

Maternity Education Program

Undiagnosed Breech

Facilitator Resource Kit





Maternity Education Program

The resources developed for MEP (Maternity Education Program) are designed for use in any Queensland Health facility that care for patients/women who are pregnant/birthing or postnatal. Each resource can be modified by the facilitator and scaled to the needs of the learner as well as the environment in which the education is being delivered, from tertiary to rural and remote facilities.



Developed by Sue Hampton, Midwifery Educator – Clinical Skills Development Service (CSDS) MNHHS, Dr Belinda Lowe, Obstetrician & Gynaecologist – Gold Coast University Hospital

3D animation developed by Peter Thomas, 3D Interactive Specialist – Clinical Skills Development Service (CSDS)

Breech - Facilitator Resource Kit

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Who is this resource kit for?

This resource kit provides healthcare workers with knowledge and skills on assessing and managing an undiagnosed breech presentation during labour and birth.

Target audience

Midwifery and medical staff providing maternity care

Duration

45 mins – including simulation and debrief (15 min set up not included)

Group size

Suited to small groups (6 – 8)

Learning objectives

By the end of the session the learner should be able to:

- Prepare resources to manage a safe vaginal breech birth.
- Provide appropriate information and support for a woman with a breech presentation, and her support person.
- Manage a breech birth.
- Prepare for a possible neonatal resuscitation.

Facilitation guide

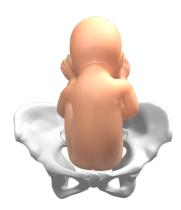
- 1. Provide Participant Resource Kit to the learner.
- 2. Utilise 2D pictures and 3D animation and to demonstrate a breech birth.
- 3. Utilise the PowerPoint (Obcast) to assist learners prior to session.
- 4. Conduct a pre-simulation briefing and deliver the breech birth scenario.
- 5. Conduct group debrief following simulation.

Supporting documents

- 1. Participant Resource Kit
- 2. Interactive 3D animation tool and 2D pictures
- 3. List of further readings
- 4. Undiagnosed breech simulation



Overview



Breech presentation is when the fetus is lying longitudinally with its bottom and/or feet presenting first to the lower part of the mother's uterus.

Babies in a breech presentation during labour and vaginal delivery are at increased risk compared to babies in a cephalic presentation. This is because the largest part of the baby - the baby's head - presents last which may lead to complications during the birth process.

Caesarean section is often recommended as a safer method of birth for a breech presentation, but it also carries risks for the mother both immediately and for future pregnancies.

While vaginal breech birth may be safely completed, women need to be carefully selected for their suitability, and thoroughly counselled. They need to labour and birth where appropriate facilities and personnel are available (1).

Breech presentation occurs in 3–4% of term deliveries and is more common in preterm deliveries and nulliparous women. Breech presentation is associated with uterine and congenital abnormalities and has a significant recurrence risk. Term breech presentations tend to have a poorer outcome than cephalic presenting babies, irrespective of the mode of delivery.

A large reduction in the incidence of planned vaginal breech birth followed publication of the Term Breech Trial. Nevertheless, many babies continue to be born via vaginal breech delivery. Lack of practitioner experience has led to a loss of skills essential for these deliveries (2).

Types of breech presentation (see page 5):

- Frank breech (50-70%) hips flexed, knees extended
- Complete breech (5-10%) hips flexed, knees flexed
- Incomplete (10-30%) one or both hips extended, foot presenting or knee presenting.

Obstetric Emergency is any clinical situation involving a maternity patient where immediate medical/ midwifery assistance is required.

Further readings and resources

Manageme	Management of breech presentation at term		
Author	The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG)		
Link	https://ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Management-of-breech-presentation-at-term-(C-Obs-11)-Review-July-2016.pdf?ext=.pdf		

Managemen	Management of Breech Presentation, Green-top Guideline No. 20b		
Author	Author Royal College of Obstetricians & Gynaecologists		
Link https://obgyn.onlinelibrary.wiley.com/doi/epdf/10.1111/1471-0528.14465			

Fetal Presentation, Pregnancy Care Guideline		
Author	Australian Government Department of Health	
Link	https://www.health.gov.au/resources/pregnancy-care-guidelines/part-j-clinical-assessments-in-late-pregnancy/fetal-presentation	



Emergency Management

Interactive 3D animation tool

The interactive 3D animation tool was developed so it can be used as a training aid to teach the mechanisms and manoeuvres of a vaginal breech birth.

This interactive animation requires a modern browser capable of running WebGL. To check if your browser supports WebGL, visit https://get.webgl.org/.

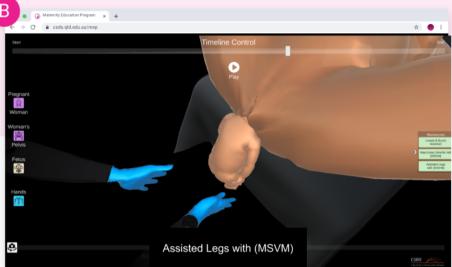
Access the tool via https://bit.ly/2GlXy6a.

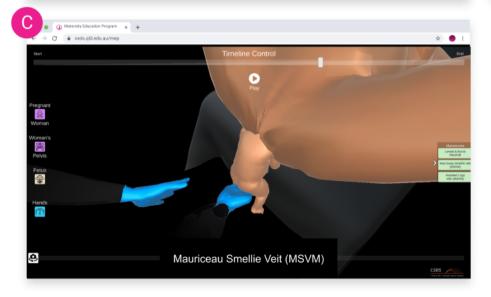












In vaginal breech birth, allow as much spontaneous delivery by uterine action and maternal effort as possible. Intervention should be limited to manoeuvres designed to correct any deviation from the normal mechanism of delivery.

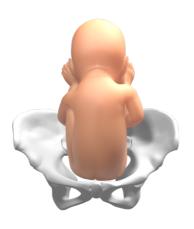
After the delivery of fetal arms:

- The fetal body should be allowed to hang from the vulva for a few seconds until the nape of the neck (hairline) is visible at the anterior vulva this flexes the head to allow descent. Please refer to screen captures A, B, and C.
- Once the fetal occiput has descended underneath the symphysis, the head may be delivered.

Breech presentations



Sacrum Posterior Position (SPP)



Sacrum Anterior Position (SAP)

Frank Breech

A frank breech is the most common breech presentation especially at full term. Of the 3-4 % of term breech births, the fetus is in the frank breech position 50-70 % of the time.

A frank breech is when the fetus' bottom is presenting, and the legs are straight up, with the feet near the head.



Complete Breech

Complete breech is when both of the fetus' knees are bent and the feet and bottom are closest to the birth canal. Presents in 5 – 10% of the breech presentations.



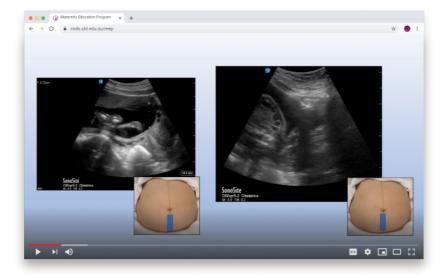


Incomplete – Kneeling Breech, Footling Breech

Incomplete breech is when one of the knees of the fetus is bent and the foot and bottom are closest to the birth canal. Presents in 10 – 30% of the breech presentation.

Online video about vaginal breech birth

Watch Obcast's online video about vaginal breech birth at https://bit.ly/3kTulhU. This video is flagged as age-restricted and requires a viewer to sign in to confirm their age.







Simulation Event

This section contains the following documents:

- 1. Pre-simulation briefing poster
- 2. Immersive in-situ scenario
- 3. Physical resources
- 4. Human resources
- 5. Simulated patient script information
- 6. Handover card
- 7. Additional information
- 8. Stage 1 Initial assessment
- 9. Stage 2 Ongoing management
- 10. Stage 3 Resolution

Pre-simulation Briefing

Establishing a safe container for learning in simulation.

Clarify objectives, roles and expectations

- Introductions.
- Learning objectives.
- Assessment (formative vs summative).
- Facilitators and learners' roles.
- Active participants vs observers.



- Individual performances.
- Maintain curiosity.

Establish a fiction contract

Seek a voluntary commitment between the learner and facilitator.

- Ask for buy-in.
- Acknowledge limitations.

Conduct a familiarisation

- Manikin/simulated patient.
- Simulated environment.
- Calling for help.

Address simulation safety

Identify risks.

- Medications and equipment.
- Electrical or physical hazards.
- Simulated and real patients.



Note: Adjust the pre-simulation briefing to match the demands of the simulation event, contexts or the changing of participant composition.

Adapted from Rudolph, J., Raemer, D. and Simon, R. (2014). Establishing a Safe Container for Learning in Simulation. Simulation in Healthcare: Journal of the Society for Simulation in Healthcare, 9(6), pp.339-349.







Scenario

Туре	Immersive in-situ scenario		
Target audience	Obstetric medical staff and midwives		
Overview	Birth suite, woman in labour		
	Situation: A multiparous woman in spontaneous labour with an undiagnosed breech presentation.		
	Background: • 24-year-old G3P2. 38/40 gestation. Low risk pregnancy. • Hb 126 @ 36/40 • Pos • GBS Negative • All other serology NAD • Allergies – Nil • Nil medical history		
	 Assessment: Obs. NAD. CTG normal. VE 45 minutes ago – 4cm dilated, fully effaced, bulging membranes, presenting part not defined '2-3cm above. Contractions 3:10 moderate, lasting 50 sec. Recommendations: 		
	Transfer to birth suite for labour care.Requesting an epidural.		
Learning objectives	 Participants are required to Prepare resources to manage a safe vaginal breech birth. Provide appropriate information and support for a woman with a breech presentation, and her support person. Manage a breech birth. Prepare for possible neonatal resuscitation. 		
Duration	Pre-brief: 10 minutes Orientation: 5 minutes Simulation: 15 mins Debrief: 15 mins Total: 45 mins (add 15 minutes for set up)		

Physical resources

Room set up	Standard birth suite set up	
Simulator/s	Simulated patient <i>or</i> Manikin (including software) with birthing peri and pregnant abdomen	
Simulator/s setup	 If working with a simulated patient Simulated patient is in a hospital gown walking around with term size pregnant abdomen. Part task trainer to the side of the bed with a fetus in a Frank breech position, ready to place on the bed, a bloody 'show' on pad. OR If using a manikin Manikin semi recumbent in bed in a hospital gown with fetus in a Frank breech position. Bloody 'show' on pad. 	
Clinical equipment	Standard birth suite roomRoutine birth suite set up	
Access	Nil	
Other	Pregnancy Health Record, chart and relevant paperwork for emergency management	

Human resources

Faculty	x2 Facilitators (Obstetric Reg/ Consultant and midwife with debriefing experience) to take on roles of scenario lead and primary debriefer	
Simulation Coordinators	If using a manikin – x1 SimCo for manikin set up and control manikin software during scenario	
Confederates	 If working with a simulated patient: Simulated patient x1, plus a midwife as a support person. Confederate to push out the fetus breech. Facilitator to provide handover to midwife taking over care. 	
Other	Midwife x1 to receive the handover. The other midwives and doctors are outside the room, to be called in as needed.	

Simulated patient script information

You are Sarah You're having your third baby. You have presented in early labour as your last labour was only three hours and you don't want to be caught out at home.

You are starting to become uncomfortable since the vaginal examination (pace up and down). Request to use the gas and mention an epidural. You really would like to have the epidural as labour is getting stronger. Go out to the toilet where you spontaneously rupture your membranes, the fluid looks a bit brown with flecks present. Your worried as you don't think it looks normal.

Your contractions start coming really quickly after this. Start sucking on the gas and request an epidural again. Move around constantly as you are unable to get comfortable. As they prepare to put you on a monitor start to experience some rectal pressure, no urges to push yet but act as though you are in transition, you cannot stay still, you are breathing hard and the contractions feel relentless.

Have a few 'heavy' contractions then start pushing. Progress to a vaginal breech birth.

Handover card

	Introduction	This is Sarah this is <staff name=""></staff>	
S	Situation	Sarah has just arrived in birth suite from the assessment area in labour.	
В	Background	 G3P2 38/40 gestation Spontaneous labour started three (3) hours ago Uneventful pregnancy Nil medical or social history Partner is on his way in Last Hb 12.6, GBS unknown, Other bloods NAD A Pos. USS NAD 	
Α	Assessment	 Obs NAD CTG normal VE 45 minutes ago – 4cm dilated, fully effaced bulging membranes, presenting part not defined -2-3cm above Contractions 3:10 moderate lasting 50 sec 	
R	Recommendation	Sarah requesting pain relief has expressed a wish for an epidural but is happy to start with 'gas'.	

Additional information

Name	Sarah Wells
Age	24 years old
Sex	Female
Weight	68 kg
Allergies	Nil known
Medications	Nil
Medical/Surgical	Nil
Social History/Employment	Stay at home mum
Partner's name	James
Pregnancy history	G3P2
Blood Group	O Pos antibodies Neg
Hb	126 – 36 weeks
Serology	Neg
Rubella	Immune
GBS	Unknown

X2 previous SVDs no complications

State 1: Initial as	sessment			
Vital signs		Script Details		Expected actions
RR	22	Sarah:	Introduction	☐ Establish rapport
SPO ₂	99%	respond to questions. • Requesting pain relief, requests gas and an epidural.	This is Sarah this is <staff name=""></staff>	with woman Listen/ask for history Perform maternal assessment i.e. obs. Abdo. Palpation Discuss pain relief options Call for assistance as situation becomes more intense Commence CTG due
ВР	110/70		3rd baby in spontaneous labour 4cm 45 mins	
HR	72		ago. Background	
Temp	36.7°C		 24-year-old G₃P₂. 38/40 gestation. Low risk pregnancy. Hb 126 @ 36/40 Bloods NAD. GBS Negative. 	
Consciousness sedation score	Alert			
FH	136			
Abdominal palpation			Nil medical history.Contractions started 3 hours ago,	to epidural request
Fundus lie position	= Term Longitudinal Back		membranes intact. Assessment Cephalic 2/5 above, ROT, – VE 4cm soft and stretchy, bulging membranes.	
Presentation	Right ROL, Difficult due to contractions,			
above brim	1/5 palpable		Obs. NAD.	
			Recommendation	
			Requesting pain relief, may want an epidural.	

State 2: Ongoing management					
Vital signs		Script	Details	Expected actions	
RR SPO ₂ BP HR Temp Consciousness sedation score FH Vaginal examination	24 98% 115/70 98 Alert CTG abnormal unlikely 120 – 140 variable declarations 8 cm, fully effaced, well applied to presenting part, breech RSA, +1cm	Sarah: Complaining that she "does not want to do this any more". She wants an epidural, is pushy about this. Goes out to the toilet and the membranes rupture – meconium flecks in liquor. If using a manikin – SROM at the height of a contraction. Following SROM, increased rectal pressure and increased contractions. Is anxious, questions what is happening. "What are you doing, what's happening?"	Contractions 4:10 moderate. SROM at height of contraction in the toilet – liquor with lumps of fresh meconium. Contractions much stronger post SROM. Starting to feel pressure.	□ Explain to mother □ Discuss pain relief □ IV- if have staff and time □ Check FHR □ VE □ NO pushing □ Call for HELP and Notify medical staff □ Set up: breech, end of bed removed □ Infant resus trolley set up; notify paediatrician.	
	lumps of fresh meconium, NO Cord felt.	Support Person: Ask questions if not included in the discussion.			

State 3: Resolution					
Vital signs		Script	Details	Expected actions	
RR SPO ₂ BP HR Temp Consciousness sedation score FH Vaginal examination	16 100% 140/90 106 37°C Sleepy but talking 150 bpm normal trace Fully dilated, breech RSA, +2cm.	Sarah: • 2nd stage noises. • "I want to push". • Repeat – "I want to push". • Is distressed. • Involuntary pushing.	 Slowly bring breech down on view (give participants time to get settled and organised). Breech on view. Baby slowly delivers with contractions. Legs out and then slowly the body. Wait for manoeuvres for arms to be born. Slowly let the head emerge. FHR felt via the umbilical cord FHR 100 – 108. Baby cries with stimulation on resus trolley. Allow cord and placenta to deliver without difficulty. 	 □ Look for teamwork and summarise actions taken □ Explain to Sarah what is happening □ VE □ Notify MO □ Allow to deliver spontaneously □ Hands off, let the baby 'hang' □ Check arm position, Loveset for arm/arms □ Flex body posterior to release anterior shoulder then posterior shoulder. □ Allow baby to 'hang', until nap of neck seen. Ensure the back uppermost □ Slow controlled delivery of after coming head using: ○ Mauriceau- Smellie- Veit manoeuvre ○ Burns Marshall or forceps 	

State 3: Resolution				
Vital signs	Script Details		Expected actions	
			 □ Place baby on Sarah's abdomen, cord clamped, cord gases and cut □ Take baby to resus trolley □ Active 3rd stage management □ Debrief to family □ Document events 	



Supporting Resources

This section contains the following supporting documents that will be essential in the delivery of this learning package:

- 1. Manikin set-up guide
- 2. Laboratory reports
- 3. CTG on admission
- 4. Current CTG 2nd stage pushing
- 5. Simulation debriefing poster
- 6. Debriefing guide

More resources can be downloaded from our website.



Fetal position -Breech presentation (RSA)

Fetal back to maternal right side

Fetal buttocks in maternal pelvis



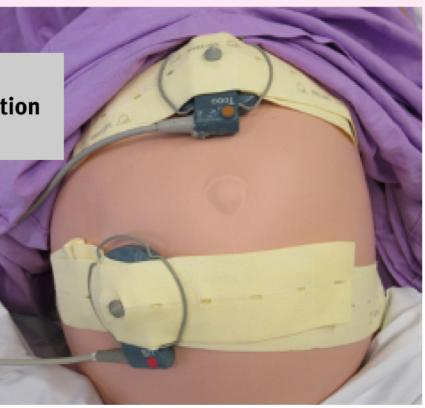
Hand position for person pushing the fetus out

Support person's hand on top of fetal head applying downward pressure.

Note: apply plenty of lubricant and a little water on buttocks and in pelvis.



CTG placement -Breech presentation (RSA)





Hand position for person pushing the fetus out

Cover arm with patient nightie, hold fetus like this



36 week routine

DATE:
PATIENT:

LABORATORY REPORT PAGE: 1
REF:

DOB:

Test	Result	Reference	Comment
Haemoglobin	126 g/dL	13.7-17.7g/dL	
WCC	11.0 L	3.9-10.6 x 109/L	
Platelets	186 L	150-440 x 109/L	
Haematocrit	0.35	0.39 - 0.52	
RCC	3.85 L	4.50 - 6.0x10 ¹² /L	
MCV	90 fL	80 - 100 fL	
Neutrophils	(83%) 9.15	2.0 - 8.0x10 ⁹ /L	
Lymphocytes	(10%) 1.15	1.0 - 4.0x10 ⁹ /L	
Monocytes	(6%) 0.65	0.1 - 1.0x10 ⁹ /L	
Eosinophils	(0%) 0.01	<0.60x109/L	
Basophils	(0%) 0.03	<0.20x109/L	

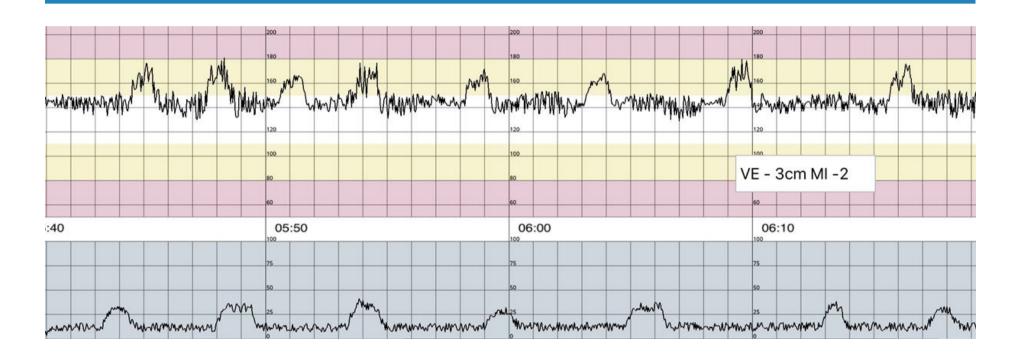
36 week routine LABORATORY REPORT

DATE: PAGE: 1
PATIENT: REF:

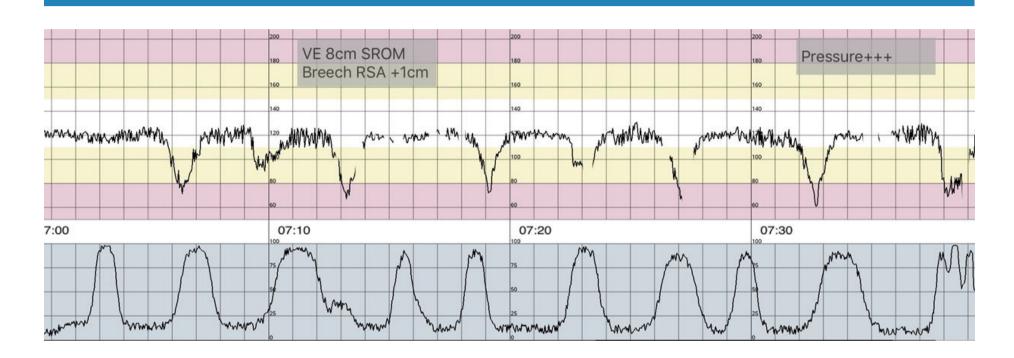
DOB:

Test	Result	Comment
Group and Antibody Screen		
Group	O Rh (D) Positive	
Antibody	Negative	
		Nil
Expires in 7 days		

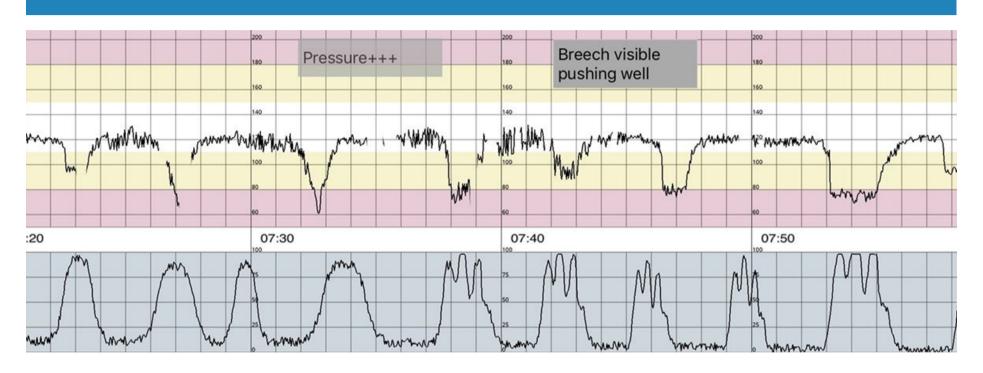
CTG 1 on admission



CTG2 labour



CTG₃ labour



Simulation Debriefing

Establishing a safe container for learning in simulation.

Reaction phase - "vent"

- How was that?
- How are you feeling?
- Any other initial reactions?
- Learners may reveal key areas that are important to them.



2

Description phase

- Clinical summary of the case.
- Can be shortened if it appears there is shared understanding of the case.

Analysis phase

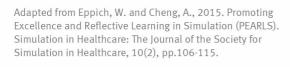
Select which strategy is suited.

- Learner Self-Assessment learner generates objectives
 - What went well/what would you change? What well/did not go well and why?
- Focused Facilitation analyse performance related to objective

Summary phase

- Discuss take-home learning points
- Learner guided approach or
- Facilitator guided approach









Debriefing guide

Scenario objectives	Participants are required to: ☐ Prepare resources to manage a safe vaginal breech birth. ☐ Provide appropriate information and support for a woman with a breech presentation, and her support person. ☐ Manage a breech birth. ☐ Prepare for possible neonatal resuscitation.	
Vent phase	 Example questions: Initial thoughts of how the simulation went? Acknowledge emotions (note body language and tone of participants) 	
What happened (phases)?	 Example questions: Tell us about your patient and what were your initial priorities? What led to your decision to escalate management? What clinical signs and symptoms led you to become concerned? 	
What was done well and why?	Example question What could have been better at each phase?	
Relevance to experience	Example question How would you transfer knowledge from today into your workplace?	
What has been learned?	Example question What actions will you take to enhance your skills and knowledge post simulation?	
Transfer to clinical settings	 Example questions: What will you take away from this session? Can you give an example of how you could apply new skills or knowledge gained during this session in your clinical setting? 	
Key moments	 Recognition of breech presentation. Appropriate management of breech presentation at the stage of labour. Appropriate management of the vaginal breech birth. Calling key team members to be present. Communication with the woman and her family regarding the breech birth. 	

Acronyms and Abbreviations

Term	Definition
CRM	Crisis resource management
CSDS	Clinical Skills Development Service
CTG	Cardiotocograph
FHR	Fetal heart rate
GBS	Group B streptococcus
Hb	Haemoglobin
IV	Intra venous cannular
МО	Medical officer
NAD	Nothing abnormal detected
Obs.	Observations
RANZCOG	Royal Australian and New Zealand College of Obstetrics and Gynaecology
RCOG	Royal College of Obstetricians and Gynaecologists
ROL	Right occipital lateral
ROT	Right occipital transverse
RSA	Right sacral anterior
SROM	Spontaneous rupture of membranes
SVD	Spontaneous vaginal delivery
USS	Ultrasound scan
VE	Vaginal examination

References

This resource kit has been inspired by the Optimus BONUS project of the Children's Health Queensland's "Simulation Training Optimising Resuscitation for Kids" service. To find more information about STORK and their Optimus project, visit their website at https://bit.ly/3km1wcZ.

- 1. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. RANZCOG. [Online].; 2016 [cited 2020 8 11. Available from: <a href="https://ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Management-of-breech-presentation-at-term-(C-Obs-11)-Review-July-2016.pdf?ext=.pdf.
- 2. Royal College of Obstetricians and Gynaecologists. RCOG. [Online].; 2017 [cited 2020 10 9. Available from: https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg20b/.



Appendix

This section contains the following supporting documents that will be essential in the delivery of this learning package:

- A. Pre-simulation briefing blank template
- B. Simulation debrief blank template

Pre-simulation Briefing Notes

Establishing a safe container for learning in simulation.



Clarify objectives, roles and expectations

- Introductions.
- Learning objectives.
- Assessment (formative vs summative).
- Facilitators and learners' roles.
- Active participants vs observers.

Maintain confidentiality and respect

- Transparency on who will observe.
- Individual performances.
- Maintain curiosity.

Establish a fiction contract

Seek a voluntary commitment between the learner and facilitator.

- Ask for buy-in.
- Acknowledge limitations.

Conduct a familiarisation

- Manikin/simulated patient.
- Simulated environment.
- Calling for help.

Address simulation safety

Identify risks.

- Medications and equipment.
- Electrical or physical hazards.
- Simulated and real patients.

Simulation Debriefing Notes

Establishing a safe container for learning in simulation.

Crisis Resource Management Principles

- 1. Know your environment
- 2. Anticipate and plan
- 3. Call for help early
- 4. Take a leadership role
- 5. Communicate effectively
- 6. Allocate attention wisely & use all available information.
- 7. Distribute the workload & use all available resources.



Reaction phase - "vent"

- · How was that?
- How are you feeling?
- Any other initial reactions?
- Learners may reveal key areas that are important to them.

Description phase

- Clinical summary of the case.
- Can be shortened if it appears there is shared understanding of the case.

Analysis phase

Select which strategy is suited:

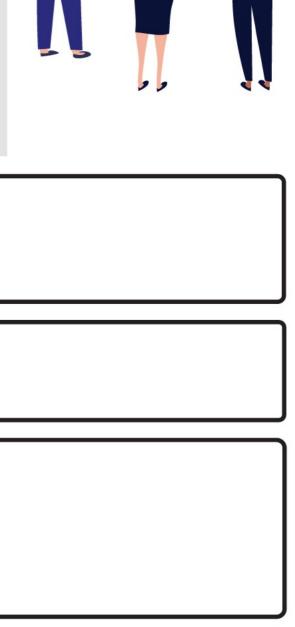
Learner self-assessment - learner generates objectives

What went well/what would you change? What well/did not go well and why?

 Focused facilitation - analyse performance related to objective

Summary phase

- Discuss take-home learning points
- · Learner guided approach or
- Facilitator guided approach



Share your feedback



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The survey should take no more than 5 minutes to complete. Scan the QR code with your device or visit this link

https://www.surveymonkey.com/r/Z8Q398N





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