


EdWISE

Topic Title: Normal Vaginal Delivery

For on site tutorials as part of the remote simulation program
Obstetrics Module 2

This project was possible due to funding made available by Health Workforce Australia



Sponsor

This project was possible due to funding made available by



Projects within NSW are overseen by the NSW Ministry of Health on behalf of HWA




Introductions



Very quick round the room to assess stage of professional development for each participant.

General Aims

- Learn in a team setting
- Blend clinical skills with team skills
- Reflect critically on practice

June 13© Health Workforce Australia

These aims are the same for all sessions – please do not modify

Speakers' notes

- This session, and package as a whole, involves learning together. Learning with the teams that you work with helps that team to function more efficiently and effectively. It allows you to learn from each other, explore different perspectives and to understand the importance of all members of the team.
- We are targeting higher level learning – applied skills and performance in contextualised events. This is through team discussion and also through working through simulated scenarios as a team. It also allows you to put into practice knowledge attained from the eLearning and other solo learning environments.
- To review and reflect upon our own practice and current best practice standards. During our feedback sessions we will facilitate this but we would also encourage you to reflect on your practice and experience after these sessions.

Ground Rules

- Participation
- Privacy
- Confidentiality
- Disclaimer
- Debriefing
- Mobile phones

Session Objectives

- Assessment of the woman in labour
- Understand and demonstrate management of normal vaginal delivery (NVD)
- Working in teams

Normal Vaginal Delivery

- Term birth greater than 37 weeks gestation
- Cephalic presentation of baby
- Spontaneous labour
- Three stages of delivery
 - First, Second, Third

June 13



© Health Workforce Australia

A normal vaginal delivery (NVD) at term is a physiological event. A term NVD is defined by being spontaneous, beyond 37 weeks gestation, with a cephalic (head) presentation of the baby. Emergency department staff should be prepared to assist a patient in circumstances of normal vaginal delivery and to provide resuscitation to a neonate if required after a normal vaginal delivery.

Labour is defined as painful regular contractions, accompanied by dilatation and effacement of the cervix, until the birth of the baby, placenta and membranes. Labour can be divided into three stages, these will be discussed over the next few slides.

Assessment

- Focused history and examination
- Determine foetal gestation and risks of delivery
- Review the pregnancy record
- Obtain IV access and send bloods

June 13



© Health Workforce Australia

Assessment of the woman in labour

A focused history and examination of the woman in labour should take place at the time of presentation. This will assess for possible risks for both the mother and child, in order to predict need for intervention during the labour. The pregnancy health record provides documentation of the antenatal history covering many facets including obstetric, gynaecological, medical, surgical, psychosocial, cultural and spiritual history.

After the initial history, an examination should be performed including an abdominal assessment, respecting the woman's privacy and obtaining consent for examination. The fundal height, lie, presentation and engagement will provide essential information about the fetus. Palpation for contractions – duration, strength, frequency and resting tone, and auscultation of the fetal heart rate with doppler, as well as fetal movements gives evidence about the labour, its progression and fetal well being. Assessment of per vaginal loss for show, blood and meconium is a further step in the assessment of labour. A vaginal examination with a speculum should be considered after reviewing the record for contraindications or discussing with an obstetrician if the need is unclear. A vaginal examination is useful to determine the dilation and effacement of the cervix, the position and station of the presenting part. In the emergency department, intra venous access should be obtained and blood tests sent to the laboratory for a group and hold, rhesus typing and a full blood count.

First Stage of Labour

- Labour is defined as painful, regular contractions with dilatation and effacement of the cervix.
- First stage is dilation of the cervix to 10cm.
- This is divided into the latent phase, active phase and transition phase.

June 13



© Health Workforce Australia

Labour is defined as painful regular contractions, accompanied by dilatation and effacement of the cervix, until the birth of the baby, placenta and membranes. Labour can be divided into three stages.

First stage begins with regular rhythmic contractions until the cervix is fully dilated (at 10cm). There are 3 phases of the first stage.

The latent phase – this stage is the longest and the least painful part of labour. This may occur over weeks, days or hours and be accompanied by mild contractions. The contractions may be regularly or irregularly spaced, or else might not even be noticed at all. The cervix begins to dilate.

The active phase – is marked by strong, regular painful contractions 3-4mins :10, lasting 40-60 seconds and cervical dilatation of $\geq 3-4$ cm.

The transition phase – During transition, the cervix dilates to 10 cm. These contractions can become more intense, painful and frequent. It may feel like the contractions are no longer separate but running into each other. It is not unusual to feel out of control and even a strong urge to go to the toilet as the baby's head moves down the birth canal and pushes against the rectum.

Preparation for delivery

- Staff for both mother and child
- Equipment
 - Birth pack, gloves, lubricant, doppler, IV
- Monitoring
 - CTG, maternal cardiac monitor
- Warm blankets
- Neonatal resuscitation equipment and plan

June 13




© Health Workforce Australia

Labouring women may present to the emergency department in the final phases of the first stage of labour. As the woman is entering into the second stage the team should prepare for the delivery of the baby and to manage the third stage. Equipment should be readily available in the emergency department for delivering a baby including a birth pack, sterile gloves, lubricant, doppler, intravenous (IV) cannula, fetal monitoring equipment such as a CTG and cord clamp. Warm blankets and a neonatal resuscitator or overhead heaters may be needed following the birth of the child.

Second Stage

- Delivery of the baby

June 13

© Health Workforce Australia

Second stage is the delivery of the baby. It begins when the cervix is completely dilated and is complete when the baby is born.

This is to be demonstrated on SimMom by the Host faculty whilst the hub faculty talks through the process.

The following are the steps that the baby moves through during the birthing process.

- Descent of fetal head into the pelvis.
- Flexion of the head, resulting in a smaller presenting diameter.
- Internal Rotation, where the head pushes onto pelvic floor, and resistance causes head to rotate.
- Crowning of the head where the head is seen on the perineum.
- Restitution is when the head rotates in alignment with shoulders.
- External Rotation so the shoulders turn to anterior posterior diameter of maternal pelvis and head turned to face maternal thigh.
- Lateral Flexion then allows anterior shoulder to pass under pubic arch.
- The rest of the body follows the head and shoulders from the pelvis to complete the birthing of the baby process before progressing to the third stage.

Third Stage

- Active management of the third stage reduces the risk of post partum haemorrhage.
- Syntocinon, cord traction and fundal massage are active management strategies.
- Once the placenta is delivered it must be checked for completeness.

June 13



© Health Workforce Australia

Third stage is the separation and expulsion of placenta and membranes. The third stage of labour may be passive, waiting for the physiological event to occur, or it may be active with administration of oxytocin and gentle cord traction. NSW Health recommends an active third stage to reduce the risk of post partum haemorrhage.

Syntocinon 10 IU IMI should be administered to the mother after the delivery of the shoulders of the fetus. This is part of active management of the third stage to reduce the risk of post partum haemorrhage

During the third stage of labour the placenta will separate from the uterus, usually over 10-12minutes. Active management of the third stage involves administration of syntocinon 10 IU IMI with the delivery of the anterior shoulder of the baby, controlled cord traction and fundal massage of the uterus immediately after the delivery of the placenta. Once the placenta is expelled it should be checked for completeness.

The Case

- Judy Dench is a 25-year-old lady who is 36 weeks pregnant. She has been visiting friends in the area and has had to come to your ED.

This is a pause and discuss scenario which is designed so that many participants can be involved. The team should be briefed that this scenario will be stopped at several pre-determined spots to discuss the case so far. Time permitting there will be an opportunity for other participants to deliver the baby.

Summary

- Normal vaginal delivery is a normal physiological event.
- A team approach to the delivery requires preparation and planning,
- Active management of the third stage will reduce the complication of post partum haemorrhage.

References

- Cooper, M.A., Fraser, D., Myles, M. Myles textbook for Midwives 15th edition. 2009.
- Stables, D. & Rankin, J. Physiology in childbearing : with anatomy and related biosciences, 3rd edition, 2010.

Acknowledgments

Obstetrics 2 Topic expert author: Nhi Nguyen

Obstetrics 2 Simulation session author: Morgan Sherwood

Obstetrics Module Expert Working Party and Peer Review Team

Nadia Sawkins, Simulation Fellow RPAH

Marilena Pelosi, Clinical Midwife Consultant, RPAH

Nhi Nguyen, Intensivist, Nepean

Tanya Nippita, Obstetrician, RNSH

Lisa Robinson, Obstetrics Fellow, RNSH

Educational consultants:

Stephanie O'Regan Nurse Educator SCSSC

Leonie Watterson Director Simulation Division SCSSC

John Vassiliadis Deputy Director SCSSC

Clare Richmond FACEM Royal Prince Alfred Hospital

Morgan Sherwood Simulation Fellow SCSSC

Disclaimer

Care has been taken to confirm the accuracy of the information presented and to describe generally accepted practices. However the authors, editor and publisher are not responsible for errors or omissions or for any consequences from the application of the information in this presentation and make no warranty, express or implied, with respect to the contents of the presentation.

Copyright and Permission to Reproduce

This work is copyright. It may be reproduced for study or training purposes subject to the inclusion of an acknowledgement of the source: Health Workforce Australia EdWISE program. It may not be reproduced for commercial usage or sale.

Same for all presentations