Queensland Clinical Guidelines

Translating evidence into best clinical practice

Maternity and Neonatal **Clinical Guideline**

Perineal care

Queensland Government

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Cultural acknowledgement

We acknowledge the Traditional Custodians of the land on which we work and pay our respect to the Aboriginal and Torres Strait Islander Elders past, present and emerging.

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- Providing care within the context of locally available resources, expertise, and scope of practice
- Supporting consumer rights and informed decision making in partnership with healthcare practitioners, including the right to decline intervention or ongoing management
- Advising consumers of their choices in an environment that is culturally appropriate and which enables comfortable and confidential discussion. This includes the use of interpreter services where necessary
- Ensuring informed consent is obtained prior to delivering care
- Meeting all legislative requirements and professional standards
- Applying standard precautions, and additional precautions as necessary, when delivering care
- Documenting all care in accordance with mandatory and local requirements

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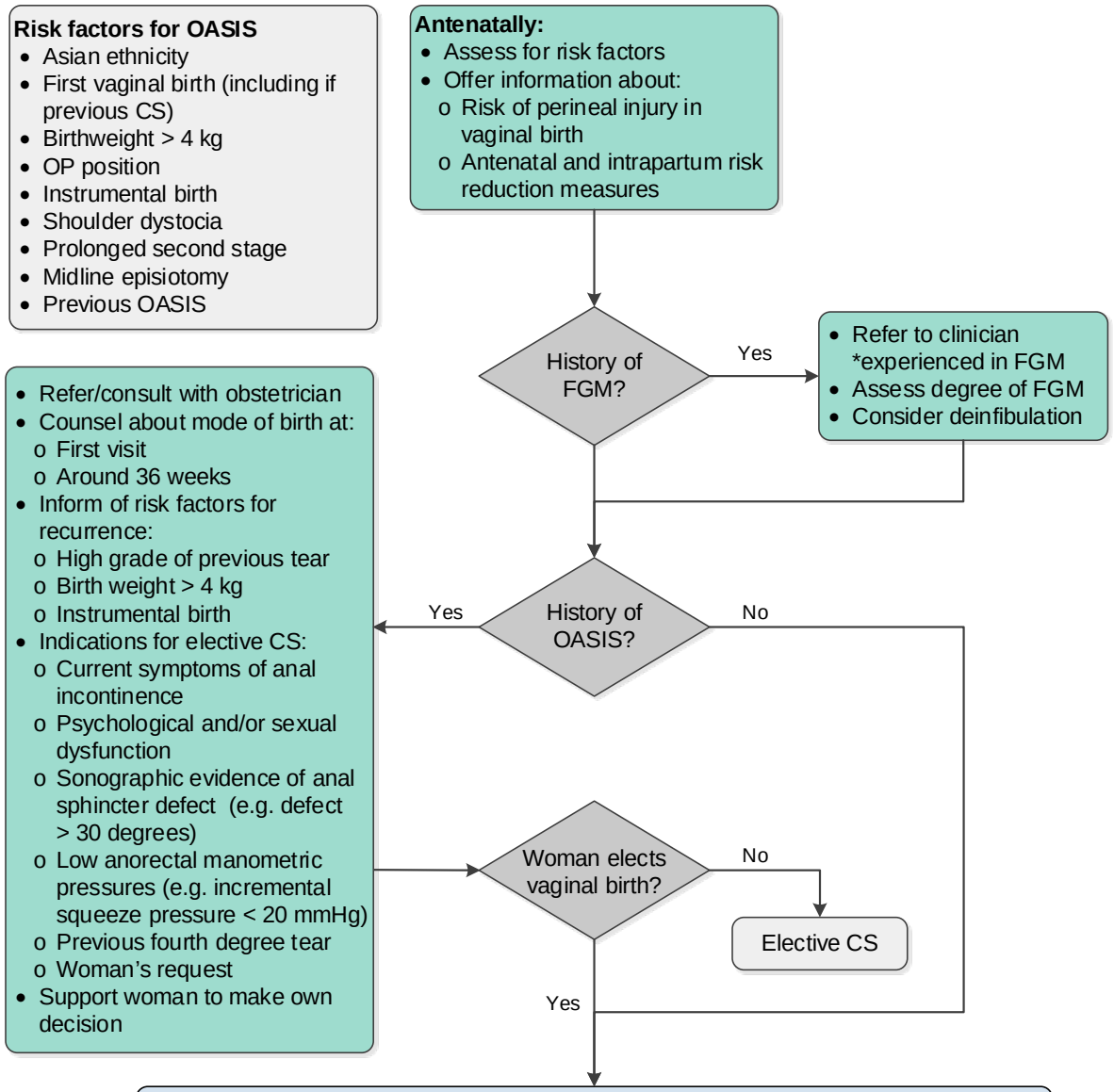
Flow Chart: Antenatal and intrapartum perineal care



*Experienced clinician: The clinician best able to provide the required clinical care in the context of the clinical circumstances and local and HHS resources and structure. May include clinicians in external facilities.

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CS: caesarean section, **FGM:** female genital mutilation, **HHS**: Hospital and Health Service, **kg:** kilogram, **mmHg:** millimetre of mercury, **OASIS:** obstetric anal sphincter injuries, **OP**: occipto-posterior position, **>:** greater than, **<:** less than

Flow Chart: Perineal assessment and repair

General principles for perineal assessment and repair

- Ensure privacy
- Seek consent prior to assessment and repair
- Communicate clearly and sensitively
- Position woman to optimise comfort and clear view of perineum ensuring adequate lighting
- Perform assessment and repair as soon as practicable while minimising interference with mother-baby bonding
- Ensure adequate analgesia throughout assessment and repair
- Ensure clinician competent to perform assessment and repair–refer to more experienced clinician as required

Perform systematic assessment

- Visual assessment
  - o Periurethral area, labia, proximal vaginal walls
  - o Extent of tear
  - o Presence or absence of anterior anal puckering
- Vaginal examination
  - o Cervix, vaginal vault, side walls, floor and posterior perineum
  - o Note extent of tearing
  - o Identify apex
- Rectal examination
  - o Insert index finger into rectum and ask woman to squeeze while feeling for any gaps anteriorly
  - o If unable to squeeze (e.g. epidural), assess using "pill-rolling motion" checking for inconsistencies in anal sphincter muscle
  - o Check integrity of anterior anal wall
  - o Note detection of IAS

Trauma identified?

No → Repair not required

Yes →

- Classify injury
- Use repair technique appropriate for injury
- Use local and/or regional anaesthesia as appropriate

First degree repair

- If haemostasis evident and structures apposed, suturing not required
- Repair skin with continuous subcuticular sutures or consider surgical glue
- Avoid large volumes of local anaesthetic for clitoral tears

Second degree repair

- Repair muscle with continuous, non-locked sutures
- Use absorbable synthetic suture material
- If skin apposed after suturing muscle layer, suturing of skin is not required
- If skin not apposed after suturing muscle layer, suture the skin

OASIS

- Undertake repair in theatre except in exceptional cases
- Avoid figure of eight sutures
- Trim suture ends and bury knots in deep perineal muscle to avoid suture migration
- Repair of EAS:
  - o Use monofilament or modern braided sutures
  - o Full thickness EAS tear, use overlapping or end-to-end method
  - o Partial thickness EAS tear, use end-to-end method
- Repair of IAS:
  - o Repair separately with interrupted or mattress sutures
  - o Do not attempt to overlap IAS
- Repair of anorectal mucosa:
  - o Use 3-0 polyglactin suture
  - o Avoid polydioxanone sutures
  - o Use either continuous or interrupted sutures

Perineal tear classification

First degree: Injury to the skin or vaginal epithelium only

Second degree: Injury to the perineum involving perineal muscles but not involving the anal sphincter

Third degree: Injury to perineum involving the anal sphincter complex

- **3a:** Less than 50% of EAS torn
- **3b:** More than 50% of EAS torn
- **3c:** Both EAS and IAS torn

Third and fourth degree tears collectively known as OASIS

Fourth degree: Injury to perineum involving the EAS, IAS and anal epithelium

Rectal buttonhole tear: Injury to rectal mucosa with an intact IAS

Queensland Clinical Guidelines: F18.30-2-V3-R23

EAS: external anal sphincter; **IAS:** internal anal sphincter, **OASIS:** obstetric anal sphincter injuries

Abbreviations

AOR	Adjusted odds ratio
APM	Antenatal perineal massage
CT	Computed tomography
CI	Confidence intervals
CS	Caesarean section
EAS	External anal sphincter
FGM	Female genital mutilation
GP	General Practitioner
HHS	Hospital and Health Service
IAP	Intra-abdominal pressure
IAS	Internal anal sphincter
IPM	Intrapartum perineal massage
IV	Intravenous
NSAID	Non-steroidal anti-inflammatory drugs
PFMT	Pelvic floor muscle training
OASIS	Obstetric anal sphincter injury or injuries
OR	Odds ratio
OT	Operating theatre
PR	Per rectum
RCT	Randomised controlled trial
RR	Relative risk
USS	Ultrasound scan

Definition of terms

Accoucheur	Clinician directly assisting with birth of baby.
Anal manometry	A test which measures the pressures of the anal sphincter muscles.
Crowning	When the widest part of the fetal head (biparietal diameter) has passed through the pelvic outlet.
Deinfibulation	A surgical procedure to cut open the narrowed vaginal opening in a woman who has been infibulated[1].
Dyspareunia	Pain on vaginal penetration and/or pain on intercourse or orgasm.
Endoanal ultrasound	An ultrasound to examine the rectum and anus.
Fourchette	The labia minora extend to approach the midline as low ridges of tissue that fuse to form the fourchette.
Infibulation	A type of female genital mutilation that involves narrowing of the vaginal orifice with the creation of a covering seal by cutting and appositioning the labia minora and/or the labia majora. May occur with or without excision of clitoris.[1]
Obstetrician	Local facilities may as required, differentiate the roles and responsibilities assigned in this document to an “obstetrician” according to their specific practitioner group requirements; for example to general practitioner obstetricians, specialist obstetricians, consultants, senior registrars and obstetric fellows.
Pelvic floor muscle exercises	Exercises aimed at strengthening abdomino-pelvic and pelvic floor muscles.
Pelvic floor muscle training	A program of exercises used to rehabilitate the function of the pelvic floor muscles.
Perineal injury	Includes perineal soft tissue damage, tearing and episiotomy.
Perineal tears	Includes perineal tearing but not injury such as bruising, swelling, surgical incision (episiotomy).
Reinfibulation	Procedure to narrow the vaginal opening in a woman after she has been deinfibulated; also known as re-suturing.[1]
Restrictive use episiotomy	Where episiotomy is not used routinely during spontaneous vaginal birth but only for specific conditions (e.g. selective use in instrumental deliveries or if fetal compromise).
Sitz bath	Warm bath to which salt has been added.
Slow birth of fetal head	Refers to measures taken to prevent rapid head expulsion at the time of crowning (e.g. counter pressure to the head (as needed) and minimising active pushing; it does not include measures such as fetal head flexion or the Ritgen manoeuvre).

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1 Introduction

Perineal injury is the most common maternal morbidity associated with vaginal birth.[2] In Queensland in 2016, 73.5% of women who had a vaginal birth experienced perineal trauma and of these, 57.2% required surgical repair.[3]

1.1 Australian context

Table 1. Australian context

Aspect	Consideration
Australian Context	• In Australia, the reported rate of obstetric anal sphincter injuries (OASIS) increased from 1.9% in 2002 to 3.2% in 2013[4] • Third and fourth degree tears are included on the Australian Commission on Safety and Quality in Healthcare (ACSQHC) Hospital Acquired Complications list[5] o From the 2020–2021 financial year onwards, a financial penalty will be applied to public hospital services for each episode of care where a woman sustains a fourth degree tear[6]
WHA Collaborative	• In 2018, Women's Healthcare Australasia (WHA) conducted a National Collaborative Improvement Project with the aim of reducing OASIS rates[4] • Twenty six maternity services from across Australia (seven in Queensland) participated in the collaborative • Participating services implemented a bundle of interventions identified by an expert panel o Refer to Appendix A: WHA Collaborative care bundle

1.2 Clinical Standards

Table 2. Clinical standards

Aspect	Consideration
Consent	• Seek consent prior to: o Examinations and assessments, including consent for per rectum (PR) examination if required o Implementation of risk reduction measures o Repair of perineal injuries • Support the woman's informed decision
Maternal care	• Ensure privacy for discussions, assessments and repair • Provide analgesia during assessment and repair of perineal injuries • Use aseptic technique for perineal repair[7]
Communication	• Inform women in the antenatal period of risk of perineal injury and risk reduction strategies • Offer counselling to women who may be at increased risk of OASIS • Following birth, inform women about the extent and nature of their injury, possible short and long term morbidity and the importance of perineal care and follow up[8,9] • If OASIS or unexpected significant perineal outcome occurs at birth: o Offer multidisciplinary follow up and debrief with senior staff o Use sensitive and culturally appropriate language[10]
Documentation	• Comprehensively document: o Outcomes and content of discussions, counselling and advice o Consent for all examinations, assessments and repair[11] o Birth information including details of instrumental birth when relevant o Assessment of extent of trauma o Repair details including anaesthetic and analgesia used, suture technique and materials used o Counts of all instruments, swabs and packs used o Estimated blood loss, post-repair haemostasis and rectal assessment

1.3 Clinical training

Table 3. Clinical training

Aspect	Consideration
Clinician training	• Appropriately trained health care professionals are more likely to provide a consistently high standard of perineal assessment and repair[7] • Increased awareness, vigilance, and training improves detection of OASIS[8,12,13] • For medical practitioners performing instrumental births provide training that includes: o Simulation training o Adequate supervision o Rigorous credentialing o Open disclosure and transparency amongst team members in terms of trainee's stage of training and credentials
Episiotomy	• Clinicians (especially if inexperienced) are not accurate at predicting the angle at the time of episiotomy, and tend to underestimate the angle[14,15] • Provide training programs to improve the accuracy of angle estimation by clinicians[14,15]
Training recommendations	• Support clinicians to access professional and competency based learning opportunities[8]: o Commence perineal repairs on uncomplicated small tears before progressing to more complex repairs o Use of best practice repair techniques[16] o Audio-visual aids[2] with information on the principles of recognition and management of perineal trauma[9] o Hands-on surgical skills workshops with the use of models[8,17] o Case scenarios and perineal repair simulation exercises[9,17] o Individual/group reflection, monitoring, and regular review of perineal trauma rates • Develop local procedures to set a minimum standard for staff competency in perineal assessment and repair
Experience of clinician	• The individual clinician providing care at the time of birth is an independent factor that influences risk of perineal trauma[18] • More experienced midwives had a lower rate of severe perineal tears than inexperienced midwives in one retrospective cohort study[19] • Where possible, consider having experienced clinicians manage the birth of women at higher risk for OASIS[19]

2 Perineal injuries

Perineal trauma refers to damage to the genitalia during the birthing process and can occur spontaneously or as a result of an episiotomy or female genital mutilation (FGM).[20]

2.1 Types of perineal injury

Table 4. Types of perineal injury

Type	Definition
Anterior perineal injury	Injury to the labia, anterior vagina, urethra or clitoris[21]
Posterior perineal injury	Injury to the posterior vaginal wall, perineal muscles or anal sphincter that may include disruption to the anal epithelium[21]
Episiotomy	A surgical incision intentionally made to increase the diameter of the vulval outlet to aid delivery
Female genital mutilation	A cultural, non-therapeutic procedure that involves partial or total removal of female external genitalia and/or injury to the female genital organs [refer to Section 10. Female genital mutilation (FGM)]

2.2 Perineal tear classification

Table 5. Perineal tears

Tear	Definition	
First degree[8,22]	Injury to the skin or vaginal epithelium only	
Second degree[8,22]	Injury to the perineum involving perineal muscles but not involving the anal sphincter	
Third degree[8,22]	Injury to perineum involving the anal sphincter complex • 3a: Less than 50% of external anal sphincter (EAS) thickness torn • 3b: More than 50% of EAS thickness torn • 3c: Both EAS and internal anal sphincter (IAS) torn	Third and fourth degree tears are collectively known as **OASIS**[23]
Fourth degree[8,22]	Injury to perineum involving the anal sphincter complex (EAS and IAS) and anal epithelium	
Rectal buttonhole[8]	• Injury to rectal mucosa with an intact anal sphincter • Not a fourth degree tear	

3 OASIS

Injury to the perineum without involvement of the anal sphincter does not generally cause long term problems for women. In contrast, injury to the anal sphincter can result in long term sequelae such as faecal incontinence, and can significantly affect a woman's quality of life.[22] For women who gave birth vaginally in Queensland in 2016, 3.1% had an injury to their anal sphincter (OASIS).[3]

3.1 Incidence and outcomes of OASIS

Table 6. Incidence and outcomes of OASIS

Aspect	Consideration
Incidence	• Rates of OASIS are increasing in Australia and in comparable countries[24,25] • There is debate as to whether increasing rates are due to rising incidence, improved detection or a combination of both[26-29] • Increased migration of Asian women (who are at higher risk of OASIS) to developed countries may also be contributing to increasing rates[29] • The incidence of OASIS is likely much higher than estimated due to missed detection [refer to Table 22. Assessment challenges]
Potential outcomes	• Short term o Perineal pain associated with oedema and bruising[17] o Urinary retention and defecation problems in initial postpartum period[17] • Long term o Abscess formation and wound breakdown o Rectovaginal fistulae o Dyspareunia and altered sexual function[30,31] o Anal incontinence may include incontinence of flatus, liquid or solid stool, passive soiling, faecal urgency[17] o Ongoing perineal pain[31] • Psychological o Women who experience perineal trauma, especially OASIS, commonly identify with experiencing or feeling: ▪ Vulnerable exposed, embarrassed and socially isolated[31,32] ▪ Disempowered, anxious, helpless and out of control[31] ▪ A disconnect between their expectations and the reality about birth and the immediate postpartum period[31] ▪ A need to redefine a new sense of normal, and work towards acceptance following OASIS[31] ▪ Psychosexual dysfunction[30]
Prognosis	• Risk and severity of complications is directly related to extent of injury[8] • Estimated that 60–80% of women are asymptomatic 12 months after external anal sphincter repair[8]

3.2 OASIS risk factors

The vast majority of OASIS occur in women who are categorised as low risk.[33] Many risk factors are non-modifiable and there is considerable variation in reported risk for the same risk factor.[8] Risk factor awareness combined with thorough perineal examination may increase detection rates.[8]

Table 7. OASIS risk factors

Risk factor	*AOR #OR ^RR	95% CI
Asian ethnicity[26]	#2.27	2.14 to 2.41
Nulliparity[34]	^6.97	5.40 to 8.99
Birth weight greater than 4 kg[26]	#2.27	2.18 to 2.36
Shoulder dystocia[26]	#1.90	1.72 to 2.08
Occipito-posterior position[34]	^2.44	2.07 to 2.89
Instrumental birth[26]		
• Ventouse without episiotomy	#1.89	1.74 to 2.05
• Ventouse with episiotomy	#0.57	0.51 to 0.63
• Forceps without episiotomy	#6.54	5.57 to 7.64
• Forceps with episiotomy	#1.34	1.21 to 1.49
Prolonged second stage[34]		
• Duration of second stage 2 to 3 hours	^1.47	1.20 to 1.79
• Duration of second stage 3 to 4 hours	^1.79	1.43 to 2.22
• Duration of second stage more than 4 hours	^2.02	1.62 to 2.51
Previous CS[35]	*1.42	1.25 to 1.61
Midline episiotomy[36]	#2.24	1.81 to 2.77

4 Antenatal risk reduction

Antenatal risk assessment is a key preventative strategy for both OASIS and other types of perineal injury.

Table 8. Antenatal assessment and advice

Aspect	Consideration
Assessment	• Review antenatal risk factors • Obtain a comprehensive history of perineal trauma including history of OASIS • Visual inspection if indicated • Consult with and/or refer to obstetrician if history of[37]: o FGM o OASIS • If fetal macrosomia is identified, refer to Queensland Clinical Guideline: *Induction of Labour*[38] o Despite reduced incidence of shoulder dystocia, and lower birth weights, induction of labour may be associated with increased incidence of third and fourth degree tears (RR 3.70, 95% CI 1.04 to 13.17)[39,40]
Recommendations	• Offer women information about protective strategies that may reduce or mitigate: o Perineal injury (incidence or severity) o Perineal pain o Pelvic floor dysfunction • If psychological issues resulting from previous perineal injury identified: o Offer referral to appropriate mental health professional o Offer debriefing and birth planning with senior clinicians

4.1 Antenatal perineal massage

Table 9. Antenatal perineal massage

Aspect	Consideration
Risks and benefits[41]	• Makes no significant difference to: o Overall rates of perineal tears o Incidence of instrumental births, length of second stage, rates of reported dyspareunia, sexual satisfaction postpartum, incontinence of urine, faeces or flatus • Generally well accepted by women • For women without previous vaginal birth who perform antenatal perineal massage (APM): o 16% less likelihood of episiotomy o 9% reduction in incidence of trauma requiring suturing (almost entirely due to reduced likelihood of episiotomy) • For women with previous vaginal birth who perform APM: o Reduction in incidence of pain at three months postpartum • If planned caesarean section (CS), no benefit
Contraindications	• Active infection (e.g. genital herpes, genital candidiasis) o May damage the vaginal mucosa and or cause infection to spread • Ruptured membranes • Vaginal bleeding
Recommendation	• Offer information about APM including technique, duration and frequency • Optimal frequency and duration uncertain, may be beneficial when performed: o From around 35 weeks gestation o One to two times per week o For around five minutes per session[41]

4.2 Pelvic floor muscle training (PFMT)

Table 10. Pelvic floor muscles training

Aspect	Consideration
Risks and benefits	• When commenced in early pregnancy, effective in reducing urinary incontinence in late pregnancy and first six months postpartum[42] • Greater positive effect if treatment closely supervised with adequate exercise regimen to strengthen muscles[42] • Effective treatment for existing urinary incontinence[42] • Efficacy for faecal incontinence is unclear[42] • For primigravidas[43]: o Shortens the first and second stage of labour o No significant association between PFMT and: ▪ Risk of episiotomy ▪ Risk of instrumental birth ▪ Risk of perineal trauma
Recommendation	• Offer antenatal education regarding PFMT • Recommend adherence throughout pregnancy • Provide one-to-one instruction if possible[44] • Where available, include a physiotherapist in antenatal care and/or education • Little high level evidence regarding the number and frequency of PFMT required for significant benefit o More than two instructional sessions may be required[44] o Even a low intensity program may be beneficial[44]

4.3 Combination interventions

In primigravid women who combined daily APM with twice daily PFMT from 32 weeks gestation reported to[45]:

- Be 31% less likely to have an episiotomy
- Have a higher likelihood of having an intact perineum
- Have lower rates of OASIS
- Have less postpartum perineal pain
- Require less analgesia in the postnatal period

5 Intrapartum risk reduction

During pregnancy, discuss the following intrapartum perineal techniques which may reduce the incidence of severe perineal trauma.[21] Respect the woman's right to decline these techniques as:

- The perineum is particularly sensitive to touch during birth
- Women may value avoiding invasive vaginal procedures (e.g. perineal massage) over reducing risk of perineal injury

5.1 Maternal position

There is little high quality evidence to inform optimal maternal position during second stage of labour to minimise perineal trauma.[32,46,47]

Table 11. Maternal position in second stage

Aspect	Consideration
Risks and benefits	• Greatest incidence of intact perineum in all-fours and kneeling positions[32] • Lowest incidence of OASIS in standing and lateral positions[48,49] • Greatest incidence and degree of perineal trauma in sitting, squatting and birth-stool positions[32] • Lithotomy and squatting positions associated with increased risk of OASIS[48,49] • For women without an epidural, giving birth in an upright position may be associated with[46]: o Reduction in length of second stage and instrumental births o No difference in OASIS rates o Fewer episiotomies but a possible increase in second degree tears o Increased estimated blood loss of 500 mL or more • For women with an epidural, giving birth in an upright position compared to lying supine or semi-recumbent, no significant difference in[47]: o Duration of second stage o Instrumental or CS rates o Perineal trauma requiring suturing
Immersion in water in labour and birth	• It is not clear whether immersion in water during labour has any effect on rates of perineal trauma, as evidence is conflicting[20] • Systematic review of randomised controlled trials (RCTs) found no significant differences in perineal outcomes with warm water immersion in first stage or second stage compared with no immersion[50]
Recommendation	• Support women to give birth in whatever position they find comfortable[29,46,47] o Accoucheur to maintain good visualisation of perineum • Advise women of the benefits of the all-fours, kneeling positions, lateral and standing positions[32,48,49] • Consider increased risk of perineal trauma with birth stool, sitting or squatting and the length of time a woman spends in these position in second stage[32]

5.2 Pushing methods in second stage

Table 12. Pushing methods in second stage

Aspect	Consideration
Directed versus spontaneous pushing	• No difference between spontaneous and directed pushing in terms of[51]: o Duration of second stage o Risk of OASIS o Episiotomy rate o Duration of pushing o Rate of spontaneous vaginal birth o Neonatal outcomes • A longer period of active pushing is linked to increased perineal pain at time of hospital discharge in women with nil or minor trauma[52]
Delayed versus immediate pushing for women with epidural analgesia[51]	• No difference detected in: o Risk of OASIS o Episiotomy rates o Rates of admission to neonatal intensive care unit o Five-minute Apgar scores less than 7 • Delayed pushing is associated with: o Reduced length of active pushing and an increase in rate of spontaneous vaginal birth o Increased overall duration of second stage o Increased risk of a low umbilical cord pH
Communication	• Clear communication between the clinician and woman in second stage is an important way to minimise perineal trauma[53,54] • Use verbal encouragement to slow down expulsive efforts and promote controlled pushing at crowning[54]
Recommendation	• No evidence to support specific pushing techniques or timing for the protection of the perineum • Be guided by the woman's preferences and the clinical context • Aim to slow the birth of the fetal head at the time of crowning to reduce the risk of perineal trauma by: o Discouraging active pushing at this time by instructing the woman to blow or make small pushes[16] o Communicating clearly to the woman

5.3 Intrapartum perineal massage

Table 13. Intrapartum perineal massage

Aspect	Consideration
Risks and benefits	• Women who receive intrapartum perineal massage (IPM) compared with women who do not may be[21]: o Less likely to experience OASIS (RR 0.49, 95% CI 0.25 to 0.94) o More likely to have an intact perineum (RR 1.74, 95% CI 1.11 to 2.73) o Likely to have similar incidence of: ▪ First and second degree tears ▪ Episiotomy • IPM not associated with harm[55] • Women may dislike the technique o If they have experienced sexual abuse, they may find it traumatic[29] • Some professional organisations endorse the use of IPM[17] whereas others do not recommend it[7] • Discuss risks and benefits and the woman's preference with her prior to the onset of labour
Recommendation	• Offer IPM in second stage • If performed: o Follow local HHS protocol/procedure for IPM technique o Stop at the woman's request

5.4 Perineal warm compresses

Table 14. Perineal warm compresses

Aspect	Consideration
Risks and benefits	• Benefits of warm compresses applied to the perineum in second stage: o May reduce incidence of OASIS[21] o Increases second stage comfort[29] o Is acceptable to women and midwives[29] • Risk of perineal burn if decreased thermal sensitivity • Not shown to have any effect on incidence of[21]: o Intact perineum o Perineal trauma requiring suturing o Episiotomy rates
Recommendation	• Offer warm perineal compresses in second stage of labour • Develop local policy to standardise preparation and temperature of warm compresses to ensure safe temperature • Ensure temperature appropriate prior to application, especially in women with reduced thermal sensitivity • Advise the woman to report discomfort • Stop at the woman's request

5.5 Episiotomy

Historically and internationally, the practice of episiotomy varies widely in terms of both technique and policy for use. The decision about whether or not to perform an episiotomy is not always straightforward. Episiotomy may serve to prevent OASIS, but it may also create trauma which may not have otherwise occurred.

Table 15. Evidence on episiotomy

Aspect	Consideration
Context	• In Queensland in 2016, an episiotomy was performed in 16.8% of vaginal births • Mediolateral and midline episiotomies are the most commonly used types • The relationship between episiotomy and OASIS varies by episiotomy type, technique and the angle of incision[56] • Evidence that episiotomy prevents OASIS and/or anal incontinence is conflicting[8,26,27,57-59]
Restrictive versus routine episiotomy	• Restrictive episiotomy (recommended)[4,49] o Episiotomy is performed selectively by clinical indication[60] o May result in 30% less incidence of severe perineal and/or vaginal trauma in spontaneous vaginal birth[60] o Does not increase pain, urinary incontinence, dyspareunia or OASIS[22] • Routine episiotomy (not recommended) o Episiotomy routinely performed during vaginal birth[60] o Associated with more trauma overall, more suturing and more complications seven days postpartum[22]
Episiotomy types	• Mediolateral episiotomy (recommended) o Incision begins at vaginal fourchette and is generally directed to the right side[7] o Refer to Table 16. Indications and technique for mediolateral episiotomy • Midline episiotomy (not recommended) o Incision begins at vaginal fourchette and runs along midline through central part of perineal body o Midline episiotomy is not effective in protecting the perineum and is associated with an increased risk of OASIS[56,61]

5.5.1 Mediolateral episiotomy

Table 16. Indications and technique for mediolateral episiotomy

Aspect	Consideration
Indications for mediolateral episiotomy	• May protect against OASIS for instrumental births[8,62] [refer to Table 19. Instrumental birth considerations] • Consider performing when: o Fetal compromise is suspected and birth needs to be expedited[63] o Instrumental birth is required [refer to Section 5.7. Instrumental birth][63] o Woman has history of FGM [refer to Section 10. Female genital mutilation (FGM)][63] o There is soft tissue dystocia[63] o Severe injury is considered imminent and likely[63] o There are maternal medical indications for shortened second stage o Woman requests
Technique principles	• Provide tested effective analgesia prior to performing episiotomy, except in emergency due to acute fetal compromise[7] • Episiotomy technique is significantly associated with risk of OASIS[64] • It is well established that the incision angle is substantially larger than the resultant suture angle due to distension and stretching of tissues[64] • One case-control study reported that longer episiotomy incisions may be more protective against OASIS than shorter incisions[56] • Use sharp scissors • Episiotomy scissors designed specifically to achieve a cutting angle of 60 degrees may be effective in achieving the correct angle and reducing OASIS[8,65-68]
Angle of incision	• No consensus on the optimal angle from the midline for a mediolateral episiotomy o Recommendations from leading professional organisations range from 45 to 60 degrees from the midline[7,8,17] • Mediolateral episiotomy cut at an angle of 60 degrees from the midline at the time of crowning results in median angle of 45 degrees after repair[69] • RCT comparing episiotomy angle of 40 degrees and 60 degrees reported: o Angles of 60 degrees associated with significantly higher short-term pain[70] o Angles of 60 degrees associated with lower rates of OASIS and higher long term pain and dyspareunia, although these differences did not reach statistical significance[70] • More acute (vertical) angles appear to increase risk of OASIS[17] • One case-control study reported[71]: o A significantly smaller mean angle of episiotomy in cases with third degree tears (30 degrees) than in controls (38 degrees) o 50% relative risk reduction in third degree tear for every six degrees away from the midline that episiotomy is cut
Recommendation	• Follow a restrictive use policy for mediolateral episiotomy • Perform episiotomy at crowning of fetal head • Ideally, cut episiotomy at 60 degrees o Not less than an angle of 45 degrees[7,17]

5.6 Manual perineal support

There are several techniques, to manually support the head and perineum, practiced worldwide, that have been outlined and studied in the literature.

Table 17. Hands on and hands poised (or off) techniques

Aspect	Consideration
Hands on	• Techniques described include: o Flexion technique—flexion of the fetal head is maintained by pressure on the occiput in a downwards direction with one hand, while guarding the perineum with the other hand[21] o Ritgen's manoeuvre—between contractions, two fingers are placed behind the anus and a forward and upward pressure is applied on the forehead through the perineum[21] o Modified Ritgen's manoeuvre—identical with Ritgen's manoeuvre but performed during a contraction[21] o Finnish manoeuvre: ▪ Speed of crowning controlled by exerting pressure on the occiput with one hand. Simultaneously, the thumb and index finger of the other hand are used to support the perineum while flexed middle finger takes a grip on the baby's chin. ▪ When a good grip is achieved, the woman is asked to stop pushing and to breathe rapidly, while the accoucheur slowly assists the head through the introitus. The perineal ring is pushed under baby's chin when most of head is out • Theoretical arguments for hands on: o Pressure against perineum may protect fragile tissue o Pressure against fetal head before crowing may aid presentation of the smallest diameter and prevent rapid expulsion
Hands off or poised	• Techniques described include: o Hands kept off the perineum, but light pressure is applied to head only o Hands are kept off the perineum, poised to apply counter pressure to fetal head if there is rapid expulsion o Hands are kept off the fetal head and perineum altogether (purely observation only) • Theoretical arguments for hands off or poised: o May enable fetal head to naturally travel through birth canal with least resistance allowing smallest diameter to crown[72] o Pressure against fetal head may disturb natural orientation and lead head towards fragile perineum

5.6.1 Evidence and recommendations

Table 18. Evidence and recommendations

Aspect	Consideration
Challenges	• There are several significant challenges related to the interpretation of research about hands on and hands off (or poised) techniques and their efficacy: o Definitions and terms applied to hands on, hands off and hands poised are inconsistent and vary widely between studies o Limited evidence and no consensus about whether to have hands on or hands off the fetal head and perineum during second stage o Mixed results between studies comparing hands on and hands off (or poised) techniques o Management of birth of shoulders varies widely across studies
Hands on versus hands off (or poised)	• Hands off (or poised) care is associated with lower likelihood of episiotomy (RR 0.58, 95% CI 0.43 to 0.79) • There are mixed results between studies in terms of the risk of OASIS when comparing hands on and hands off (or poised) techniques o Systematic reviews of RCTs do not demonstrate any difference in OASIS rates between hands off (or poised) and hands on techniques[21,23] o Systematic review of non-randomised trials demonstrate there may be some protective benefit from OASIS with hands on techniques[23] ▪ In non-randomised trials, hands on techniques were implemented as part of a broader bundle of interventions, making it impossible to identify the effect of individual interventions [refer to Table 20. Combination interventions] • No clear differences in rates of intact perineum, first degree tears and second degree tears between hands on and hands off (or poised)[21] • Modified Ritgen's manoeuvre compared to applying pressure against the perineum with one hand has no significant effect on the incidence of OASIS[73]
Birth of shoulders	• Incidence and severity of perineal trauma has not been shown to differ between primary delivery of anterior shoulder compared with primary delivery of the posterior shoulder[74]
Summary and recommendation	• High level evidence does not demonstrate any clear differences between hands on and hands off (or poised) in terms of risk of OASIS[21] • Episiotomy rates are higher with hands on technique[21] • For the fetal head—have hands on or hands poised whenever possible o Recommend novice clinicians have hands on fetal head whenever possible • For the perineum—use clinical judgement in determining whether to have hands on or hands off • Continuously watch the perineum and evaluate the risk of injury • Assist birth of the body of the baby by lateral flexion of the trunk following the curve of Carus • Use minimum amount of force required to achieve birth to reduce risk of perineal injury to woman and traction injury to fetus

5.7 Instrumental birth

Table 19. Instrumental birth considerations

Aspect	Consideration
Instrumental birth	• Consistent evidence that instrumental birth is associated with higher rates of OASIS[26] • Use of forceps compared to vacuum is associated with higher risk of[75]: o OASIS o Episiotomy o Vulval and vaginal trauma o Anal incontinence • The lower the fetal head on application of forceps or vacuum the less risk of anal sphincter tears[76] • Clinical factors influence the choice of instrument[75] • An observational study found the incidence of OASIS was reduced by 37% during instrumental births with[77]: o Preference for vacuum extraction over forceps o Conversion of occipito-posterior position to occipito-anterior position before birth o Performance of mediolateral episiotomy if deemed necessary o Flexion of fetal head and maintenance of axis traction o Early disarticulation of forceps o Reduced maternal effort during birth of head
Episiotomy in instrumental birth	• Evidence on role of episiotomy for reducing risk of OASIS in instrumental vaginal birth is unclear[78] o No large RCTs to guide practice[78] o Pilot RCT does not provide conclusive evidence that routine episiotomy is better or worse than restrictive episiotomy[79] o Large Danish observational studies support the use of routine right mediolateral episiotomy for reducing risk of OASIS[80,81] o Large retrospective cohort study demonstrated reduced risk of OASIS with mediolateral episiotomy for primiparous women[26] o Population based cohort study demonstrated reduced risk of OASIS with mediolateral episiotomy in instrumental birth for primiparous but not multiparous women[59] • Midline episiotomy in combination with instrumental birth significantly increases the risk of OASIS[82]
Recommendation	• Consider use of vacuum rather than forceps for assisted vaginal delivery when clinically possible[75] • Strongly consider performing a mediolateral episiotomy for instrumental birth, especially if: o Primiparous woman o Forceps used[26] • Do not perform midline episiotomy for instrumental birth[82] • Consider antibiotic prophylaxis o Refer to Queensland Clinical Guidelines shortGuide: *Instrumental vaginal birth*

5.8 Combination interventions

Several studies have examined the effect of combining multiple intrapartum strategies on rates of OASIS.[77,83-86] Refer to Table 20. Combination interventions.

Table 20. Combination interventions

Aspect	Consideration
Intervention bundles	• Several Scandinavian studies have examined the implementation of a combination of interventions on various outcomes including the incidence in OASIS[84,85] o Interventions included varying combinations of: ▪ Good communication between woman and accoucheur[85,87,88] ▪ Instructing woman not to push during last part of second stage[83,84] ▪ Hands on technique (predominantly the Finnish manoeuvre[83,85,87,88]) ▪ Maternal position for birth which allows for visualisation of the perineum[83,85,88] ▪ Restrictive use of episiotomy[84,85,87,88] ▪ Avoidance of midline episiotomy[84] ▪ Clinician education on episiotomy[85] o Results demonstrated ▪ Reduced rates of OASIS[83-85,87,88] ▪ Increased use of episiotomy[87,88] • A study from United Kingdom achieved similar results using a different set of interventions:[54] o Intervention bundle consisted of: ▪ Avoidance of semi-recumbent positions and encouragement of upright, non-flat positions ▪ High standard of communication in active second stage ▪ Hands-on the head, but not the perineum, and spontaneous birth of shoulders with no or minimal traction to shoulders o Results demonstrated ▪ Reduced incidence of OASIS (4.7% to 2.2%) most pronounced in first five months ▪ Unchanged episiotomy rate
Maternal position and pushing method	• When combined with delayed pushing, maternal position change every 20–30 minutes in passive second stage and birthing in the lateral position was found to have better outcomes than birth in lithotomy and immediate pushing[89]: o 22.3% reduction in instrumental births o 28.15% increase in intact perineum o 30.4% decrease in episiotomy
Cautions for interpretation	• Studies are observational with low levels of evidence[29,72] • Intervention programs consisted of several elements o Observational studies do not identify which element is most protective against OASIS[72] • Causal relationships cannot be determined, as the studies were not randomised, blinded or compared with a concurrent control group[72] • The Scandinavian studies and United Kingdom studies achieved similar results, despite significantly different interventions

6 Perineal assessment and repair

Accurate diagnosis and effective care of perineal injuries requires systematic perineal assessment and best practice repair techniques.

Table 21. Perineal examination and repair

Aspect	Consideration
Maternal considerations	• Ensure: o Privacy and cultural sensitivity o Good lighting[7] o Woman is comfortable, warm and positioned to optimise clear view of perineum[7,90] • Provide support to the woman and her baby o Enable woman's support person(s) to be present if desired by woman • Discuss: o Importance of thorough assessment and the need to perform vaginal and rectal examinations[7,91] o The process of diagnosing a tear o Extent of trauma and repair[7] o Functional and/or cosmetic changes o Postpartum care of perineum [refer to Section 8. Postpartum perineal care]
Analgesia	• Ensure pain relief effective prior to and during assessment and repair[7,90]: o 16% of women report severe pain during perineal procedures[92] • For repair: o Infiltrate perineum with local anaesthetic and/or top up epidural or insert spinal anaesthetic as appropriate[7] o Seek confirmation that analgesia is effective and sufficient before commencing repair[7] • If woman reports inadequate pain relief, pause repair and address immediately[7]
Timing	• Assessment may be done immediately after birth[7] • Recommend repair is undertaken as soon as practicable after birth to minimise risk of infection and blood loss[7] o No high level evidence on optimal repair timing, however women can find lengthy delays distressing[91] • Minimise interference with mother-baby bonding unless bleeding requires urgent attention[7]

6.1 Perineal assessment

6.1.1 Assessment challenges

Table 22. Assessment challenges

Aspect	Consideration
Diagnosis of OASIS	• OASIS can be easily missed • A prospective study of women having their first vaginal birth found[12]: o Detection of OASIS increased from 11% to 24.5% when women were re-examined by an experienced research fellow following the birth o Majority of missed OASIS were clinically detectable—only 1.2% of OASIS were occult • A prospective observational study compared a control group assessed routinely and an intervention group that had an additional assessment[13] o There were significantly more third degree tears in the intervention group (14.9%) compared with the control group (7.5%) o Overall detection rates increased from 2.5% in the six months prior to the study, to 9.3% during the study period suggesting improved vigilance in diagnosis
Clinician competence	• Assessment to be performed by an experienced clinician trained in perineal assessment and alert to risk factors[8] o Recommend perineal assessments by less experienced clinicians be repeated or supervised by an experienced clinician • If there is doubt as to the extent of the injury, refer to a more experienced clinician[93] • If OASIS cannot be excluded, consult an obstetrician to clarify the assessment[90]

6.1.2 Components of assessment

Undertake a systematic assessment of the perineal structures gently and sensitively.[7]

Table 23. Systematic perineal assessment

Aspect	Consideration
Visual examination	• Visually assess: o Periurethral area, labia and lower vaginal walls o If the perineal tear extends to the anal margin or anal sphincter complex o For absence of anal puckering around the anterior aspect of the anus (between nine and three o'clock) as this may suggest anal sphincter trauma
Vaginal examination	• Establish extent of the tearing by inserting the index and third fingers high into the vagina, separate the vaginal walls before sweeping downward to reveal the cervix, vaginal vault, side walls, floor and the posterior perineum • Identify apex of the injury, using vaginal retractors if required
Rectal examination	• If perineal trauma is identified, recommend a rectal examination[7,17] o Insert the index finger into the rectum and ask the woman to squeeze o The separated ends of a torn external anal sphincter will retract backwards and a distinct gap will be felt anteriorly • When regional analgesia affects muscle power, assess for gaps or inconsistencies in the muscle bulk of the sphincter by placing the index finger in the anal canal and the thumb in the vagina and palpate by performing a 'pill-rolling motion'[17] • If any doubt as to the extent of the perineal injury, seek advice from a more expert clinician • Assess the anterior rectal wall for overt or occult tears by palpating and gently stretching the rectal mucosa with the index finger • It is often difficult to determine if the internal anal sphincter is damaged—careful inspection by an experienced obstetrician is required

6.2 Perineal repair

Table 24. Principles for perineal repair

Aspect	Consideration
General principles	• Aims of repair[94] o Maintain closure of damaged tissue o Promote haemostasis o Minimise risk of infection o Promote healing by primary intention • Ensure good anatomical alignment and give consideration to cosmetic result[7] • Perform rectal examination post repair to ensure sutures have not inadvertently penetrated through anorectal mucosa[7,8] o If a suture is identified, remove it
Suturing versus not suturing	• Limited evidence to guide choice between suturing and non-suturing[95,96] • Leaving first or second degree trauma unsutured may be associated with poorer wound healing at six weeks postpartum[7] • Leaving perineal skin unsutured may reduce dyspareunia pain at up to three months postpartum[20] • For first degree tear: o If haemostasis is evident and anatomical structures are apposed, suturing is not required, unless preferred by the woman[7,20] o If bleeding or anatomical structures not aligned, suturing is recommended[7] • Suturing is recommended for second degree tears[7]
Environment for repair	• Straightforward repair of first and second degree tears and episiotomies that have not extended can be undertaken in the birth suite environment • If trauma is difficult or extensive, undertake repair in operating theatre (OT) under general or regional anaesthetic[7] o The theatre environment helps to facilitate: ▪ Aseptic conditions[93] ▪ Adequate pain relief[93] ▪ Sufficient lighting[93] ▪ Identification of full extend of injury ▪ Surgical assistance and access to appropriate instrumentation[93]

6.2.1 Types of repair

Table 25. Perineal repair

Degree of injury	Good practice points
First degree repair	• If suturing is required, repair skin with either: o Continuous, non-locked subcuticular sutures using an absorbable synthetic suture material[7,96] or o Surgical glue[96,97]
Second degree repair	• High level evidence supports continuous, non-locked suturing for perineal muscle repair as it is associated with[7,98]: o Less short-term pain o Increased maternal satisfaction o Increased reports of feeling 'back to normal' three months postpartum • Use an absorbable synthetic suture material[20,99] o Less likely to result in long term pain than catgut sutures[20,99] o Rapidly absorbed synthetic sutures reduce need for suture removal[20,99] • If skin is apposed after suturing the muscle layer, suturing of skin is not required[7]: o Consider not suturing or use surgical glue[100,101] o Associated with less short-term perineal pain and less dyspareunia at three months o Not associated with any differences in occurrence of repair breakdown • If skin is not apposed after suturing the muscle layer, use a continuous, non-locking subcuticular stitch[7,20] or glue[101] for the skin

6.2.2 OASIS repair

Table 26. Repair of OASIS

Aspect	Consideration
General principles	• Perform in OT o In exceptional circumstances, may be performed in birthing room after discussion with a senior obstetrician[8] • If there is excessive bleeding, insert a vaginal pack and transfer woman to OT for repair as soon as possible[8] o Confirm and document removal of vaginal pack prior to carrying out repair in OT • If clinician competent in repair of OASIS is not available, repair can be delayed by 8 to 12 hours without impact on anal incontinence or pelvic floor symptoms provided[102]: o No excessive maternal bleeding from injury o No maternal medical condition associated with risk of abnormal obstetric bleeding • Avoid figure of eight sutures as they can cause tissue ischaemia and poor healing[8,17] • General or regional anaesthesia facilitates: o Adequate analgesia[93] o Identification of full extent of injury o Sphincter relaxation[93] o Retrieval of retracted ends of torn anal sphincter • To avoid suture migration, trim suture ends and bury knots in the deep and superficial perineal muscles[49] • Consider IDC post operatively as per local HHS protocol o OASIS associated with increased risk of postpartum urinary retention[17] • Consider antibiotics at time of repair o Refer to Table 30. Antibiotic regimen
Repair of EAS	• Use either monofilament sutures such as 3-0 polydioxanone or modern braided sutures such as 2-0 polyglactin—both have similar outcomes[8] • If full thickness EAS tear, use overlapping or end-to-end method[8] o The overlapping method has lower incidence of faecal urgency, lower anal incontinence scores and a significantly lower risk of deterioration of anal incontinence symptoms over 12 months than end-to-end approximation[20,103] • For partial thickness EAS tear, use end-to-end method[8]
Repair of IAS	• Use either monofilament sutures such as 3-0 polydioxanone or modern braided sutures such as 2-0 polyglactin—both have similar outcomes[8] • If torn IAS can be identified, repair separately with interrupted or mattress sutures[8] • Do not attempt to overlap the IAS[8]
Repair of anorectal mucosa	• 3-0 polyglactin suture is recommended • Use submucosal technique so no sutures or knots are within the rectal lumen • Avoid use of polydioxanone sutures as they take longer to dissolve and may cause irritation and discomfort in the anal canal[8] • Either continuous or interrupted sutures may be used[8] • Consider involving colorectal surgeons in large anorectal tears

7 Puerperal genital haematoma

Up to 87% of haematomas are associated with sutured perineal injuries; others can occur with an intact perineum.[104] Indirect injury can occur from radial stretching of the birth canal as the fetus passes through.[104]

7.1 Diagnosis of puerperal haematoma

Timely diagnosis can reduce the risk of maternal morbidity or death.

Table 27. Diagnosis of puerperal genital haematoma

Consideration	Good practice points
Presentation	• Depends on the haematoma site, volume and rate of formation[104] • Hallmark symptom is excessive pain or pain that is persistent over a few days[104] • Pain location varies according to the haematoma site[104]: o Perineal pain may indicate a vulval/vulvovaginal haematoma o Rectal or lower abdominal pain may indicate a paravaginal haematoma o Abdominal pain may indicate a supravaginal haematoma o Shoulder tip pain may or may not be present • Signs and symptoms may include:[104] o Hypovolaemia or shock disproportionate to the revealed blood loss o Feelings of pelvic pressure o Urinary retention o An unexplained pyrexia
Assessment and diagnosis	• Potential need for a vaginal and/or rectal examination o Ensure adequate analgesia prior to performing • Check for[104]: o Vulval haematoma—appears as a swelling on one side of the vulva that may extend into the vagina or fascia of the thigh o Paravaginal haematoma may be felt as a mass protruding into the vaginal lumen or as an ischiorectal mass o Supravaginal haematoma—may be felt as an abdominal mass causing the uterus to deviate laterally • Consider that vascular disruption (causing haematoma) may be associated with underlying ‘macro’ or ‘micro’ levator ani trauma[105] • Exclude coagulopathy • If accessible[106]: o Detection is enhanced using three dimensional (3D) or four dimensional (4D) ultrasound scan (USS) techniques[107] o Ultrasound (consider transvaginal) can be used to detect pelvic extraperitoneal haematomas o Computerised tomography (CT) and magnetic resonance imaging can identify the exact extent of the haematoma o Contrast enhanced CT can detect active bleeding through extravasation of the intravenous contrast

7.2 Treatment of puerperal haematoma

Treatment is dependent on the size and site of the haematoma.

Table 28. Care of puerperal genital haematoma

Aspect	Consideration
Aim of treatment[104]:	• Prevent further blood loss • Minimise tissue damage • Manage pain • Reduce the risk of infection • Provide woman with information and counselling
If signs of shock	• Refer to Queensland Clinical Guideline: *Primary postpartum haemorrhage[108]* for: o Fluid resuscitation o Observations and monitoring • Transfer to operating theatre for surgical procedures[104] after resuscitation
Large haemostatic haematoma	• Clot evacuation, primary repair and/or tamponade of blood vessels through compression packing (for 12–24 hours)[104] • If persistent bleeding, consider arterial ligation or embolisation o Transfer to higher level service as required • Drain insertion is discretionary o Monitor drainage for failed haemostasis[104] o Remove once loss minimal (e.g. less than 50 mL in 12 hours) • Consider use of broad spectrum antibiotic cover based on current therapeutic guidelines[104] o Refer to Table 30. Antibiotic regimen • Insert urinary catheter to prevent retention and to monitor fluid balance[104]
Small static haematoma	• Conservative treatment[104]: o Early application of ice packs to minimise vulval haematoma • If levator ani trauma detected refer to a physiotherapist and consider uro-/gynaecologist consultation
Ongoing care	• If vaginal packing used, remove 12–24 hours after procedure o Administer prophylactic analgesia prior to pack removal • Offer regular analgesia that will not encourage constipation • Review regularly as recurrence is common[104] • Check for laboratory signs of coagulopathy and anaemia and treat as indicated[104] o Refer to the Queensland Clinical Guideline: *Primary postpartum haemorrhage*

8 Postpartum perineal care

8.1 Management of pain and bowel function

Most women will experience perineal pain following perineal injury and repair, particularly within the first 24 to 48 hours. This pain can impact on the woman's transition to motherhood.

Table 29. Management of pain and bowel function

Aspect	Considerations
Reduce pain	• If not contraindicated, offer rectal non-steroidal anti-inflammatory drugs (NSAIDs) routinely after repair of first or second degree tears[8] • Although evidence is limited, ice packs may provide improved pain relief during first 24 to 72 hours post birth[109] • Apply cold packs or gel pads for 10 to 20 minute intervals for 24 to 72 hours[109,110] • If not contraindicated, oral paracetamol and NSAIDs are first line analgesics in postnatal period[17,111,112] • Urinary alkalisers soon after birth may reduce urine acidity and discomfort associated with passing urine over open wounds • Minimise use of narcotics and encourage water intake to reduce risk of constipation • Avoid codeine phosphate or codeine containing preparations in breastfeeding women (codeine is a category L4 in lactation[112])
If OASIS	• Use stool softeners for 10 days after repair[8] o Aim is to ensure soft formed motions, minimise pain on defecation, avoid constipation and potential disruption of repair[17] o Laxatives are associated with less painful first bowel opening after birth and shorter length of stay[17] o Consider docusate sodium over osmotic laxatives o Do not give bulking agents routinely with osmotic laxatives due to an increased risk of faecal incontinence[8,17] o If faecal incontinence occurs, advise to cease use and see General Practitioner (GP) • Encourage healthy bowel care by promoting: o Adequate fluid intake ▪ Recommend 2 to 2.5 L of fluid per day, preferably majority of intake from plain water[113] o Fibre intake o Mobility
Recommendation	• Establish local protocols for use of analgesia and laxatives based on therapeutic guidelines[8]

8.2 Antibiotics

Table 30. Antibiotic regimen

Aspect	Consideration
Indications	• Large haemostatic haematoma • Third or fourth degree perineal tear • Instrumental vaginal birth o Refer to Queensland Clinical Guidelines shortGuide: *Instrumental vaginal birth*
Antibiotic regimen	• Limited evidence for optimal antibiotic regimen • Follow local HHS protocol—if no local antibiotic protocol, consider the suggested regimen below • Administer before the repair, single doses of[114]: o Cefazolin 2 g intravenous (IV)[115] (3 g if woman more than 120 kg)[116] plus o Metronidazole 500 mg IV[117] • If fourth degree perineal tear, or high risk of anal incontinence and fistula formation, consider addition of[114]: o Amoxicillin with clavulanic acid 875+125 mg orally every 12 hours for 5 days[118] • If hypersensitivity to penicillins, seek expert advice

8.3 Promoting perineal recovery

Table 31. Postnatal measures to promote perineal recovery

Aspect	Considerations
Positioning and movement	• Advise positions that reduce dependent perineal oedema, particularly in first 48 hours o Lying the bed flat and side-lying to rest and breastfeed, pillow-supported 'recovery' position, avoid overuse of sitting/propped positions o Move in/out of bed through a side-lying position • Avoid activities that increase intra-abdominal pressure (IAP) for 6 to 12 weeks post birth (e.g. straining, lifting, high impact exercise, sit ups)
Pelvic floor muscle exercises	• Commence 2 to 3 days postpartum or when comfortable • If third or fourth degree tear, refer to a physiotherapist prior to discharge[8] • Offer information about the correct technique for PFME and the importance of long term adherence[8,119,120] o NOTE: Incorrect technique can cause excessive IAP and repetitive downward displacement of the pelvic floor over time, may disrupt tissue and muscle healing
Hygiene and healing	• Visually assess the repair and healing process at each postnatal check • Advise women to: o Avoid constipation and straining o Change perineal pad frequently, wash hands before and after changing pad and to shower at least daily to keep the perineum clean[121] o Check the wound daily[121] for signs of infection and wound breakdown o Report concerns to a midwife or GP
Diet	• Emphasise the importance of good nutrition to maximise wound healing and prevent constipation • Encourage: o High fibre food choices o Adequate fluid intake, especially if on oral iron therapy ▪ Recommend 2 to 2.5 L of fluid per day–majority of intake from plain water[113] • Treat anaemia, as needed, with iron therapy (consider delaying start for two weeks) and/or dietary advice

8.4 Follow up after perineal injury

Table 32. Post perineal repair follow up

Aspect	Considerations
If OASIS:	• Refer to an obstetrician for postpartum review 6 to 12 weeks postpartum[8] • Refer to a physiotherapist for ongoing follow up and PFMT[8,17] • Refer to a continence nurse (where available) prior to discharge • Where facilities and resources are available, establishing a dedicated perineal clinic to follow up women with OASIS may be beneficial[8,122] o There may be a place for 3a tears to be followed up in the community[123] • Establish local protocols for follow up of women with OASIS to avoid a 'patchwork of services'[29]
Self-care advice until six weeks post birth	• GP and/or midwife review around six weeks postpartum for assessment of wound healing o If woman observes signs of wound infection or breakdown, advise earlier medical review • Recommend continence clinic review or follow up, where available • Discuss resumption of sexual activity o Women with perineal suturing are at increased risk of dyspareunia[124,125] o Wound healing and emotional readiness are some of the many factors that influence the decision to resume sexual activity ▪ Median time of return to intercourse is around 5 to 8 weeks postpartum[124] o Ways to minimise discomfort (e.g. experimenting with sexual positions, use of lubrication) • Advise to see GP/midwife if: o Experiencing dyspareunia o Constipation or symptoms of urinary or faecal incontinence
After six weeks postpartum	• If incontinence or pain at follow up, consider referral to specialist gynaecologist or colorectal surgeon[8] • Care considerations may include[8]: o Endoanal USS o Anorectal manometry o Consideration of secondary sphincter repair o Referral to a physiotherapist for assessment and individualised PFMT to help manage pelvic floor dysfunction[17]

8.5 Previous OASIS and decision making

For women who have a history of OASIS, the decision around future mode of birth is a complex one, which needs to take a variety of factors into consideration[17].

Table 33. Considerations following OASIS

Aspect	Consideration
Subsequent vaginal birth	• Reported risk of OASIS recurrence varies—estimated around 4% to 8%[17,126] • No clinically significant increase in OASIS rates in subsequent pregnancies when risk factors remained the same[126] • In asymptomatic women, a vaginal birth following OASIS does not increase risk of subsequent symptoms[7] • Anal incontinence symptoms may worsen particularly for women who experienced transient anal incontinence after their first birth[8,17] • An Australian population based linkage study demonstrated women with OASIS in their first birth were no more likely to have another severe tear in a subsequent birth than women who did not (OR 0.9; 95% CI 0.67 to 1.34)[127]
Endoanal ultrasound and anal manometry	• For women with symptoms of anal sphincter compromise, endoanal USS and anal manometry may aid decision making[8,17,128] • In one protocol[128]: o Women were offered a caesarean section (CS) if they had: ▪ Sonographic evidence of a sphincter defect greater than 30 degrees ▪ An incremental squeeze pressure as measured by anal manometry of less than 20 mmHg o Vaginal birth was recommended to other women o Without antenatal evidence of anal sphincter function compromise, vaginal birth was not associated with significant deterioration in symptoms or quality of life
Episiotomy	• No evidence on role of prophylactic episiotomy in subsequent pregnancies following OASIS[8] • Use episiotomy based on clinical indications independent from history of OASIS[8]
Counselling for subsequent birth after OASIS	• Counsel women with history of OASIS regarding mode of birth[8] early in pregnancy, throughout pregnancy as required, and again at around 36 weeks • Inform women antenatally of risk factors for recurrence of OASIS [refer to Table 34. Risk factors for recurrence of OASIS) • No high level evidence to recommend an optimal mode of birth[8] o Consider: ▪ Extent of previous injury ▪ Functional status—symptoms experienced in both the short and long term by woman ▪ Extent of anatomical and functional defects shown on anal USS and anal manometry o Discuss balance of risks and benefits as unique to each woman[17] • Indications to offer CS: o Current symptoms of anal incontinence o Psychological and/or sexual dysfunction o Previous fourth degree tear o Endoanal defects evident on USS o Low anorectal manometric pressures[8,128] o Woman's request

8.5.1 Risk factors for recurrence of OASIS

Table 34. Risk factors for recurrence of OASIS

Risk factor	RR	95% CI	Significance
Forceps[126]	3.12	2.42 to 4.01	**Significant**
Ventouse[126]	2.32	1.74 to 3.08	**Significant**
Birth weight[126]			
• Greater than 4 kg	1.69	1.6 to 1.79	**Significant**
• Greater than 4.5 kg	2.59	2.25 to 2.99	**Significant**
Grade of tear[126]	1.4	1.3 to 1.5	**Significant**
Episiotomy[126]	1.15	0.90 to 1.47	Not significant
Maternal age greater than 35[126]	1.14	1 to 1.29	Not significant
Induction[126]	1.08	0.84 to 1.38	Not significant
Epidural[126]	0.98	0.78 to 1.24	Not significant
Birth weight[126]			
• 3 to 3.5 kg	0.55	0.48 to 0.64	Not significant
• 3.5 to 4 kg	0.88	0.82 to 0.95	Not significant
Asian ethnicity[126]	0.84	0.64 to 1.09	Not significant

9 Clinical measures not supported by evidence

Current levels or quality of clinical evidence do not support the following measures to significantly reduce perineal morbidity.

Table 35. Clinical measures not supported by evidence to reduce perineal morbidity

Aspect	Consideration
Antenatal	• Perineal stretching device unlikely to be beneficial in reducing perineal trauma[129,130]
Intrapartum	• Perineal lubrication[131] • Water birth[20,50] • Perineal protection device[21] • Cold compresses[21] • Hyaluronidase injection[132] • Midwife-led continuity models of care versus other models[133] • Continuous one on one support[134] • Primary delivery of anterior versus posterior shoulder[21]
Postnatal	• Perineal ultrasound to treat perineal pain or dyspareunia[135,136] • Topical anaesthetics for perineal pain[137] • Sitz baths[138] • Ray lamps

10 Female genital mutilation (FGM)

FGM is an umbrella term for procedures that involve the partial or total removal of external genitalia or other injury to the female genital organs for non-medical reasons.[1] It is internationally recognised as a violation of human rights.[1] UNICEF estimates that at least 200 million girls and women from around 30 countries have been subjected to the centuries-old practice of FGM.[139,140] Refer to Appendix B: Female genital mutilation.

Infibulated genital mutilation (Type III) is the most severe form of FGM. This type of FGM increases the risk of perineal injury and requires specialised care during childbirth.[141]

Table 36. FGM classification

Type	Classification
I[1]	Partial or total removal of the clitoris and/or the prepuce (clitoridectomy)
II[1]	Partial or total removal of the clitoris and the labia minora, with or without excision of the labia majora (excision)
III[1]	Narrowing of the vaginal orifice with creation of a covering seal by cutting and appositioning the labia minora and/or the labia majora, with or without excision of the clitoris (infibulation)
IV[1]	All other harmful procedures to the female genitalia for non-medical purposes (e.g. pricking, piercing, incising, scraping and cauterising)

10.1 General considerations

FGM affects a women's physical and mental health from the moment of cutting through to adulthood and childbirth.[139] In most cases, FGM is performed by a traditional practitioner with no formal training, without anaesthetic and using unsterile implements.[140,141]

Table 37. General considerations for FGM

Aspect	Consideration
Short term complications[139]	• Bleeding and shock • Genital tissue swelling and problems with urination • Fever and infection • Problems with wound healing
Long term complications[139,141]	• Urinary tract complications • Impaired sexual function • Genital scarring and local scar complications • Local pain • Menstrual difficulties • Genital infection • Pelvic inflammatory disease • Infertility
Psychological sequelae	• Women may report: o Flashbacks o Anxiety o Post-traumatic stress disorder[141]
Communication principles	• The term "mutilation" may not be appropriate to women who have experienced FGM o Consider alternative terminology such as "cutting" or "circumcision"[11] • Use professional, approved interpreter services[141] o Do not use family members as interpreters[141] • Sensitively discuss the impact of FGM on birth[141] • Ensure consultation and examination environment is safe and private[141] • Use a kind, respectful, sensitive, non-judgemental and professional approach[141] • Ensure women understand that FGM and re-infibulation are illegal in Australia[11] • Offer referral for psychological assessment and treatment[141]
Care provider	• Wherever possible, assessment, care and procedures should be performed by care providers skilled, experienced, and trained in the management of women with FGM[141] • Refer to more experienced clinician as required[141]

10.2 Obstetric consequences

Women who have undergone FGM have a significantly higher risk of obstetric complications.

Table 38. Obstetric risks with FGM

Risk factor	RR	95% CI
Prolonged labour[142]	1.69	1.03 to 2.77
Obstetric tears/lacerations[142]	1.38	1.07 to 1.79
Instrumental birth[142]	1.65	1.29 to 2.12
Obstetric/postpartum haemorrhage[142]	2.04	1.36 to 3.05
Difficult labour[142]	3.35	1.75 to 6.55

10.3 Implications for pregnancy and birth

Type III FGM (infibulation) presents the most issues for pregnancy and birth and is associated with the greatest degree of narrowing and scarring of the vaginal introitus. When the introitus is significantly narrowed, vaginal examination and intrapartum procedures such as amniotomy, catheterisation and the application of a fetal scalp electrode may be very difficult or impossible.[7,11]

Table 39. Care considerations

Aspect	Consideration
Assessment	• Country of origin is strongest risk factor for FGM[11] • Identify FGM[11] early by asking all women for a history of FGM at booking antenatal visit, irrespective of their country of origin[141] o Good practice to obtain this information in absence of a partner or other family member[141] o Some women may not realise they have been exposed to FGM[141] • If FGM identified, inspect the vulva to determine the type of FGM and whether deinfibulation is indicated • Discuss mode of birth—FGM is not generally an indication for caesarean section[11]
Deinfibulation	• Is a surgical procedure to cut open the narrowed vaginal opening in a woman who has been infibulated (type III FGM)[1,141] • Is not a reversal of FGM, as it does not restore genital tissue or normal genital anatomy and function[141] • Recommended if narrowing of introitus prevents normal menstrual and urinary flow, vaginal examination, comfortable sexual intercourse and safe vaginal birth • If the urethral meatus is visible, then deinfibulation is unlikely to be indicated[11,141] • Use visual aids to explain anatomical changes • Inform women that reinfibulation after birth is illegal, and will not be performed[11,141]
Timing of deinfibulation	• Deinfibulation may be performed during pregnancy (generally in the second trimester) or in labour[11] o May also be performed perioperatively after CS[141] • No evidence of a significant difference in obstetric outcomes between antenatal and intrapartum deinfibulation[143]
Intrapartum care	• If possible, plan birth in units with access to emergency obstetric care • Recommend—IV access, full blood count and group and hold once in established labour • Offer adequate analgesia • Routine mediolateral episiotomy is not necessary (regardless of whether or not deinfibulation has been performed), but may be required due to increased scarring and a lack of skin elasticity at the vaginal introitus[11,141]
Postnatal care	• Manage perineal tears as for women without FGM[141] o Anatomy may be distorted and difficult to recognise o Take extra care and utilise OT if required to ensure good view • Recommend six week postnatal follow up with an obstetrician

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Appendix A: WHA Collaborative care bundle

The below table compares the WHA care bundle which forms part of a national collaborative on third and fourth degree tears, and the guidance provided within the Queensland Clinical Guideline on Perineal care.

WHA care bundle	QCG Perineal care
Warm compresses	
For all women Apply warm perineal compresses during the second stage of labour at the commencement of perineal stretching	Offer warm perineal compresses in second stage of labour
Communication and manual perineal support	
For all women With a spontaneous vaginal delivery, using gentle verbal guidance, to encourage a slow controlled birth of the fetal head and shoulders: • Support the perineum with the dominant hand • Apply counter-pressure on the fetal head with the non-dominant hand • If shoulders do not deliver spontaneously, apply gentle traction to release the anterior shoulder • Allow the posterior shoulder to be released following the curve of Carus	Aim to slow the birth of the fetal head at the time of crowning to reduce the risk of perineal trauma: • Discourage active pushing at this time by instructing the woman to blow or make small pushes • Communicate clearly to the woman • For the fetal head—have hands on or hands poised whenever possible • For the maternal perineum—use clinical judgement in determining whether to have hands on or hands off • As far as is possible, continuously watch the perineum as much as possible and evaluate the risk of injury • Assist birth of the body of the baby by lateral flexion of the trunk following the curve of Carus • Use minimum amount of force required to achieve birth in order to reduce risk of perineal injury to woman and traction injury to fetus Refer to Section 5.6.1. Evidence and recommendations
Episiotomy	
When episiotomy is indicated Episiotomy should be performed: • At crowning of the fetal head • Using a mediolateral incision • At a minimum 60 degree angle from the posterior fourchette NB: An episiotomy is indicated for all women having their first vaginal birth requiring a forceps or ventouse assisted delivery	Follow a restrictive use policy for mediolateral episiotomy Perform mediolateral episiotomy at crowning of fetal head • Ideally, cut episiotomy at 60 degrees o Not less than an angle of 45 • Consider use of vacuum rather than forceps for assisted vaginal delivery when clinically possible[75] • Strongly consider performing a mediolateral episiotomy for instrumental birth, especially if: o Primiparous woman o Forceps used • Do not perform midline episiotomy for instrumental birth[82]
Examination	
For all women Genito-anal examination following birth needs to: • Be performed by an experienced clinician • Include a PR examination on all women, including those with an intact perineum	• Assessment to be performed by an experienced clinician trained in perineal assessment and alert to risk factors • If perineal trauma is identified, recommend a rectal examination
Assessment	
For all women All perineal trauma should be • Graded according to the RCOG grading guideline • Reviewed by a second experienced clinician to confirm the diagnosis and grading	• Perineal tear classification in guideline consistent with RCOG grading • Recommend perineal assessments by less experienced clinicians be repeated or supervised by an experienced clinician

Appendix B: Female genital mutilation

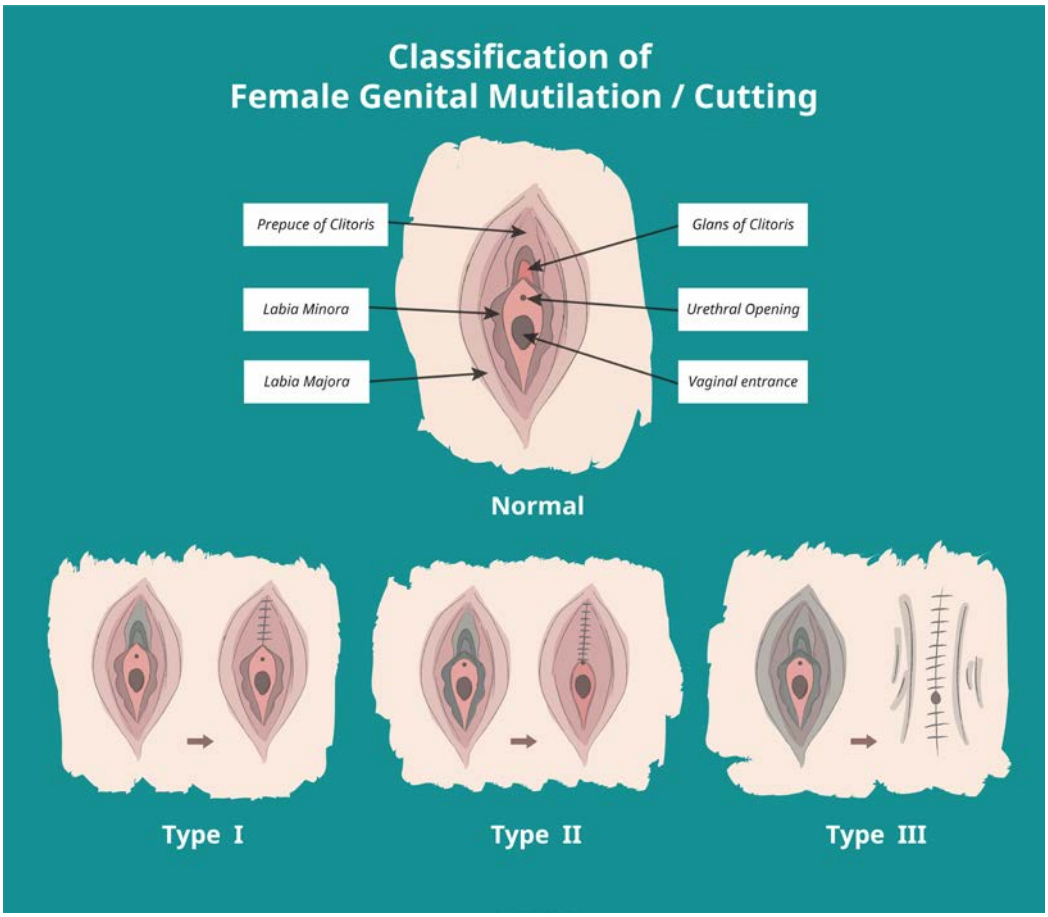
Countries where FGM is performed

FGM occurs in a band of countries from the Atlantic Coast to the Horn of Africa. There are wide variations in the proportions of girls and women cut both within and across countries[140]. Migrants from Somalia, Sudan, Ethiopia and Egypt make up the majority of affected women seen in Australia[11]. In Somalia and Sudan, more than 80% of women have undergone (predominantly Type 3) FGM. While FGM is predominantly performed in Africa, it is also practiced in some populations within the Middle East and Asia. FGM is illegal in Australia.

Countries in which FGM has been documented[144]

Benin
Burkina Faso
Cameroon
Central African Republic
Chad
Cote d'Ivoire
Djibouti
Egypt
Eritrea
Ethiopia
Gambia
Ghana
Guinea
Guinea-Bissau
India
Indonesia
Iraq
Israel
Kenya
Liberia
Malaysia
Mali
Mauritania
Niger
Nigeria
Senegal
Sierra Leone
Somalia
Sudan
Thailand
Togo
Uganda
United Arab Emirates
United Republic of Tanzania
Yemen

Classification of FGM



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