The North West Children's
Major Trauma Network

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Always Children First

# Trauma in Pregnancy

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| **Source Document:** | North West Children's Major Trauma Operational Delivery Network (ODN) Clinical Guidelines |
| **Version:** | 4 |
| **Ratifcation Date:** | 10/11/2023 |

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**Trauma in Pregnancy**

The priority is to resuscitate the mother. Uterine compression of the inferior vena cava can occur from 20 weeks gestation. If there are signs of shock, it is essential to manually displace the uterus to the left. Spinal precautions should always be maintained.

There is an increased intravascular volume in pregnancy, so a significant amount of blood can be lost before the mother's vital signs appear to have changed below normal.
Depending on the degree of trauma and the age of the patient it may be appropriate to use the maternal early warning score.

Abdominal exam must include examination of the uterus to determine if there is evidence of uterine rupture or placental abruption in particular. The vagina should also be examined to exclude vaginal bleeding.

If the patient is being actively resuscitated the obstetric crash team should be summoned, refer to local standard operational policy. In the case of the patient requiring advanced life support the aim would be to begin to perform a peri-arrest or perimortem caesarean section within four minutes of the arrest with delivery by five minutes refer to local standard operational policy.

Foetal heart sounds can be auscultated using a Doppler in gestations >12weeks but this must be done by someone experienced in its usage as it is not uncommon for a maternal tachycardia to be interpreted as a foetal heartbeat.

Any girl who is greater than 12 weeks gestation and Rhesus negative will need anti-D prescribed if there is any evidence of bleeding/ significant trauma. A Kleihauer should be taken prior to administration and sent to haematology.

If the patient is Rhesus negative, she is likely to require anti-D. This will need to be administered as per the Anti D Immunoglobulin Prophylaxis for Rhesus D Negative Women which can be found on the intranet under maternity policies. In order for the arrangements to be made for the timely administration of anti-D please refer to local standard operational policy.

NHS
Cheshire & Merseyside
Strategic Clinical Networks

NHS
Cheshire & Mersey Operational Delivery Networks
Major Trauma & Adult Critical Care

The North West Children's
Major Trauma Network

**The Pregnant Major Trauma Patient** – applies to Cheshire & Mersey Major Trauma Network ONLY

**Principles:**

Obstetric & paediatrics presence in all Trauma Units (TUs) 24/7.
Level 3 critical care in all TUs.
Rapid Response Obstetric & Neonatology in-reach from LWH into Major Trauma Centre Collaborative (MTCC) trauma team available 24/7.
Trauma patients must not go to LWH.
Support for trauma team with training and maintenance of specialist equipment at MTCC from LWH.
Consider best interests of the patient and viability of baby throughout
Explore possibility of additional training e.g. MTCC general surgeons (only) to perform emergency Caesarean Section?
NWAS Pathfinder to include obvious signs of pregnancy

***To call for help from LWH ring**
1. **0151 702 4494** (obstetrics24/7 'hot line') or (if no response)
2. 0151 702 4413 (maternity assessment triage unit).
Clearly state the urgency and who you need to respond to your call.

**NWAS patient transfer**. If signs of pregnancy are apparent or reported on-scene transfer to Aintree **with pre-alert to Aintree and LWH including request for obstetric & (if gestation known or appears to be ≥23 weeks) neonatal teams from LWH to attend A & E immediately** as part of MTCC trauma team.

**a. ED, MTCC** If patient arrives via NWAS and pregnancy becomes apparent OR patient self presents at MTCC with known pregnancy or pregnancy becomes apparent then **trauma team call to LWH for obstetrics and neonatology team to attend immediately. 0151 702 4494***

**b. ED, TU or MTCC.** Patient arrives with **severe major trauma** with known pregnancy or pregnancy becomes apparent during assessment or treatment. **Immediate trauma call to on-site obs & paeds (TU) or obs &, if gestation known or appears to be ≥ 23 weeks, neonates at LWH (MTCC) (if not done at time of pre-alert. If known state gestation period. 0151 702 4494***

**c. ED, TU** i) If arrival via NWAS with pre-alert for immediate care at TU, **ensure trauma team call includes obstetrics and paediatrics (consultant or registrar),** stabilise patient according to major trauma standards and process.

ii) If patient self presents at TU repeat of i) except that **A & E staff must be empowered to call for obs & paeds as part of that trauma call. 0151 702 4494***

Ensure trauma team call includes obstetrics and neonatology (consultant or registrar) midwife and neonatal nurse, stabilise patient according to major trauma standards and process.

**a. ED, MTCC Does patient need on-going definitive care at MTCC?**

Yes → Complete definitive care with MDT outreach team input

No → **Is patient stable for transfer?**

Yes → **Is pregnancy viable without need for further in-patient obstetric input?**

Yes → **Transfer to DGH** (with in-patient maternity services)

No → MDT call consider urgent delivery of baby (if not already done) & reassess

No → MDT call consider urgent delivery of baby (if not already done) & reassess

**b. ED, TU or MTCC Is pregnancy viable given nature &/or extent of trauma sustained or effects of treatment required? Stabilisation of patient successful?**

Yes → **Follow pathway a or c**

No → **Immediate delivery by perimortem caesarean section**

**c. ED, TU. Does patient require transfer to MTCC for definitive care?**

Yes → **Is patient stable for transfer?**

Yes → **Is pregnancy viable without need for further in-patient obstetric input?**

Yes → **Transfer to MTCC**

No → **Retain at TU, consider need for urgent delivery of baby & reassess**

No → **Retain at TU, consider need for urgent delivery of baby & reassess**