken, to deal with the baby? (*PED team or paed arrest call, either appropriate*)
8. Did the **Team Leader** display knowledge of the technical skills required?
9. How did team members help the team pull together?
10. Were there any instances of:
 - a. Equipment issues?
 - b. Human factors negatively impacting communication or patient care?



Additional Resources

-  **Procedural Aide Memoires: PAMs (MAGPAS)** <http://bit.ly/magpasreshys>
-  **Prehospital resuscitative hysterotomy: Perimortem Caesarean Section** (R.Parry, et al.) <http://bit.ly/2AVGz5i>
-  **Post-Mortem C-Section: A How-to Guide to Section or Not to Section** (BroomeDocs) <http://bit.ly/2PmWVwA>
-  **Prehospital resuscitative hysterotomy** (R.Bloomer, et al.) <http://bit.ly/2qDhwxZ>
-  **Perimortem C-section** (St.Emlyn's) <http://bit.ly/2AWYHvi>
-  **Out-of-hospital perimortem cesarean section** (D.Kupas, et al.) <http://bit.ly/2zC0PXE>
-  **Realistic simulation by obstetricians** (Operative Experience) <http://bit.ly/2Dvc5JF>
-  **Real patient, very speedy, smaller incision as they are experienced obstetricians** (YouTube) <http://bit.ly/2QuNis3>

