

Peri-Mortem C Section



What are the indications for a peri-mortem C-section?

Peri mortem C-section is indicated in maternal arrest for gestation estimated > 24 weeks. (~ a few fingers over the umbi). This is roughly the age of foetal viability and correlates with the time the gravid uterus exerts significant hemodynamic challenges that C-section might reverse. C-section should be done in the context of maternal cardio-respiratory arrest, no matter what the presumed aetiology.

Who should perform it?

Ideally a practitioner who has experience with the anatomy and LUSCS. BUT, this is not the norm – so it can be done by any provider. This is an empirical procedure done in the face of a high likelihood of a poor outcome. The alternative to delivering the foetus is to continue standard CPR / ALS which we know has a reasonably grim outcome in many cases.

When should it be done in a maternal arrest?

This is an evidence free zone and recommendations are based on physiology rather than facts.

Katz et al described the “4-minute rule” – the resus team should commence a peri mortem CS after 4 minutes of arrest if no ROSC. This seems sensible – but man, that time flies quickly in a Resus – so it needs to be considered at the outset and plans made before 4 minutes clocks over. The 2012 Resuscitation review of 94 case reports showed a 10 minute “delivery time” was pretty good and had a highish rate of good neonatal outcomes. In reality 4 minutes is really tough, nice to see 10 minutes being not a disastrous outcome.

I think in reality if you are in a non-shockable rhythm and have commenced fluid resus, intubated etc then that is the time to act if there is no response. Once again it will depend on your crew’s

resources – if you have enough people then a dedicated pair of cutters should start prepping ASAP after a maternal arrest.

How to do it?

Equipment required: one scalpel (disposable will do – 11 blade if you like), gloves, wall suction, a splash of betadine, a willing assistant to help retract layers. If you have dedicated retractors in your “Arrest box” great, but hands will do.

Found this cool presentation with images and a step-by-step. Dr Charlotte Wills of Oakland California produced this for her ED ([TH 229 Post Mortem C-Section perimortem\[1\]](#)) Pretty nice pictorial review of the procedure. Cliff Reid at [Resus.Me](#) did a review a few months ago on [resuscitative hysterotomy](#) – check it out for a bit of a pre-hospital perspective.