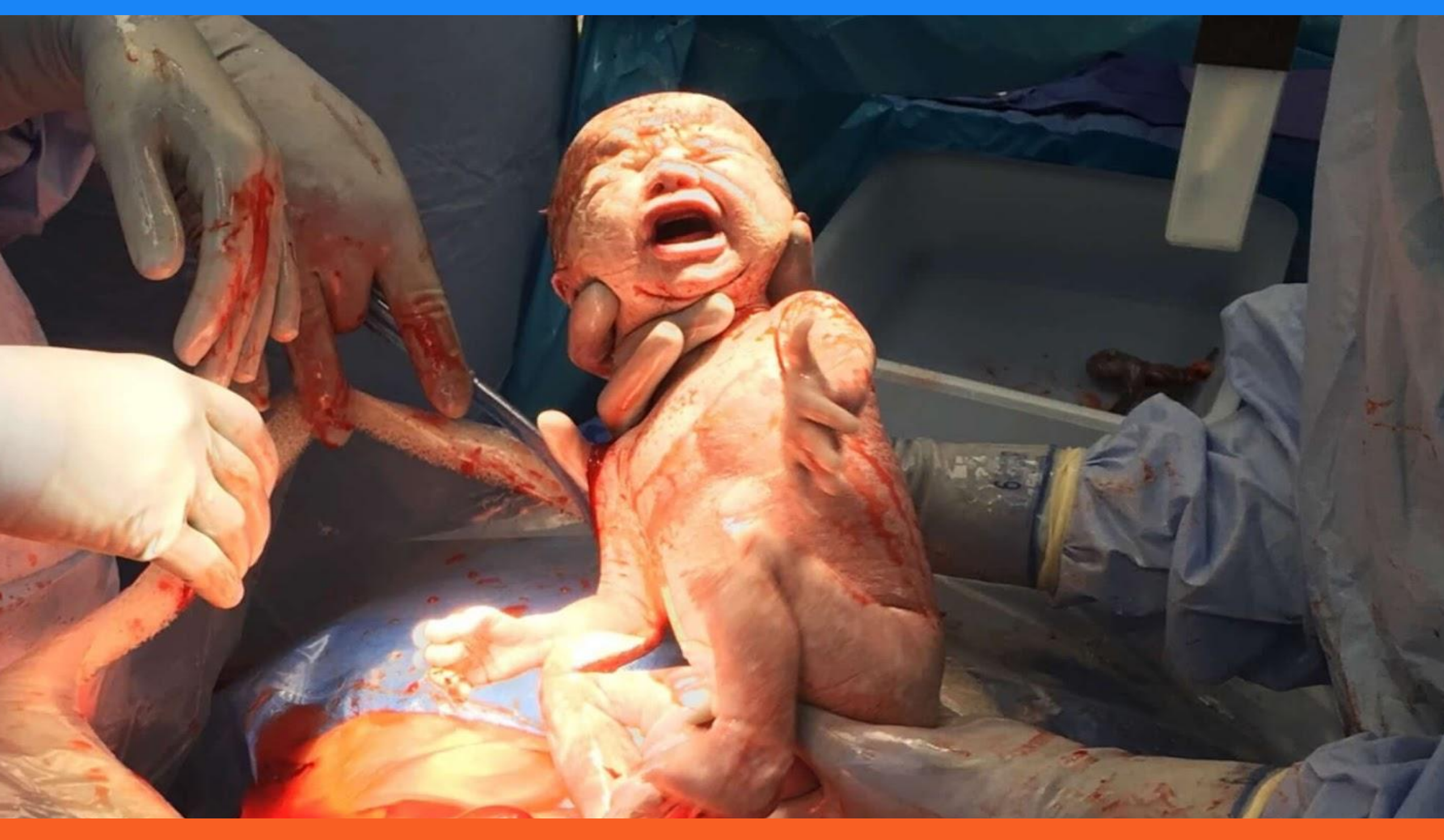
# RESUS DRILLS



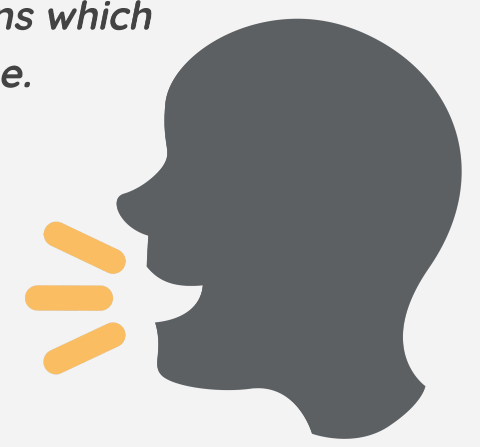
# CAESAREAN SECTION #3

# Caesarean Section Drill #3

## Pre-brief — Instructor to read out this section

*"Welcome to this Resus Drill. Drills are for situations which are not common, and need a time-critical response. This is not a Simulation. Drills are a rehearsal 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:** drills are for practice and for learning. We're concentrating on how fast you can think, and how well you work as a team.

**Safe zone:** lessons are shared here, not judged, not told as tales.

**5-min reflection rules:** please use the debrief to be positive about what you can all do better on the re-run. These are deliberately tough scenarios. That's the point of a drill.

**Pretend it's real:** 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?

**Each Resus Drill pack follows a standard format.**

The drill packs are laminated and available for teaching purposes, and can be downloaded from www.em3.org.uk

Our downloaded drills can be edited to suit local hospitals.

# Caesarean Section

# Drill #3

## S.E.T.U.P.

Instructor to read out before patient arrives

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

**E**NVIRONMENT... lighting, crowd control, appropriate equipment?

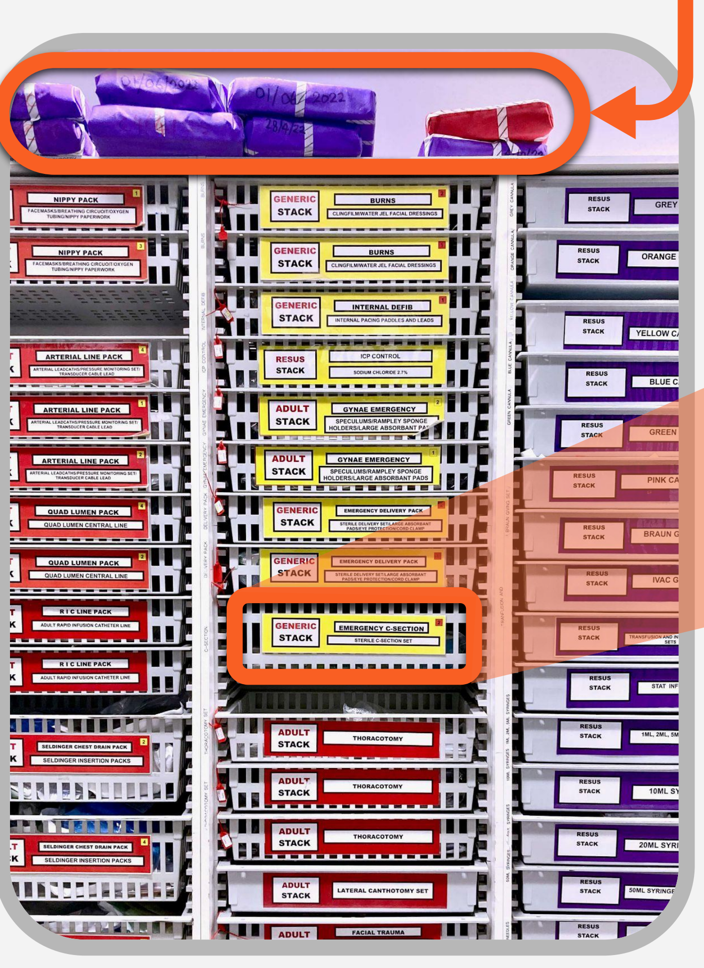
**T**EAM... initial briefing, identify Team Leader, allocate team roles

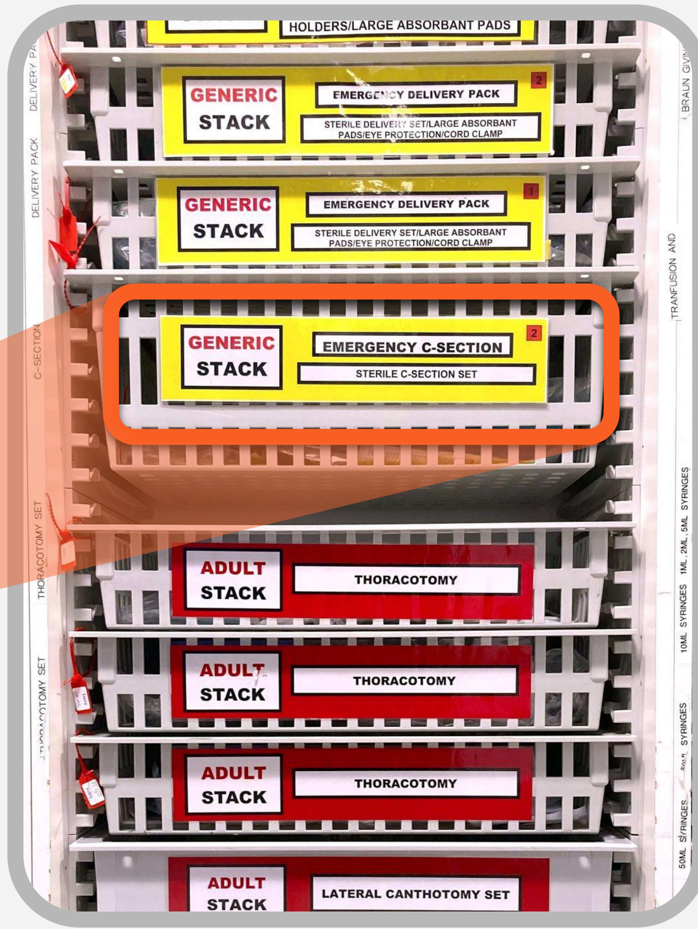
**U**PDATE... if possible, recap for the team (and yourself) before patient's arrival

**P**ATIENT... the patient arrives

## Location of Equipment

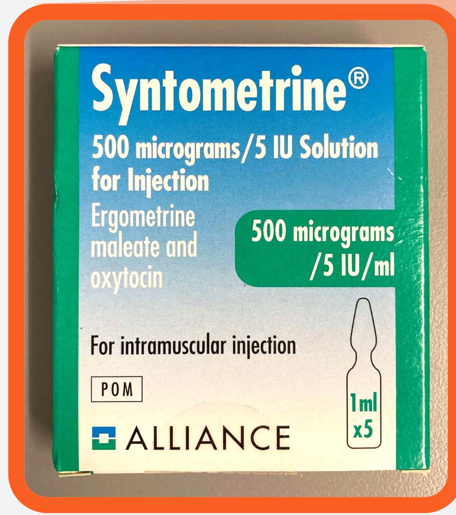
The ED **C-section kit** is located in the Resus room equipment stacks opposite Bay 10. The full **obstetric pack** is found on top of the stacks.



## Location of Equipment ...continued

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



# Caesarean Section

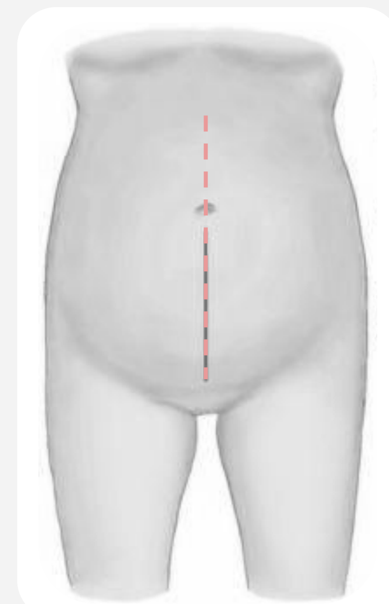
# Drill #3

## Indications

**MATERNAL CARDIAC ARREST + NO RESPONSE TO CPR and left lateral position after <u>2 MINUTES</u> + gestational age >20 weeks** (fundus at or above umbilicus).

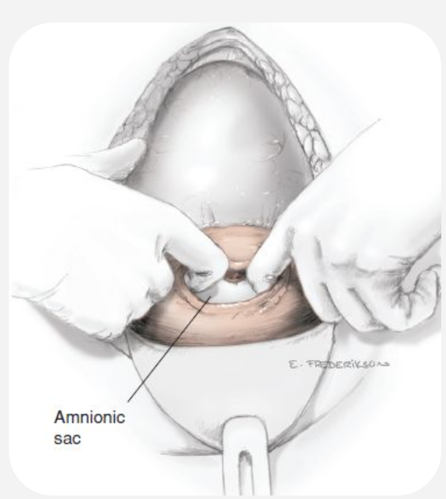
## Equipment Required

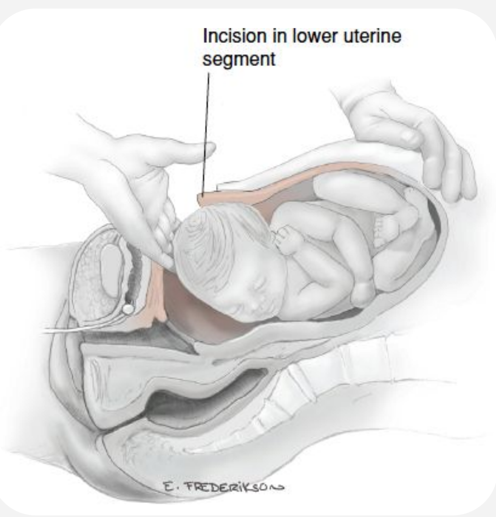
- ☑ Scalpel
- ☑ Cord clamps (x2)
- ☑ Suction
- ☑ Celox gauze
- ☑ Large dressings
- ☑ Cling film



## 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. 4 cm vertical incision high up the uterus
5. Blunt extension of incision using fingers
6. Deliver foetus (grab any part)
7. Clamp and cut umbilical cord, stimulate with warm towel
8. Remove placenta and membranes, rub uterus
9. Give Syntometrine I.M.
10. Pack abdomen with Celox gauze and dressing, wrap with cling film



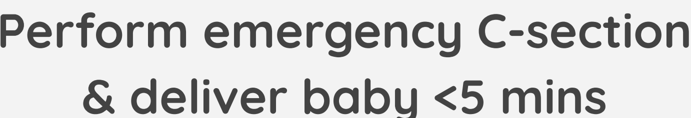
# Caesarean Section — Drill #3

## Cardiac Arrest Decision Algorithm

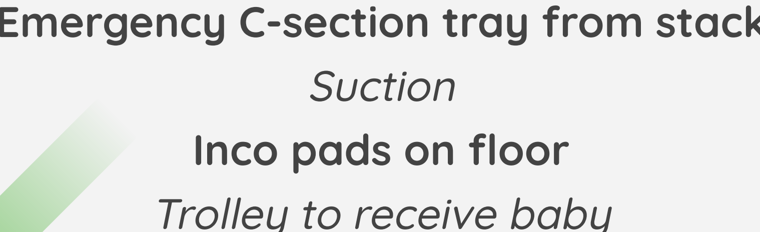
- ☑ Known gestation >20 weeks <u>OR</u> unknown + uterus height above umbilicus
- ☑ Loss of vital signs ≤15 minutes duration

**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**



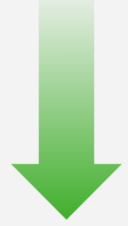
**Emergency C-section tray from stack**

*Suction*

**Inco pads on floor**

*Trolley to receive baby*

**ROSC within 5 mins of delivery?**

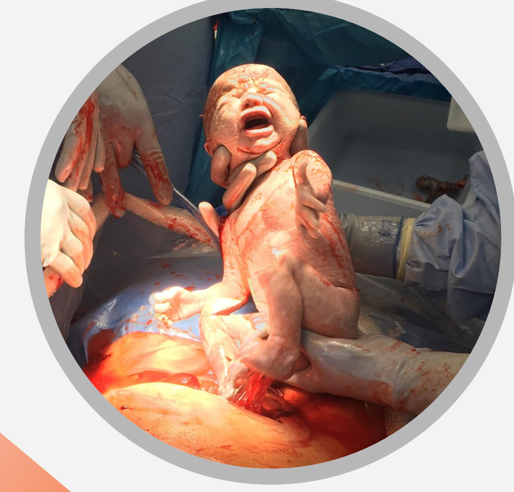


**Manually separate and deliver placenta**

*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**

ADHESIVE STRIP - HERE

University Hospitals of Leicester NHS
NHS Trust

## 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<br>PMH PE | | (35/40) circled | |
| **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) circled / NO |
| ***Red Flag Sepsis*** | | CLINICAL CONDITION | | STABLE / (UNSTABLE) circled |
| **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**<br>MASSIVE BLOOD LOSS PROTOCOL<br>TRAUMA TEAM ACTIVATION | | (**MEDICAL**) circled<br>STROKE THROMBOLYSIS<br>CARDIAC SPECIALIST NURSE<br>SEPSIS PATHWAY | |

| | | | | | |
|---|---|---|---|---|---|
| **Call taken by;** | V. Pregnant (PRINT NAME) | **Date;** | | **Time;** | : HRS |
| **Information passed to;** | PRINT NAME | **Date;** | | **Time;** | : HRS |

**Pátient Addressograph Label**

**(MUST BE ADDED ONCE PATIENT REGISTERED)**

**TURN FORM OVER AND COMPLETE CHECKLIST ON REAR**

**PLEASE ATTACH TO PATIENT NOTES – INSIDE FRONT SHEET**

# Caesarean Section Drill #3

## Scenario Script — Instructor to read out this section

***"You have received a 3-minute warning of a 28-year-old female who had onset of severe shortness of breath 1 hour ago, 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** communicates to team and uses **S.E.T.U.P.** *(Self, Environment, Team, Update, Patient arriving). Maintain this phase as real-time as possible.*

**Team Leader (T.L.)** should at least consider ITU support and the obstetric emergency team at this stage. Team needs to get the C-section pack *(not the 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)".*** Team should measure all obs, obtain 2nd IV access, O2 high-flow. Obs are as pre-hospital. Patient is unable to answer questions, gasping.

## Minute Three

***"She has just gone floppy, pale and her eyes have rolled up".*** Cardiac monitor should show SR *(it is PEA)*. Pulse should be checked. *Prompt if necessary.* ***"There is no pulse".*** **T.L.** should initiate lateral tilt, CPR and airway control. Do not prompt tilt maneuver.

## Minute Four

***"She remains in PEA arrest."*** **T.L.** should make decision to do C-section (self or other senior Dr), and call for either Paeds ED staff or paediatric arrest call for baby, plus senior support (ED consultant). If C-section started, ask **T.L.** to talk through the technique. If reaching Minute Five, cover this briefly in the debrief instead.

## Minute Five

***"The paeds team, obstetric team and ED consultant have arrived."*** **T.L.** should manage 'crowd control' and noise (ideally by tasking ED consultant with scene management).

## Debrief and Feedback

**You should aim to cover the following points <u>within 5 minutes</u>, then re-run the scenario:**

1. Did the **Team Leader** allocate roles and tasks in a way that was clearly understood? Was **S.E.T.U.P** utilised?
2. Did the team make the right emergency calls? (obstetric emergency team, paediatrics / paeds ED team, anaesthetist and ED consultant)
3. Did the **Team Leader** rapidly reach a decision to proceed to C-section?

4. Did the **Team Leader** explain the situation in a way that everyone understood it was a time-critical operative procedure?
5. Did the **Team Leader** ask for the right equipment and was it provided?
6. Was the right action taken, to deal with the baby? *(PED team or paed arrest call, either appropriate)*
7. Did the **Team Leader** display knowledge of the technical skills required?
8. How did team members help the team pull together?
9. Were there any instances of:
   a. Equipment issues?
   b. Human factors negatively impacting communication or patient care?

## Additional Resources

- **Procedural Aide Memoires – PAMs: Peri-mortem Caesarean** (MAGPAS) https://bit.ly/3tJ2GGS
- **Prehospital resuscitative hysterotomy: Perimortem Caesarean Section** (R.Parry, et al.) https://bit.ly/2AVGz5i
- **Post-Mortem C-Section: A How-to Guide to Section or Not to Section** (BroomeDocs) https://bit.ly/2PmWVwA
- **Prehospital resuscitative hysterotomy** (R.Bloomer, et al.) https://bit.ly/2qDhwxZ
- **Perimortem Caesarean section** (LITFL) https://bit.ly/3NBSUhu
- **Maternal Collapse in Pregnancy and the Puerperium guideline** (RCOG) https://bit.ly/3lOwqxD
- **Perimortem C-section** (St.Emlyn's) https://bit.ly/2AWYHvi
- **Out-of-hospital perimortem cesarean section** (D.Kupas, et al.) https://bit.ly/2zC0PXE
- **Resuscitative Hysterotomy 101** (SMACC) https://bit.ly/3NrvBXA
- **Realistic simulation by obstetricians** (Operative Experience) https://bit.ly/2Dvc5JF
- **Real-time simulation scenario of a perimortem caesarean section** (BTHFT) https://bit.ly/39WArxC
- **Perimortem C-section simulation** (The Gurney Room) https://bit.ly/3PF5xKv