



Queensland Trauma Education

TRAUMA IN PREGNANCY

Trauma assessment in pregnant patient

Immersive scenario

Facilitator resource kit

Queensland Trauma Education

The resources developed for Queensland Trauma Education are designed for use in any Queensland Health facility that cares for patients who have been injured as a result of trauma. Each resource can be modified by the facilitator and scaled to the learners needs as well as the environment in which the education is being delivered, from tertiary to rural and remote facilities.

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Queensland Trauma Education

Trauma in Pregnancy – Trauma assessment in pregnant patient: Immersive scenario – Facilitator resource kit

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About this training resource kit

This resource kit provides an opportunity to develop skills when caring for trauma patients who are pregnant.

National Safety and Quality Health Service (NSQHS) Standards



Target audience

Emergency department medical and nursing clinicians.

Duration

30 minutes.

Group size

Suited to small group participation.

Learning objectives

By the end of this session the participant will be able to:

- Perform a structured assessment in a trauma patient
- Understand the differences in assessment during pregnancy
- Recognise alterations in management of the pregnant trauma patient

Facilitation guide

1. Discuss the pre-simulation briefing and deliver the immersive scenario on trauma assessment of pregnant patient.
2. Utilise the supporting documents to maximise learning throughout immersive scenario.
3. Utilise the debriefing guide to evaluate participant performance and provide feedback.

Supporting resources (in Printable Resources)

1. CXR: NAD
2. PXR: NAD
3. Xray L ankle: #/dislocation
4. 3rd Trimester US: wellbeing scan NAD

5. FBE: normal
6. Kleihauer: negative
7. Pre-simulation briefing poster

Simulation event

This section contains the following:

1. Immersive scenario
2. Resource requirements
3. Handover card
4. Scenario progression
 - a. State 1
 - b. State 2
 - c. State 3
 - d. State 4
5. Debriefing guide

Immersive scenario

Type	Immersive scenario
Target audience	Emergency Department medical and nursing clinicians
Overview	A 19-year-old female is brought to ED after being pushed out of a vehicle. She is approximately 30/40 but has not had any antenatal care. Her vital signs are normal, but she complains of abdominal pain and a swollen/bruised L ankle.
Learning objectives	<ul style="list-style-type: none">• Perform a structured assessment in a trauma patient• Understand the differences in assessment during pregnancy• Recognise alterations in management of the pregnant trauma patient
Duration	45- 60 minutes, including debrief.

Resource requirements

Physical resources

Room setup	Resuscitation bay
Simulator/s	3G Mannequin with maternity part task trainer
Simulator set up	<ul style="list-style-type: none"> • Moulage for 30/40 • Abrasions to RHS abdomen • Bruising to L ankle
Clinical equipment	<ul style="list-style-type: none"> • Ultrasound/foetal doppler • Resuscitation equipment • Analgesia/antiemetics
Access	PIVC L ACF. No PIVC sticker on R ACF.
Other	Maternity obs chart Procedural sedation consent and delivery documents (relevant to local area)

Human resources

Faculty	2 facilitators with debrief experience (medical and nursing) to take role of scenario commander and primary debrief
Simulation coordinators	1 for mannequin set up and control
Confederates	1 confederate in room, optional 1 confederate to provide QAS handover / radiographer / other team members
Other	Trauma team composition-2 nurses and 2 doctors in room (or team composition as per local area)

Handover card

Handover from ambulance officer

Hi, this is Sophie. She is 19 and was unfortunately involved in a RTC today where she was pushed out of a moving vehicle at about 10km/hr. She was able to move to the side of the road and call 000. When we arrived about 10 minutes later she was complaining of R sided abdominal pain where we have found some abrasions, and a sore L ankle which is swollen and bruised. Her vitals are all normal.

Sophie thinks she is about 30 weeks pregnant but hasn't been to any antenatal appointments as yet. This is her first pregnancy. She has no other PMHx, is not taking any medications and isn't allergic to anything.

We have placed a cannula in her L ACF and administered 25microg IV fentanyl for pain. She has a splint on her ankle to help support it.

Scenario progression

STATE 1: INITIAL ASSESSMENT				
Vital signs		Script	Details	Expected actions
ECG	ST	Person Is my baby ok? My side hurts, my leg hurts	<ul style="list-style-type: none"> • Primary survey NAD • Abrasions to RHS abdomen • Nil PV loss • Nil uterine tenderness 	<ul style="list-style-type: none"> <input type="checkbox"/> Perform primary survey <input type="checkbox"/> Recognise specific relevant maternal history and examination assessment <input type="checkbox"/> Gain consent for imaging
HR	102			
SpO₂	99% RA			
BP/ART	110/80			
RR	22			
Temp	37			
BGL	12			
GCS	15			

STATE 2: FURTHER INVESTIGATIONS				
Vital signs		Script	Details	Expected actions
ECG	ST	Person I am so worried about my baby I am in so much pain in my leg	<ul style="list-style-type: none"> • CXR: NAD • PXR: NAD • Bedside US: foetal movement and FHR 135 • Secondary survey: bruising to R elbow, tender/swollen L ankle • Xray R knee: L ankle # with mortise displacement 	<ul style="list-style-type: none"> <input type="checkbox"/> Perform additional pregnancy related investigations <input type="checkbox"/> Kleihauer <input type="checkbox"/> CTG
HR	110			
SpO₂	99%RA			
BP/ART	100/60			
RR	22			
Temp	37			
BGL	12			
GCS	15			

STATE 3: INITIAL MANAGEMENT				
Vital signs		Script	Details	Expected actions
ECG	ST		<ul style="list-style-type: none"> • Kleihauer negative • Initial CTG negative 	<ul style="list-style-type: none"> <input type="checkbox"/> Provide analgesia <input type="checkbox"/> Discuss investigation results with patient and ongoing care <input type="checkbox"/> Discuss plan to reduce and splint ankle #/dislocation
HR	100			
SpO₂	100			
BP/ART	105/60			
RR	22			
Temp	37			
BGL	12			
GCS	15			

STATE 4: PROCEDURAL SEDATION ASSESSMENT				
Vital signs		Script	Details	Expected actions
ECG	ST		<ul style="list-style-type: none"> Recognise risks specific to pregnant patient for sedation delivery Consider team, environment and urgency for procedure 	<ul style="list-style-type: none"> <input type="checkbox"/> Discussion of risks for procedural sedation <input type="checkbox"/> Perform anaesthetic assessment
HR	100			
SpO₂	100			
BP/ART	105/60			
RR	22			
Temp	37			
BGL	12			
GCS	15			

Debriefing guide

Scenario objectives

- Perform a structured assessment in a trauma patient
- Understand the differences in assessment during pregnancy
- Recognise alternations to management of the pregnant trauma patient

Example questions

Exploring diagnosis

- How is the initial approach to the pregnant patient different to the non-pregnant patient?
- Are there pregnancy specific questions that assist with risk stratification after trauma?
- What additional tests are done in the pregnant trauma patient and why?
- In this patient, what other psycho-social factors are relevant to ongoing care delivery?

Discussing management

- How does a Kleihauer result assist in the management of the pregnant trauma patient?
- How should a pregnant patient be positioned? At what gestation is this important?
- Are there changes to resuscitation (and ROTEM interpretation) in the pregnant patient?
- Does the performance of procedural sedation risks change in the pregnant patient?

Discussing teamwork / crisis resource management

- Was there a different focus for the team in this scenario?
- How were the assessment and management priorities articulated to the team?
- Were there other clinicians required for the care of this patient? If so, how would they be engaged in the local environment?

Key moments

- Recognition of priorities in assessment are focussed on the mother, and then the foetus
- Differences in assessment and management in the pregnant trauma patient
- Recognition of high-risk DFV scenarios in the pregnant state

Acronyms and abbreviations

Term	Definition
CTG	Cardiotocography
RHS	Right hand side
PIVC	Peripheral intravenous cannula
ACF	Antecubital fossa
NAD	Nil abnormalities detected
PV	Per vaginum
FHR	Foetal heart rate
PXR	Pelvic xray
CXR	Chest xray
FBE	Full blood examination
RTC	Road traffic collision

References

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