4 Labour and birth

Introduction

In traditional Aboriginal culture, birthing is strictly the concern of women, and governed by Women's Law. Many older women, known as traditional birth assistants, have this knowledge — the 'Grandmother's Law'. Older women and traditional birth assistants talk about birthing on country, with babies connected by birth and ritual to that country.

Traditionally, women gave birth well away from the camps. Women birthed alone or were looked after by birth assistants or female relatives of the right skin. Rules about which relatives are 'right skin' vary by region, see *Looking after women's health* (*p6*) for where to find more information.

Traditional practices governed how the cord was managed, including cutting the cord after the placenta* was delivered, cutting the cord longer than what is now normal, crushing with a stone instead of cutting, and tying the cord with hair or string. A long strand of cord may also be put around the baby's neck. Management of the placenta is also of cultural importance. Old women say the placenta is sacred, and should not be handled. Traditionally, the placenta was buried in a hole at the birth site, often dug by the mother, then a good hot fire lit on top.

Women relied on a fire for warmth and healing. After the birth, traditional practices focused on stopping bleeding, healing, warming, and making the mother and her baby spiritually strong. Traditional smoking ceremonies would be held for the baby and the mother. Women stayed isolated for up to a week after the birth. Appropriate relatives visited, bringing special food like kangaroo, sweet potato, and wild bananas, or other bush foods depending on the season. The father usually didn't see the mother or the baby during this time.

Birthing places

Women from remote communities are strongly encouraged to birth in a regional hospital, in line with health service policies. This can conflict with traditional practices of birthing on country. Give enough information in the antenatal period to prepare the woman for going to a regional centre. Include advice about living and hospital arrangements, the birth experience, and having support people with her.

Birthing in hospital may be isolating and frightening due to unfamiliar staff (sometimes male), strange surroundings, and language barriers. Lack of knowledge about the birth experience can contribute to fear and feelings of isolation. Ongoing education is an important part of antenatal care. Good preparation can help reduce fear, and make the unknown less daunting. Strategies include a tour of labour ward and postnatal area, having an interpreter available, and meeting maternity unit staff. It may be helpful to identify family or others in town who can support the woman while she waits.

Women may wish to follow some of their traditional practices after the birth.

If in Alice Springs, she can go to Congress Alukura (women's health clinic) for traditional ceremonies, or have them when she returns to her community.

Unplanned births 'out bush'

Births still occur unexpectedly in remote communities. Sometimes women don't agree with birthing in hospital for a variety of personal reasons and beliefs. Occasionally a baby is born in the bush with traditional birth assistants supporting the woman and practising Law and culture. Clinic staff may only find out when labour is well established, or after the baby is born.

If a woman presents in labour and there is no time to send her to hospital, try to close the clinic. Birthing is still private. Ask a female ATSIHP, ACW, or SWSBSC worker about the appropriate practice in this community. The woman can choose appropriate relatives and birth assistants to support her. Clinic staff should work with these women in an open, cooperative and culturally appropriate way. Traditional birth assistants have a wealth of knowledge and beliefs to help the woman through labour. They are skilled at massage, easing pain by rubbing the woman's back, and encouraging the baby to be born by rubbing the woman's belly.

After checking the placenta*, ask the mother, ATSIHP, or birth assistants what to do with it. Check if it can be kept in the fridge or freezer. The mother may want to take it home and bury it on her traditional birth country. Old women are worried by stories that placentas are burned in the clinic rubbish bins, or buried where dogs can get to them. They may not want the placenta stored in a freezer, saying that this causes sickness from the cold to enter the mother.

The mother and baby may still need to be sent to hospital for postnatal care. If not, the woman, female ATSIHPs, and relevant family members will decide where the woman will stay and who is allowed to see her after the birth.

Cultural practices may take place in the community after a birth. Health staff need to be aware of these customs so they don't interfere with traditional practices or protocols. Staff are sometimes invited to attend and participate, if culturally appropriate. An invitation is a sign of respect and should not be assumed.

* Traditionally Aboriginal women call the placenta the birth bag.

Birth and resuscitation equipment

Birth

Birthing pack (delivery/midwifery pack)

- Sterile lubricant
- Sterile sharp curved blunt-ended scissors for episiotomy
- 2 sterile metal clamps with ratchets and grazed ends for clamping cord
- Sterile blunt-ended scissors for cutting cord
- Urinary catheter equipment
- Small combine dressings
- Kidney dish for placenta
- Sponge holding forceps for membranes
- Suture materials (*CPM p292*)
- Equipment for taking cord blood
  - Kidney dish
  - Syringe
  - EDTA or plain specimen tube

General equipment

- Personal protective equipment (PPE)
- Lots of blueys, spare sheets
- Good light

Medicines

- Oxytocin 10 international units/mL x 5 ampoules, 2mL syringe, 23G needle
- Lidocaine (lignocaine) 1% x 5 ampoules
- Nitrous oxide + oxygen cylinder

Emergency equipment

- Sterile Sims' speculum (*p47*) x 2 (breech birth, removing cervical suture/tape)
- Sterile sponge forceps (removing cervical suture/tape)
- Sterile long-handled scissors — at least 15cm (removing cervical suture/tape)

After the birth

- Wraps for baby — see *Keeping baby warm after birth* (*p182*)
- Laminated copy of APGAR chart
- 2 plastic cord clamps, and 2 spares in case first break
- Name bands for baby x 4
- Plastic bucket with lid or plastic bags for placenta — family may take it
- Thermometer, under arm (axillary)
- Paediatric vitamin K 2mg/0.2mL, 1mL syringe, 25G needle
- Birth registration forms

General equipment — mother and baby

- BP machine, stethoscope, thermometer
- Fetal heart doppler, pinard stethoscope
- Clock with second hand
- Blood specimen tubes — EDTA, plain
- Syringes 1mL, 2mL, 5mL, 10mL x 5 each and needles 19–26G
- Normal saline**,** tourniquet, tape
- IV cannula — 14–24G
- IV giving sets (blood/fluid pump sets), bungs, extension tubing, dressings
- IO needle device, IO needles, 15mm (baby), 25mm (adult), 45mm (obese)
- Nasogastric tubes 5Fr, 6Fr, 8Fr

Resuscitation — mother

- Oxygen/medical air with flow meter (flow rates up to 10L/min)
- Emergency trolley

Resuscitation — newborn

- Laminated copy of newborn resuscitation flowchart

Warmth

- Warm towels and baby wraps, space blanket

Airway and breathing equipment

- Oxygen/medical air with flow meter (flow rates up to 10L/min)
- Infant mask and oxygen tubing. Can used cupped hand if not available
- Oxygen saturation monitor (oximeter) with infant probe
- Resuscitation bag-valve-mask, sizes 0, 00 — assemble and check before birth

Suction

- Mechanical suction (low pressure if possible) and tubing
- Suction catheters, sizes 8Fr, 10Fr, 12Fr

Intubation — if skilled in advanced newborn resuscitation

- Laryngoscope with straight blades, No. 0, No. 1 — extra bulbs and batteries
- Endotracheal tubes 2.0, 2.5, 3.0, 3.5, 4.0, 4.5mm, tape for securing
- Stylette or introducer

Medicines — under medical advice

- Adrenaline (epinephrine) 1:10,000 (0.1mg/mL)
- Normal saline 30mL
- Glucose 5% and glucose 10%, 500mL
- Water for injection 5mL

Labour and birth

For women presenting unexpectedly in labour to primary health care centre.

- More likely to
  - Be early birth (preterm labour)
  - Have had little or no antenatal care
  - Have declined transfer to regional centre to wait for birth

If woman arrives pushing and birth about to happen — see *Getting ready to birth baby* straight away (*p161*).

Labour

- **Labour pains** are caused by tightening of uterus (contractions)
  - Between contractions uterus is relaxed
  - During contractions uterus tightens. Put your hand on woman's abdomen to feel this happening
  - Each contraction pushes baby down on cervix and it opens a little more
- **Labour has started** when regular, painful contractions — usually lasting 1 minute every 2–5 minutes
- **Waters have broken** (membranes ruptured) when clear fluid (liquor) loss from vagina. Doesn't always mean birth will happen soon
  - Check colour of liquor (waters). Can be
    - Clear — normal
    - Bloody — mixed with mucus ('show'), normal unless 'frank' blood loss
    - Greenish/brown — meconium (baby poo) stained, baby may be distressed
- **Baby is coming** when uncontrollable urge to push, grunting, wants to go to toilet to pass faeces, perineum or anus bulging *AND/OR* part of baby seen when labia parted, usually the head
  - If cord seen — see *Cord prolapse* straight away (*p42*)
  - If bottom or feet seen — see *Breech birth* (*p47*)

First stage of labour

From start of labour until cervix fully dilated.

First check in labour

Check as much as you have time to

Ask woman, check notes, have helper phone hospital or other clinics for relevant information.

- **Ask**
  - Is there more than 1 baby
  - Is baby moving
    - Have movements gotten less over last 24 hours
  - When labour (pains) started

- **What is happening now**
  - Contractions
    - How often, how long — ask woman to tell you each time one starts, time over 10 minutes
    - How strong — mild, moderate, strong
  - Membranes intact or ruptured
    - If fluid loss — when did it start, how much, colour, smell, blood or mucus
  - If urge to push — can you see baby
- **Obstetric history**
  - When baby is due
  - Antenatal care — problems or infections during pregnancy, medical or obstetric (eg positive GBS, untreated STI, diabetes, anaemia, UTIs)
    - Obstetric ultrasound report — number of babies, position of placenta
    - Blood group, latest test results
  - Number of previous pregnancies, number of live births, types of birth, multiple births
  - Problems during or after past births — high BP, pre-eclampsia, bleeding after birth (postpartum haemorrhage)
- **Medical history**
  - Medicines, allergies, substance use
  - Bleeding disorders, diabetes, heart disease, kidney disease, high BP

If woman less than 37 weeks pregnant — see *Preterm labour* (*p26*).

Check

- Baby's heart rate. Use doppler if available
  - Straight after a contraction measure for at least 1 minute
  - Repeat every 15 minutes
- Woman's observations
  - Repeat pulse hourly
  - Check temp and BP every 4 hours
  - If any observations abnormal — repeat in 30 minutes
- Contractions
  - Over 10 minutes — how often, how long, how strong
  - Repeat every 30 minutes
- Vaginal fluid loss — colour of liquor, blood loss
- Every 2 hours — ask woman to try to pass urine, do U/A
- Every 2–4 hours — palpate baby (*p99*), check that head (or presenting part) is moving down into pelvis

Normal observations

- Temp — 37.5°C or less
  - If more than 37.5°C — see *Group B Streptococcus* (*p147*)
- Pulse — less than 100 beats/min
- BP — less than 140/90mmHg
  - If high BP — **medical consult**
- U/A — no more than trace of ketones or protein
  - Blood and leucocytes common but need **medical consult**
- Vaginal fluid loss — clear or pink
- Uterus — soft and no pain between contractions
- Contractions — become stronger, last longer, closer together
- Baby's head (or presenting part) — continues to move down into pelvis
- Baby's heart rate — 110–160 beats/min
  - If heart rate not normal — see *Fetal distress in labour* (*p40*)

Do

- **Medical consult** to talk about
  - Stopping labour (*p32*)
  - Sending to hospital
  - Pain relief — consider
    - Natural methods — breathing, relaxation, massage
    - Medicines — nitrous oxide, opioids
  - Oxytocin for delivery of placenta, and if bleeding after birth
- **Put clean pad between woman's legs and monitor loss**
  - Small amount of blood and mucus ('show') normal
  - If more than 50mL vaginal bleeding — see *Bleeding in pregnancy* (*p14*)
  - If green or brown vaginal fluid loss (meconium-stained liquor) — see *Fetal distress in labour* (*p40*)
- **Let woman be in any position that makes her comfortable**
  - Upright positions help labour/birth more than lying on back — F 4.1 for examples
  - If woman wants to lie down — encourage her to use wedge to tilt her to left side
- **If birth to progress** — put in 1 or if possible 2 **IV cannula as soon as you can** (16–18G) (*CPM p84*)
  - Birth is natural and not usually dangerous, but in remote clinic you need to be ready in case something goes wrong

- If baby's heart rate less than 110 beats/min or more than 160 beats/min — baby may be distressed
  - Change woman's position. If lying on back — tilt to left side or sit up
  - **Midwife/obstetrician consult**, see *Fetal distress in labour* (*p40*)

4.1

Second stage of labour

From cervix fully dilated until birth of baby.

Getting ready to birth baby

Do first

- Get help — don't leave woman alone
- Have helper collect equipment (*p156*)
- If you have incubator — turn it on, needs time to heat up

Check

- When pushing — check baby's heart rate during and after every contraction, for at least 1 minute
  - Take woman's pulse to be sure you are not listening to her heartbeat
- Check BP hourly
  - If not normal — repeat in 30 minutes

Do

- **Put in 1 or if possible 2 IV cannula as soon as you can** (16–18G), if not already in place (*CPM p84*)

Birthing baby

- **Have helper read out these instructions as you go along**
- Let woman birth baby in any position she wants, but remind her **upright positions are best** — F 4.1 for examples (*above*)
  - If she chooses to lie down — encourage her to lie on her left side or use wedge to tilt her to the left
    - Lying flat on her back can be dangerous for mother and baby

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Be aware: Woman may pass faeces when straining to push. Normal, but can be embarrassing for her. Gently remove, wiping away from baby.

In normal birth

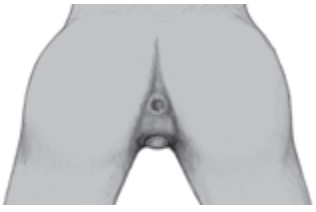
- Baby will
  - Arrive (present) head first, usually with face toward mother's back
    - If bottom or feet first — see *Breech birth* (*p47*)
    - If cord first — see *Cord prolapse* straight away (*p42*)
  - Have heart rate during labour of 110–160 beats/min
  - Be bluish at birth, but become pink with first few breaths
- Vaginal discharge will be clear or pink before birth, may be mucoid and/or bloody. Should **not** be green or brownish

Do

- Put clean sheet under woman
- Use small combines to clean any 'show' or faeces from perineum. Wipe from front to back, then throw in bin
- Open and set up birthing pack
- Put on goggles and sterile gloves
- Check baby's heart rate between contractions
  - Talk calmly. Say things like "You are letting this baby out so well, everything's stretching nicely", "That's great, let the baby out slowly"

Birth of baby's head and shoulders

- Let birth of head happen slowly on its own
  - On all fours — F 4.2, F 4.3, F 4.4
  - On back — F 4.5, F 4.6, F 4.7



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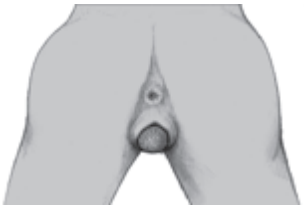

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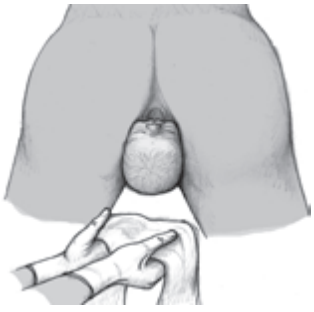

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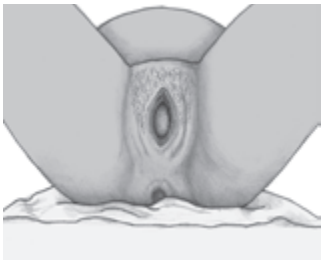

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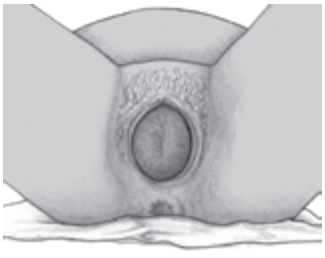

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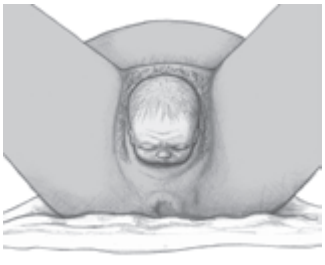
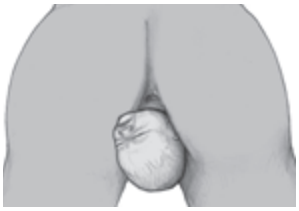


4.7

- Let woman push as she feels like it
- When perineum stretched thin and labia wide apart as head is being born, ask woman to 'pant' or puff through contractions
  - Helps baby's head to be born as slowly as possible
  - May help protect perineum from tearing
- If membranes still intact and bulging — pop with gloved finger
- **Wait for next contraction** — will take about 1 minute. As contraction starts, baby's head usually turns to face woman's inner thigh — F 4.8, F 4.9
- As woman pushes with contraction, shoulders should deliver
- Shoulder under pubic bone (anterior) comes out first



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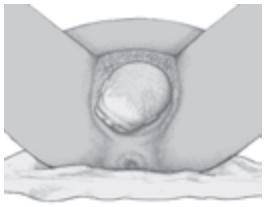

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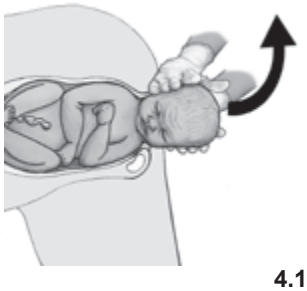

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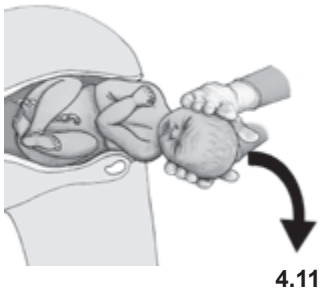

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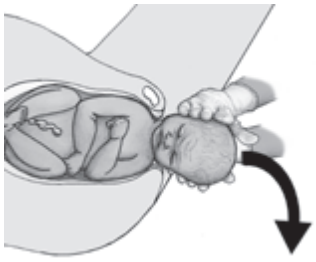

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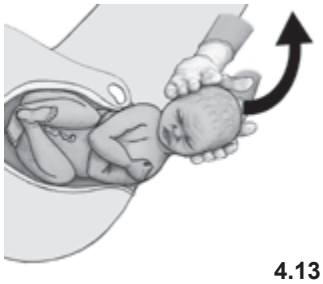

4.13

If shoulder doesn't come out easily

If woman birthing on all fours

- Wait for next contraction. Holding baby's head between palms of your hands, gently lift up toward ceiling to release anterior shoulder — F 4.10
- When shoulder comes out from under pubic bone, ask woman to stop pushing. Gently guide baby downward toward bed/floor — F 4.11
- Other shoulder should now appear — F 4.11

If woman birthing on her back

- Wait for next contraction. Holding baby's head between palms of your hands, gently pull down toward bed to release anterior shoulder — F 4.12
- When shoulder comes out from under pubic bone, ask woman to stop pushing. Gently lift baby upward toward ceiling — F 4.13
- Other shoulder should now appear — F 4.13

If shoulders still stuck — see *Stuck shoulder (shoulder dystocia)* straight away (p44).

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Birth of body

- Support head and shoulders while waiting for rest of body to slip out. May happen straight away, or not until next contraction
- Support baby as it births. It will be slippery, so use gentle but firm grip. Can use warm towel

After the birth

- Make sure there is only 1 baby by feeling woman's uterus. Top of uterus should be no higher than umbilicus
  - If there is another baby — **do not** give oxytocin**.** See *Birth of twins* (*p53*)
- Give **oxytocin** IM in thigh – 10 international units
  - Placenta should separate within a few minutes
  - If oxytocin not used —
    - Separation may take longer
    - Increased risk of bleeding after birth (postpartum haemorrhage)
- Note time of birth

Immediate care of baby

- Put baby skin-to-skin on mother's chest/abdomen
  - If mother doesn't want baby on her — put baby between her legs, away from blood and mess
- Dry baby very well, remove wet towel. Cover baby with warm dry towel, make sure head is covered
- Do 'rapid assessment' of baby's condition
  - Breathing or crying
  - Muscle tone
  - Heart rate

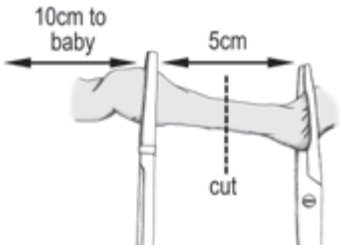
If baby floppy and/or not breathing properly and/or heart rate less than 100 beats/min — see *Newborn resuscitation* straight away (*p70*).

- If baby breathing, good muscle tone, heart rate more than 100 beats/min — leave in skin-to-skin contact with mother if possible
  - *OR* if baby needs extra care — give to helper, see *Newborn needing special care* (*p76*)
  - *OR* if mother tired or unwell — give baby to family member
- Check heart rate, RR, tone, response to stimulation, colour at 1 minute for APGAR score (*p180*)
- Have helper
  - See *Keeping baby warm after birth* (*p182*)
  - Watch baby closely over next few minutes for signs of respiratory distress
  - Check APGAR score again at 5 minutes (*p180*)
    - If less than at 1 minute — see *Newborn resuscitation* straight away (*p70*)
  - Encourage early breastfeeding — helps placenta separate from uterus, uterus to contract after placenta delivered

- See *Care of normal newborn for first 24 hours* for ongoing care (*p184*)

Clamp and cut cord

- Some cultures like long cord left on baby, ask mother or support person
- Wait at least 1 minute, and until cord stops pulsating if possible
- Put 2 metal clamps on cord 5cm apart, at least 10cm from baby's abdomen — F 4.14
- Cut cord **between** 2 clamps with sterile blunt-end scissors
  - **Do not** take clamps off after cutting



4.14

Taking cord blood

Very important if woman RhD negative or blood group not known.

- **If taking before placenta delivered** —
  - Unclamp metal cord clamp on placenta side
  - Let blood flow into clean kidney dish
  - Reclamp
  - Use syringe to draw up 10mL of cord blood, put into labelled EDTA or plain specimen tube
- **If taking after placenta delivered** —
  - Draw 10mL of blood from one placenta blood vessel with needle and syringe, put into labelled EDTA or plain specimen tube

Third stage of labour

From birth of baby until placenta delivered.

If twins — only deliver placenta/s after birth of second baby.

- Watch blood loss closely. Collect clots in kidney dish to measure later
  - Normal loss is under 500mL (2 cups), but can seem like a lot of blood
- Deliver placenta
  - If oxytocin given — see *Delivering placenta with controlled cord traction* (*p166*)
  - If oxytocin not given — see *Delivering placenta by maternal effort* (*p167*)
- Check for tears of birth canal (*p173*)
- STI check
  - Syphilis serology
  - If STI status not known — do pregnancy STI check (*p241*)
- Check that blood and swabs for all other routine tests have been collected

Delivering placenta with controlled cord traction

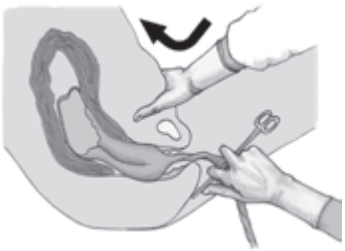
- Only apply cord traction if
  - Counter traction being applied above pubic bone
  - Well contracted uterus
- If traction applied to cord without uterus contracted — increased risk of uterine inversion
- If any suggestion of cord tearing, or uterus relaxes — ease off or stop traction

Do not

- **Do not** do controlled cord traction if no **oxytocin** available or woman refuses it
  - See *Delivering placenta by maternal effort* (*p167*)

Do

- Woman lying or half sitting on bed, with kidney dish between her legs
- Check **oxytocin** given — IM 10 international units into thigh
- Clamp and cut cord if not already done
- **Wait 5–10 minutes for signs that placenta has separated from wall of uterus and descended** — trickle or gush of blood from vagina, lengthening of cord
- Clamp cord close to entrance of the vagina. Put fingers around clamp — F 4.15, or wrap cord around hand
- Put other hand above pubic bone with palm facing away from you. Use arch formed between thumb and first finger to apply counter traction. Push in and up to support uterus and hold it in place — F 4.15
  - If cord goes back in when you push on uterus — placenta hasn't separated properly. Wait a few minutes before trying again



4.15

- Apply **gentle** traction (pull) on cord — down toward bed
  - **Do not** apply cord traction without applying counter traction — F 4.15
  - **Do not** apply cord traction unless uterus well contracted
- **Stop** traction if
  - Any suggestion of cord tearing
  - Uterus relaxes — increased risk of uterine inversion
  - No lengthening of cord
  - Wait a few minutes for placenta to separate then try again
    - If only small amount of bleeding — no hurry
- If you feel movement — keep applying **gentle** traction (pull) to cord until you see placenta at vaginal opening
- Hold placenta with both hands and slowly turn in one direction to peel membranes off wall of uterus

  - Keep turning slowly while maintaining gentle traction until whole placenta and membranes are out
  - Put placenta in kidney dish
- Straight after placenta delivered, check top of uterus (fundus). Usually found at level of umbilicus. Should be firm like a grapefruit
  - If soft — see *Rubbing up a contraction* (p168)
- Check how much bleeding
- Check placenta quickly to see if there are any pieces missing, put aside to check again later (p169)
- Record time placenta delivered

- If placenta not delivered after following these steps — **medical consult**
- If placenta still not delivered 30 minutes after birth — see *Retained placenta* (p178)
- If bleeding — see *Primary postpartum haemorrhage* (p58)

Delivering placenta by maternal effort

If no oxytocin available or woman refuses to have injection.

- Do nothing — let placenta be delivered by mother's effort only
- **Do not** pull on cord at any stage. May cause more bleeding

Do

- Encourage breastfeeding as soon as possible after birth. Releases natural hormone (oxytocin) that causes uterus to contract
- **Watch for signs that placenta has separated from wall of uterus** — trickle or gush of blood from vagina, and lengthening of cord
- Woman may feel a contraction or heaviness in pelvis. Usually has urge to push as placenta separates and drops down into lower part of uterus
  - Encourage woman to push when she gets the urge
  - May be easier in standing or squatting position or sitting on toilet or pan, where gravity will help
- As placenta delivers, collect in kidney dish
- Straight after placenta delivered, check top of uterus (fundus). Usually found at level of umbilicus. Should be firm like a grapefruit
  - If soft — see *Rubbing up a contraction* (p168)
- Check how much woman is bleeding
- Check placenta quickly to see if there are any pieces missing, put aside to check again later (p169)
- Record time placenta delivered

- If placenta not delivered 30 minutes after birth — **medical consult**, treat as retained placenta (p178)
- If bleeding — see *Primary postpartum haemorrhage* (p58)

►

Finally

- See *Care of mother — first 24 hours after the birth* (*p171*)
- Record in file notes
  - Date and time of birth
  - Time of delivery of placenta
  - How much blood woman lost
  - What you did, any problems you had, etc
  - Any medicines, immunisations given to mother and/or baby
  - Whether placenta and membranes complete or incomplete
  - APGAR scores (*p180*) — 1 minute and 5 minutes after birth
- Complete birth registration forms (*p187*)
- Don't forget to celebrate and debrief
- If challenged or distressed by anything you saw or did — talk with
  - Friends, colleagues, qualified counsellor
  - Bush Support Services on 1800 805 391

Rubbing up a contraction

Using hands to stimulate uterine muscles to contract after delivery of placenta.

Only rub up a contraction if woman starts to bleed from relaxed uterus after delivery of placenta. Relaxed uterus will bleed heavily.

- Gently feel top of uterus (fundus) after delivery of placenta and every 15 minutes for first hour. Should be hard and size of a grapefruit
  - Warn woman as top of uterus (fundus) very tender after birth
- Have baby breastfeed if possible. Helps uterus contract
  - Important that baby feeds within first hour after birth. Most babies do this themselves if held close to breast
- Encourage woman to empty bladder — full bladder stops uterus contracting
  - If unable to pass urine and blood loss heavy — put in indwelling urinary catheter (*p281*)

Do

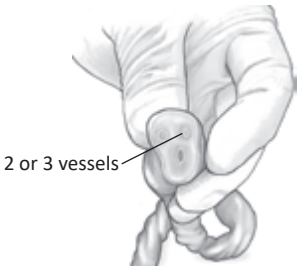
- Using one hand, firmly but gently rub top of uterus (fundus)
- **Keep doing this until uterus becomes firm**. Will feel like a hard grapefruit or tennis ball under your hand
- **If uterus stays relaxed**, feels spongy and bulky —
  - Woman may keep trickling or gushing blood
  - Call for help
  - See *Primary postpartum haemorrhage* (*p58*)

Checking the placenta

- Placenta and membranes need to be checked after the birth to make sure they are complete
- If pieces of placenta or membranes left inside — uterus can't contract completely, can cause significant bleeding (postpartum haemorrhage)
- If woman going to hospital — send placenta with her
  - Make sure it is labelled
  - Double bag then put in pathology transport container with ice brick
- Placenta may have cultural or personal significance so family may want to take it home. If not sending to hospital/pathology — **do not** dispose of it until you have asked them

Check

- If woman less than 37 weeks pregnant or showing signs of infection (eg fever or pus/discharge on membranes) —
  - Take swabs from fetal and maternal sides of membranes, send for MC&S
  - Send placenta to pathology, even if woman not going to hospital
- If abnormalities in the placenta, or complications in the pregnancy — placenta may need to be sent for histopathology. **Medical consult**



4.16

Do

- Look at cut cord.
  - Usually 3 blood vessels — F 4.16
  - If only 2 blood vessels — this can be associated with kidney, heart and other abnormalities. Medical review for baby
- Put placenta on table with fetal (cord) side up. Should be smooth and shiny — F 4.17
- Hold placenta up by cord and check membranes are intact — F 4.18
  - 2 layers of membranes
    - Membrane on fetal side (amnion) is easy to tear
    - Membrane on maternal side (chorion) is a bit tougher and thicker
  - Note any holes, tears, ragged edges, or missing membrane — F 4.19

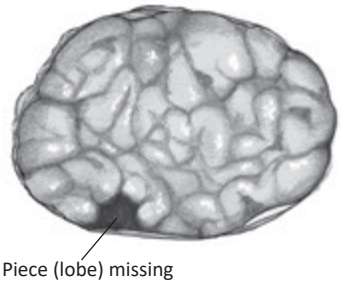
4.17

4.18

4.19

►

- Lay placenta flat on table with maternal side up — check it is complete
  - Note if any pieces of placenta missing — F 4.20



4.20

Care of mother — first 24 hours after birth

- If total blood loss 500mL (2 cups) or more, or if woman shows signs of shock — see *Primary postpartum haemorrhage* (p58)
- For ongoing care after first 24 hours — see *Postnatal care of mother* (p195)

Signs of shock

- Restless, confused, drowsy, unconscious
- Pale, cool, moist skin
- Fast breathing
- Pulse fast (more than 100 beats/min) or difficult to feel
- Low BP (systolic less than 100mmHg)
- Capillary refill longer than 2 seconds

Check

- Uterus contracted, vaginal blood loss, pulse
  - Every 15 minutes for 1 hour, then hourly for 4 hours
  - If uterus contracted — top of uterus (fundus) will be firm, central, at level of umbilicus
  - Slow continuous trickle of blood can result in large loss. If this is happening — see *Primary postpartum haemorrhage* (p58)
- Temp, RR, BP — hourly for 4 hours

Blood tests

- If no antenatal care — **medical consult**
  - Take blood as for first antenatal visit. See *Antenatal checklist* (p86)
- FBC (best done 24 hours after birth), syphilis serology
- If woman RhD negative or blood group unknown — **medical consult**
  - May need to transfer to hospital for cord blood processing and RhD-Ig within 72 hours
  - Take blood for Kleihauer test — within 2 hours of birth and before giving RhD-Ig

Do in first hour

- If mother comfortable — put baby on her chest, encourage skin-to-skin contact and breastfeeding (p199). Offer help if needed
- Offer woman something to eat and drink, shower, change of clothes
- Encourage woman to pass urine
  - Full bladder can stop uterus contracting and cause heavy bleeding
- Make sure placenta checked and is complete (p169)

- **Medical consult** about birth. Make sure you know mother's medical and obstetric history. Talk about
  - Labour, birth, condition of mother and baby
  - Problems with woman, baby, placenta
  - Need to send to hospital
    - If sending — send with woman, placenta, birth documents, bloods, birth registration and family assistance forms

Do

- Fill in forms for birth registration (*p187*), family assistance, perinatal statistics
- Encourage woman to move about to help prevent blood clots in her legs
- If woman staying in community —
  - Mother and baby should rest in clinic for at least 4 hours, or as long as needed after birth
  - Make sure woman has passed urine before leaving clinic
  - Make sure woman has someone staying with her to help look after baby
- **Talk with woman about**
  - Emptying bladder regularly to lessen risk of heavy bleeding
  - Perineal hygiene and healing — changing pads often, shower at least once and preferably several times a day
  - If perineal tear — use ice pack inside pad to help decrease pain and swelling in first 24 hours. On for 20 minutes, off for 20 minutes
  - Normal blood loss, how to feel top of her uterus, how to massage it to make it hard if she has heavy bleeding
    - If heavy bleeding — someone to notify clinic staff as soon as possible
  - 'After birth' pains — crampy abdominal pains, often worse when breastfeeding. Use as needed for pain relief
    - **Paracetamol** up to 4 times a day (qid) – adult 1g (*CARPA STM p380*)
    - *OR* **paracetamol-codeine** oral up to 4 times a day (qid) – adult 500+30mg (*CARPA STM p381*)
  - Symptoms of thromboembolism (clots) — DVT or PE (*p138*)
  - Breastfeeding (*p199*)
  - Arrangements for follow-up/ongoing care, including contraception (*p335*)

Tears of the birth canal

Common after birth. Can be tear of perineum, vagina, vulva, or cervix. Always check carefully for tears, especially if heavy blood loss.

- Tears more likely to happen if
  - Quick birth
  - Large baby
- If bright blood loss, placenta delivered, uterus firm and well contracted —
  - Look at vaginal area for tear
  - If heavy bleeding but can't see bleeding tear — suspect cervical tear

If heavy bleeding at any time — see *Rubbing up a contraction* (p168), *Primary postpartum haemorrhage* (p58).

Types of tears

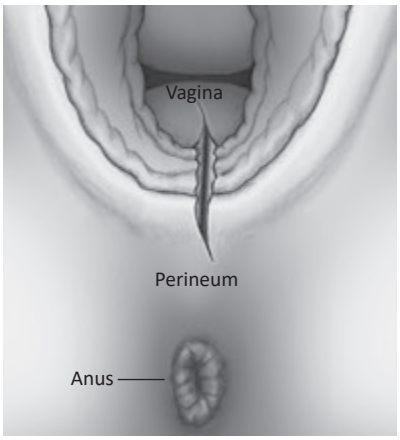
Table 4.1: Tears of the birth canal

Classification	Type of damage	Repair needed
Graze or 1st degree tear — F 4.21	Tear involves skin and subcutaneous tissue of perineum and vaginal epithelium only	Usually doesn't need repair. Apply pressure to stop bleeding
2nd degree tear — F 4.22	Tear extends into fascia and muscle of perineum but anal sphincter remains intact	Should be repaired. Can be done in community, if trained
3rd degree tear — F 4.23	Tear extends into anal sphincter	Needs to be repaired in hospital by specialist
4th degree tear — F 4.24	Tear extends beyond anal sphincter to involve rectal mucosa	Needs to be repaired in hospital by specialist
Episiotomy	Cut made through perineum and posterior vaginal wall. Can extend into complex 2nd degree tear or even a 3rd or 4th degree tear	Simple episiotomy can be repaired in community, if trained
Anterior genital tear	Peri-urethral, labial or clitoral tears	May need repair if bleeding or large. **Specialist consult**
Cervical tear	Tear involving the cervix	If bleeding, needs repair in hospital by specialist

Check

- Woman often very sore, embarrassed about this examination. Be gentle, careful, sensitive
- Reassure woman, offer **nitrous oxide** if available for pain relief and to help her relax
- Position woman lying down, bottom at edge of bed, knees bent up, feet supported
- Use good light, positioned properly

- Put on sterile gloves
- Mop up blood in vagina entrance with sterile gauze swabs
- Check perineum, vulva, urethra, labia, clitoris
  - Separate labia and look at vaginal opening
  - Wrap sterile gauze around fingers, use to **gently** separate walls of vagina
  - If tear/bleeding high up in vagina or hard to see — may need sterile speculum exam
- Check for 3rd or 4th degree tear — put gloved index finger into rectum, feel for anal sphincter between thumb on outside and finger on inside. Should feel circular ridge of muscle around anus
  - Check for small fibres that may indicate partial 3rd degree tear
  - Change gloves after rectal exam
- Follow each tear to end to see where it stops



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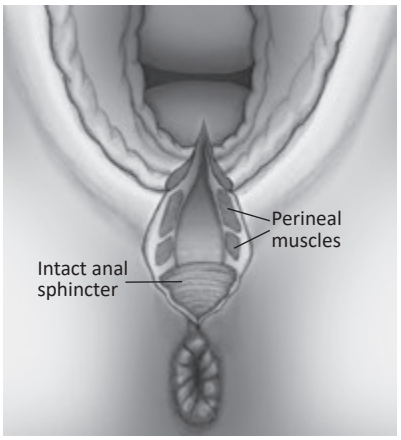

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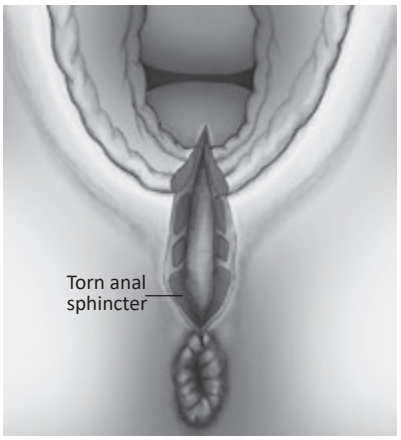

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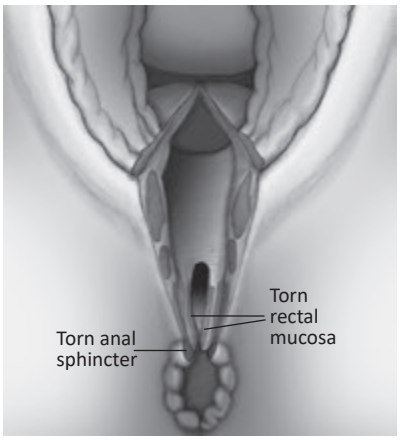


4.24

Do not

- **Do not** suture tear or episiotomy unless trained

Do

Repairing tear properly will control bleeding. Start as soon as possible.

- **Superficial graze** — common, don't need to be sutured. Sting when passing urine. Advise to drink plenty of water and use urinary alkaliniser
- **1st degree tear not bleeding** — treat as for superficial graze
- **1st degree tear bleeding** — apply pressure with sterile pad for 5–10 minutes or until bleeding stops. Add ice pack into combine pad
- **2nd degree tear** — suture unless woman refuses. See *Repairing tear or episiotomy* (*p176*)
  - If not confident about doing repair —
    - Control bleeding
    - **Medical consult**, send to hospital
- **3rd or 4th degree tear** — **medical consult**, send to hospital for repair by specialist
- If woman being sent to hospital —
  - Ice pack to perineum for pain relief, ease swelling and bleeding (20 minutes on, 20 minutes off). **Do not** put ice pack directly on skin
  - If tear bleeding — apply pressure with sterile pad for 5–10 minutes
    - If bleeding continues — ask helper to apply pressure
    - Recheck for bleeding after another 10 minutes pressure
    - If still bleeding — **medical consult**. May suggest putting in large stitches at bleeding point, clamping bleeding point, packing vagina (record what and how much/many used)
    - Keep applying pressure for as long as needed. Weigh pads to work out blood loss (1g increase = 1mL loss)
  - If bleeding continues — put in IV cannula (*CPM p84*), largest possible
    - Start **normal saline** 1L at 125mL/hour
  - **Medical consult** about whether antibiotics needed
  - If woman unable to pass urine — put in indwelling urinary catheter (*p281*)
  - Reassure woman and family. Encourage her to hold and breastfeed baby unless feeling very unwell
  - Do routine observations every 30 minutes until evacuation

Remember: Keep checking uterus is firmly contracted.

Repairing tear or episiotomy

Attention

Only do if skilled, but repair should be done as soon as possible to reduce risk of blood loss and infection.

- Put on sterile gloves and gently examine vaginal/perineal tear
- If anal sphincter or rectum torn — **do not** attempt repair
- If you can't do repair —
  - Treat tear/episiotomy as open wound waiting to be sutured
  - **Most important to stop/control bleeding**
    - Apply pressure with pad
    - Ask woman to keep legs together to hold pad in place
    - Check blood loss often and reinforce pads as needed

- If LA given to do episiotomy — make sure area is still anaesthetised before doing repair. Give more if needed — lidocaine (lignocaine) 3mg/kg up to 200mg (20mL) in total
- Repairing tear or episiotomy is an aseptic technique

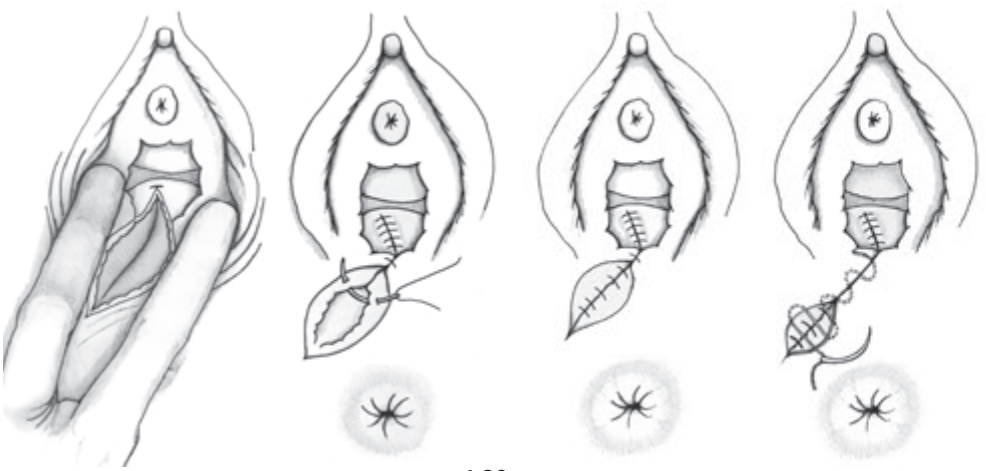
What you need

- Sterile dressing pack
- Sterile gloves x 2 — double glove
- Protective apron and glasses
- Chlorhexidine aqueous solution
- 10–20mL lidocaine (lignocaine) 1%
- Syringe and needles for infiltration
- Sterile combine (small)
- Sterile gauze swabs (preferably radiopaque) x 3 packets
- Sterile suture pack with needle holders, scissors and toothed forceps
- Sterile artery forceps (fine)
- 2.0 or 3.0 absorbable synthetic suture (eg *Vicryl*, *Vicryl Rapide*, *Dexon*)
- 30–40mm half-circle or tapered needle
- Water-based lubricant for rectal exam
- Sterile towels/drape
- Ice pack
- Combine or pad

What you do

- Position woman so she is comfortable and you can see tear clearly
  - Good lighting essential
- Lay out dressing pack and equipment
- Put on apron and glasses
- Wash hands, put on sterile gloves
- Count gauze squares, packs, needles — record count in file notes

- Clean site with **chlorhexidine solution**
- Drape site with sterile towels/drape
- Inject **lidocaine (lignocaine) 1%** into whole site if needed — 10mL usually enough, but can use up to 20mL over 1 hour
  - Wait a few minutes, check area anaesthetised properly
- Check wound again. **If tear too big for you to repair — stop now**
  - Control bleeding (*p176*)
  - **Medical consult**, send to hospital
- May need to insert vaginal pack/combine to enable good visibility while suturing. Record in file notes, **do not** forget to remove it
- Start by repairing vagina first. Find apex of tear and put first suture 3–5mm behind it — F 4.25
- **Use these sutures — do not** pull stitches too tight as area can swell and cause a lot of pain
  - In vagina — continuous non-locking stitch — F 4.26
  - In muscle layer — interrupted or continuous non-locking stitch — F 4.27
  - In skin of perineum — continuous subcuticular stitch — F 4.28



4.25 4.26 4.27 4.28

- **If vaginal pack/combine used while suturing — take out**
- Inspect repaired vagina to make sure bleeding has stopped
- Remove top pair of gloves, apply water-based lubricant
- Do digital rectal exam to check that
  - Sutures haven't gone through rectal mucosa
  - No openings between vagina and rectum
  - Sphincter feels intact
- Count gauze squares, packs, needles again, make sure count is correct, record number in file notes
- Use ice pack inside pad to help decrease pain and swelling
- Give **pain relief** if needed (*CARPA STM p377*)

Retained placenta

In remote setting, treat as retained placenta if placenta still inside uterus (not delivered) after 30 minutes, despite controlled cord traction or maternal effort.

Keep checking for vaginal bleeding or rising fundus (top of uterus).

If heavy bleeding at any time (500mL or more) — *see Primary postpartum haemorrhage* (p58).

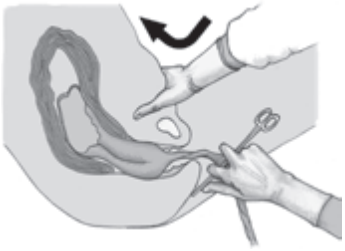
If placenta retained

Check

- Pulse, RR, BP, colour, vaginal blood loss
- Was oxcytocin given after birth of baby
- Has woman passed urine, does bladder feel full
  - If unable to pass urine — may need indwelling urinary catheter (p281)

Do

- Put baby to mother's breast, encourage baby to start sucking
- If woman had oxytocin — try controlled cord traction again (p166)
  - If cord has lengthened — may need to move clamp closer to vulva
- If woman has not had **oxytocin** — give IM single dose into thigh – 10 international units
  - **Wait 5–10 minutes for signs that placenta has separated from wall of uterus and descended** — trickle or gush of blood from vagina, lengthening of cord
  - If signs of separation — try controlled cord traction (p166)
  - If no signs of separation — try controlled cord traction (p166) *AND* take extra care to guard uterus by applying counter traction — F 4.29
    - Put second hand above pubic bone with palm facing away from you. Use arch formed between thumb and first finger to apply counter traction. Push in and up to support uterus and hold it in place — F 4.29



4.29

If placenta delivers

- See *Checking the placenta* (p169), *Rubbing up a contraction* (p168)
- Measure/estimate blood loss if possible
  - If more than 1L loss, or ongoing bleeding — **medical consult**, see *Primary postpartum haemorrhage* (p58)

If placenta still not delivered

Reassure woman. Explain what you are going to do and why.

Check

- Temp, pulse, RR, BP, colour
- Measure/estimate blood loss if possible
- POC test for Hb

Do

- **Medical consult** — may need to go to hospital
- Put in IV cannula (*CPM p84*), largest possible, if not already in
  - Start **normal saline** 1L at 125mL/hr
- Put in indwelling urinary catheter (*p281*), if not already in place
- Explain to woman that you need to do a digital vaginal exam, and it can be painful
- Give **pain relief**
  - **Nitrous oxide** if available
  - *AND/OR* **morphine** IV – adult 1–2mg
    - Naloxone must be available
- If skilled and woman consents — do digital vaginal exam
  - Use sterile gloves and water-based lubricant or obstetric cream
  - With your fingers, follow cord up into vagina
  - If woman uncomfortable — stop examination, give more pain relief
  - If you feel placenta in vagina or cervix — grasp and carefully pull out
  - If you feel cord going through cervix — stop
    - Placenta retained. **Do not** try controlled cord traction again
- **Medical consult**, send to hospital
- If ongoing heavy bleeding or delay in evacuation — start **oxytocin** infusion (40 international units in 500mL **normal saline**) at 125mL/hr
  - If no infusion pump — monitor carefully
- Continue observations, especially blood loss, until sent to hospital
- **Do not** let woman eat or drink anything — may need operation
- **If placenta delivers** — see *Checking the placenta* (*p169*), *Rubbing up a contraction* (*p168*)

APGAR score

Used to help assess baby immediately after birth. Could have good APGAR scores at first and deteriorate afterwards.

- **If baby non-responsive** — start resuscitation straight away (*p70*). **Do not** wait for first APGAR score

To check baby's heart rate

- Listen with stethoscope over lower left chest
- *OR* put 2 fingers over lower left chest to feel heartbeat
- *OR* feel at base of umbilical cord close to abdomen

Do

- Score each of the 5 signs 0 to 2 — to give total score out of 10. See Table 4.2
- Check APGAR scores at **1 minute** and **5 minutes** after birth
- **Record in file notes**
  - Scores — at 1 minute and 5 minutes
  - How long it took for baby to breathe normally
  - How long it took for baby to 'pink up'
  - How long before heart rate 100 beats/min or more

Table 4.2: APGAR score

APGAR sign	Score 0	Score 1	Score 2
Appearance (central colour)	Grey, blue, pale	Body pink but hands and feet pale or blue	Good colour, pink all over
Pulse (heart rate)	Absent	Less than 100 beats/min	100 beats/min or more
Grimace (reflexes, response to stimulation)	No response	Pulls a face, grimaces	Coughs, sneezes, pulls away
Activity (muscle tone)	Arms/legs floppy	Some flexion, elbows/knees a little bent	Flexed, all limbs moving well
Respirations (breathing)	Absent	Slow, weak, irregular	Good, strong cry

Interpreting APGAR score

- **8–10** — Normal score, care for baby as usual (*p184*)
- **4–7** — Low score, baby needs some help
  - Ask helper to find Newborn resuscitation (*p70*) or Newborn needing special care (*p76*)
  - While they are finding this
    - If RR 40 breaths/min or less and/or heart rate less than 100 beats/min — start assisted ventilation with neonatal bag-valve-mask using room air at 40–60 breaths/min
    - If RR more than 40 breaths/min — give **oxygen** through cupped hand over mouth and nose
- **0–3** — Very low score, baby needs help straight away
  - Ask helper to find Newborn resuscitation (*p70*)
  - While they are finding this, start assisted ventilation with neonatal bag-and-mask using room air at 40–60 breaths/min
  - If heart rate less than 60 beats/min after 30 seconds of ventilation — start external chest compressions (CPR at ratio 3 compressions to 1 breath), attach bag and mask to **oxygen** 10L/min

Keeping baby warm after birth

- Normal newborn temperature is 36.5–37.5°C under arm
- Babies lose heat very quickly, can quickly get cold after birth
- Cold will stress baby, cause breathing problems (respiratory distress) or low BGL (hypoglycaemia), make resuscitation more difficult

Risk factors for low temperatures

- Low birth weight
- Preterm
- Sick
- Resuscitated straight after birth
- Breathing problems
- Mother with diabetes
- Born before arriving at clinic and has become cold
- See *Newborn needing special care* if any risk factors present (*p76*)

Attention

- **Best way to warm baby is against mother's skin**
  - **Keep baby's head covered** — where most heat is lost
  - Cover back of baby with bunny rug, sheet, clothing
- **Do not**
  - **Do not** use hot water bottle
  - **Do not** overheat baby
  - **Do not** bath baby until temperature normal — most don't need a bath

What you need

- **Warm room** for baby to arrive into
  - Turn off air conditioner and put on heating just before birth
  - If can't turn off air conditioner and warm outside — open doors and windows
- Lots of clean, pre-warmed towels, sheets, blankets. Warm by putting in sun, wrapping around hot water bottle or put near heater
- Bubble wrap, space blanket, cling wrap
- If less than 28 weeks gestation — thick plastic bag

What you do

- **As soon as baby born**, put onto mother's chest, skin-to-skin, and dry thoroughly with warm dry towel
- Remove wet towel and put new, warm one over baby's head and body, as baby lies on mother
- If mother not able to hold baby, and baby is pink and breathing well —
  - Ask helper/relative to put naked baby under their clothes, against skin on their chest (chest-to-chest), add layers of space blankets/ bubble wrap/ towels around baby's body, cover head with hat or bunny rug

  - *OR* use clean, warm towel to wrap baby as snugly as possible, making sure head is fully covered to middle of brow — F 4.30
    - Wrap body (not head) again in bubble wrap/cling wrap/ space blanket
    - Give to helper to hold and watch over

4.30

- After placenta delivered and mother comfortable, take baby's temp under arm (axillary). Make sure skin dry, thermometer snugly between folds of skin not clothing
- Wait until baby warm and settled with no signs of distress before weighing naked. Have all equipment ready before unwrapping baby
- Keep skin-to-skin with mother for as long as possible, **encourage first breastfeed within first hour** — F 4.31. Baby will warm up faster after a good feed
  - If unable to breastfeed — help mother express some colostrum (*p200*) and syringe/drop into baby's mouth

4.31

Babies less than 28 weeks gestation

- **Do not** dry baby
- Place immediately in thick plastic bag or wrap
  - Appropriate size, food grade, heat resistant
- Head out, body completely covered
- Cover head with small hat
- Aim for normal temperature — 36.5–37.5°C under arm. Avoid overheating

Care of normal newborn for first 24 hours

Immediate care of babies who **didn't need active resuscitation** at birth, and ongoing care of babies who remain well with no risk factors (*p76*).

Immediate care after birth

If baby looks unwell — call for help, see *Newborn resuscitation flowchart* (*p68*), **medical consult** straight away.

- Leave baby skin-to-skin on mother's chest/abdomen for as long as possible — encourage early breastfeeding (*p199*)
- If not skin-to-skin — wrap baby warmly. See *Keeping baby warm after birth* (*p182*)

Check

- Temp under arm, heart rate, RR, O_2 sats, capillary refill, colour — work out REWS (*p8*)
  - Repeat every 15 minutes for first hour
- Umbilicus for bleeding, clamp on properly
- **Do not** rush to weigh baby. Wait until after first breastfeed
- If any observations not normal or you are concerned — **medical consult**

Normal observations for newborn baby

- Temp — 36.5–37.5°C under arm
- Heart rate — 110–160 beats/min
- RR — 30–60 breaths/min
  - No distress — no grunting, nasal flaring, chest in-drawing (sucking in of soft tissues around rib cage or neck)
- O_2 sats — can take 10 minutes to reach 90% or more in room air in after-birth period, then reaches 95% or more as normal rate
- Colour — tongue and lips pink. Not pale or blue
- Movement — active when awake, moving all limbs with good tone. Not floppy or stiff
- BGL — more than 2.6mmol/L
- Feeding — gets started with breastfeeding. Not vomiting

Some babies at higher risk of becoming unwell in first 24 hours and needing additional care, even if well at birth. If baby has any risk factors (*p185*) — see *Newborn needing special care* (*p76*).

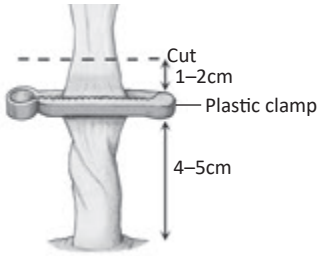
Do not

- **Do not** rush to weigh baby. Wait until after first breastfeed

Risk factors		
Mother's history	**Labour and birth**	**Newborn period**
• Little or no antenatal care — less than 4 visits • Diabetes • Alcohol and/or other substance use • GBS positive • Current STI • High BP	• Mother needing help with birth • Baby needing **any** resuscitation at birth • Maternal fever in labour • Meconium-stained liquor (green or brown amniotic fluid)	• Weight less than 2.5kg or more than 4.5kg • Preterm — less than 37 weeks gestation • Congenital abnormality • Abnormal observations — respiratory distress, low BGL, temperature instability • Neurological — seizure, poor tone

Do

- Trim cord if necessary
  - Clamp remaining cord with plastic cord clamp 4–5cm from abdomen — F 4.32, make sure it is snapped shut
  - Remove metal cord clamp put on after birth
  - Trim cord 1–2cm above plastic clamp — F 4.32, or at length requested by mother or support person
- If mother positive for hepatitis B (HbsAg), hepatitis C or HIV and baby more than 32 weeks gestation — before giving injections, wash injection site with warm water, dry thoroughly (keep warm)
- Give **vitamin K** IM
  - 1mg (0.1mL) for baby weighing 1.5kg or more
  - 0.5mg (0.05mL) for baby weighing less than 1.5kg



4.32

Ongoing care of normal newborn

- If baby well — observations every hour for 4 hours
- If GBS status of mother not known (no screening at 36 weeks) — continue routine observations, including temp, every 6 hours for 24 hours
- If observations not normal (eg increased RR or heart rate, rash/redness to head, face or eyes) — **medical consult**
- If baby jittery (jumpy) and unsettled, or not feeding after birth — consider having mother express some colostrum (*p200*) and syringe/drop into baby's mouth, check BGL, **medical consult**
  - If BGL less than 2.6mmol/L — treat straight away (*p78*)

After first hour or first breastfeed

- Head-to-toe check of baby — including abnormalities, birth marks, bruising
  - If sending to hospital — can be done there
  - If not sending to hospital — ask doctor or midwife how this is done
- Measure length, head circumference
- Start file notes and growth chart
- Check mother's hepatitis B results
  - If mother HBsAg positive or status not known — give at different sites
    - **Hepatitis B immunoglobulin** IM – newborn 100 units
    - *AND* **hepatitis B immunisation** IM – newborn 0.5mL
  - Give hepatitis B immunoglobulin within 12 hours of birth
  - If clinic doesn't have hepatitis B immunoglobulin — **medical consult**
  - If mother HBsAg negative — give **hepatitis B immunisation** IM – newborn 0.5mL
- Check mother's syphilis serology
  - If active syphilis at any time during pregnancy or if syphilis serology not known — **medical consult** about treating baby
- If mother had recent infection, especially STI — **medical consult**
- Continue to encourage breastfeeding
  - Only contraindications — lesions on breasts, mother's medicines
- Fill out birth registration forms (*p187*)

If mother and baby stay in community

- Encourage mother to breastfeed baby on demand (*p199*)
- Check baby has passed meconium and urine
  - Cotton wool ball in disposable nappy can make it easier to check for urine
  - If urine or meconium not passed within 24 hours — **medical consult**
- Talk with CDC/PHU about BCG vaccination
- Talk with mother about care of umbilicus
  - Clean with water and dry with towel or cloth
  - Keep nappy away from cord until it separates
  - If signs of infection or any problems — come to clinic straight away
- After 24 hours, see *Postnatal care of baby* (*p228*)
- Review baby daily for first week

Birth registration forms

All births must be registered with state/territory register. Attending health professional must complete forms for births out bush, even if woman and baby sent to hospital, or health professional not present at actual birth.

To save time finding forms, ask local maternity service to send a few made-up bundles. Keep with other birthing equipment.

Follow instructions on forms, send to address given on each form.

- Birth Registration form/Statement — lodge within 60 days
- Perinatal statistics form (also called Midwives/Perinatal Data Form)
- Help parents if needed
  - Newborn Medicare enrolment form
  - Relevant Centrelink forms
- If pack not available — call local maternity hospital regarding information needed and where to source forms

Health service requirements

- Set up new patient file notes
- Start vaccination record
- Add to population register and recall lists
- Update community 'birth' book if applicable

Stillbirth

- Stillbirth — any baby 20 or more weeks gestation or weight 400g or more who doesn't show any sign of life at birth
- Miscarriage (*p17*) — pregnancy loss at less than 20 weeks gestation or weight less than 400g

Can be distressing, traumatic event for woman and family. Different cultures and language groups react in different ways. Women and family members may understand stillbirth differently, react and respond in different ways. Some Aboriginal women say that, in the old days, a baby who died soon after birth 'with the eyes still closed' was not a source of grief.

Listen carefully, be guided by ATSIHPs, woman's relatives, woman herself. Some younger women may have different cultural values to older family members.

Considerations for health staff, woman and family

- Be guided by ATSIHPs, family members for language to use. 'Passed away', 'lost', 'finished' may be better understood, less offensive than 'died'
- Woman and family members may or may not want to see baby. Always ask. If they want to see or hold baby — wrap in clean baby rug with face uncovered
- Family may name baby. Check if you should refer to baby by name
- Allow family to spend the time they need with the baby
- If baby goes to hospital with woman — mementos of baby can be taken for the family if they would like them (eg lock of hair, photos, hand/footprints)
- Woman may want baby buried in home community. Relatives may want formal burial, even if baby 'passed away' early in pregnancy. Can have important cultural and spiritual significance
- Father of baby may or may not be directly involved
- Family may believe death caused by unacceptable behaviour of another person, or series of events. May direct anger or frustration at clinic staff
- You or community members may wish to close clinic for a period of time

Do

- **Medical consult** about
  - Stillbirth, for help in following this protocol
  - Medical complications that may need to be managed in hospital, antibiotics if signs of infection, other concerns

Care for mother

- Look after woman as the priority
- See *Care of mother — first 24 hours after the birth* (*p171*)
- Strongly encourage woman to go to hospital with baby for support and care
  - Mother may stay in community, let baby be transferred to hospital
  - Rare that mother and baby stay in community
- Explain that careful management and follow-up now may improve outcome, help prevent problems in future pregnancies. Autopsy (operation to find cause of death) for baby recommended for same reasons

- **If mother agrees to go to hospital** —
  - **Medical consult**, send to hospital straight away
  - Baby must be identified with name band on each leg
  - Talk with retrieval team about options for transporting baby with mother
  - Send placenta. Very important for autopsy process
- **If mother doesn't go to hospital** —
  - **Medical/obstetrician consult**
  - Offer tests in Table 4.3 and as advised
    - Explain that tests aim to find cause of stillbirth
- See *Postnatal care of mother* (*p195*)
- Talk later about suppressing lactation (*p203*). Can use simple measures or take medicine. Milk usually produced within a few days even if baby stillborn

Management of baby (deceased)

- If woman doesn't go to hospital — talk with her about autopsy for baby
  - Autopsy strongly recommended, talk with family about doing one
  - Explain it may help find out why this baby died, help future pregnancies

If mother consents to autopsy for baby —

- Get consent form from Maternity Unit. Best if mother signs consent form. If situation complicated (eg by family disagreement) — **medical consult**
- Write letter/generate health summary which includes
  - Details of any previous pregnancies
  - Details about this pregnancy
  - Details about labour and birth, including birth weight, time of birth
  - Antibiotics or other medicines taken in pregnancy
  - Substance use — smoking, alcohol, petrol sniffing
- Ask for medical report and autopsy report to be sent to clinic

Transporting autopsy specimens

- Baby — put name bands on both legs, wrap baby then put in plastic bag
- Placenta — put in separate sealed plastic bag
- **Do not** use formalin or saline
- Transport in esky with 4 large ice bricks
  - Seal with sticky tape right around edge of lid
  - If being transported on aircraft (RFDS or other) — put sealed esky inside additional plastic bag, seal bag completely so no leakage
- Include baby's cord blood, consent form for autopsy, letter, pathology form
- Make sure all checks and documentation complete

If mother doesn't consent to autopsy for baby —

- Check placenta (*p169*) — completeness, texture, cord vessels, knot in cord
- Take cord blood — may be difficult. Collect blood from cord before it is clamped *OR* perform venipuncture on 1 vessel of cord
- Collect mementos (eg lock of hair) if asked to by family

►

- Carry out basic examination of baby, document findings clearly
  - Check for any obvious abnormalities
  - Record appearance, take photos if parents consent. May help paediatrician diagnose congenital abnormalities
  - Document weight, length, head circumference
  - Assess gestational age if possible
- **Medical consult** or talk with clinical coordinator about how to manage baby. Follow health service guidelines

Table 4.3: Pathology specimens after stillbirth

Sample from	Blood	Swab	Urine
Mother	• Serology ◦ Syphilis ◦ Toxoplasmosis ◦ Rubella ◦ Herpes ◦ Cytomegalovirus ◦ Parvovirus B19 ◦ Hepatitis B • Blood clotting problems (thrombophilia) ◦ Protein C ◦ Protein S ◦ Antithrombin III ◦ Homocysteine ◦ Activated protein C resistance ◦ Anticardiolipin antibodies ◦ Lupus anticoagulant ◦ Kleihauer test (within 24 hours) • FBC • Blood group • Antibody screen • HbA1c • BGL • Blood cultures (if fever or signs of infection)	• If speculum exam – HVS/ endocervical *OR* if no speculum exam – LVS ◦ MC&S ◦ NAAT for gonorrhoea, chlamydia, trichomonas	• MC&S • If no swabs – gonorrhoea, chlamydia, trichomonas NAAT
Baby	• Cord blood ◦ Chromosomes		
Placenta	• Cord blood – from placental or baby cord	• Baby's side of placenta (cord side) ◦ MC&S	

Documentation

- Labour/birth details
- Birth registration form (*p187*)
- Medical Certificate of Cause of Perinatal Death completed by doctor
- Perinatal statistics form, send to Perinatal Statistics Unit
- Women entitled to Stillborn Baby Payments — contact Centrelink

Follow-up

- See *Postnatal care of mother* (*p195*) and *Mother's 6–8 week postnatal check* (*p219*). Look for signs of perinatal depression (*p221*)
- **Medical consult** about autopsy report and other results
  - Offer tests in Table 4.4 and others as advised

Table 4.4: Follow-up pathology after stillbirth

Reason for stillbirth	Tests
Reason unexplained despite investigations	Blood clotting studies at 8–12 weeks postpartum with **medical/obstetric consult**
Positive tests for thrombophilia and/or history of • Fetal growth restriction • Pre-eclampsia • Placental vasculopathy or thrombosis • Mother or family history of thrombosis • Unexplained fetal death	Blood clotting studies at 8–12 weeks postpartum with **medical/obstetric consult**
No investigation done	• Blood clotting studies • Investigations as per Table 4.3

- If results affect future pregnancies — arrange obstetrician review
  - Talk with woman about risk, important to be seen early for antenatal care
  - Offer pre-pregnancy counselling (*p84*)
- Give woman the opportunity to talk about what happened, offer referral to perinatal mental health service
- Talk with woman about available support and counselling services — such as
  - Stillbirth and Neonatal Death Support (SANDS)
  - Pregnancy, Birth and Baby
- If more support needed — refer woman to social worker

Stillbirth or neonatal death can be distressing and traumatic for staff involved. Feelings can persist. Important to debrief after these events and support each other in this process.

- CRANAplus Bush Support Service 1800 805 391