National Women & Infants Health Programme

National Clinical Practice Guideline

Intrapartum Care for Women on the Supported Care Pathway

INSTITUTE OF OBSTETRICIANS & GYNAECOLOGISTS

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

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Algorithms

Algorithm 1: Initial and On-going Assessment for Women in Labour

Initial and ongoing assessment for women in labour

Using this tool, assess the women to ensure that the Supported Care Pathway remains appropriate. The SCP is appropriate for normal-risk' women with uncomplicated singleton pregnancies, entering labour at low risk of developing intrapartum complications and between 37 and 42 weeks of pregnancy. It assumes labour starts spontaneously for the woman and that her unborn baby is in the vertex or head-down position.

Initial history taking to include:

Situation: Reason for and source of presentation and concerns.

Background history: parity, EDD, gestation, relevant social/demographic details, pregnancy, obstetric, medical, surgical and anaesthetic history, pregnancy screening results.

Assessment and findings: Vital signs, urine analysis, VTE score, abdominal palpation to include contraction length, strength and frequency, relevant system assessment dependant on complaint, maternal and fetal wellbeing assessment. **If there is any uncertainty, multidisciplinary discussion is necessary, with appropriate documentation.**

Initial assessment to determine appropriate pathway for labour

NB These lists are not exhaustive and an individualised assessment is recommended

	Green: Supported Care Pathway	**Red: Assisted or Specialised Pathway**
At labour presentation	• 37-42 weeks gestation • Maternal age ≥16 and ≤40 years • Last recorded Hb ≥10 g/dl • Spontaneous labour onset • Prolonged rupture of membranes < 18 hrs (* If IAP administration possible, may consider up to 24hrs on SCP, **NB:** neonatal observations in the postnatal period will also be required, in line with national guidance) • Any other woman in labour, deemed suitable for the SCP by a Consultant Obstetrician or Registered Advanced Midwife Practitioner	• Meconium stained liquor • HB <10.0g/dl • Prolonged rupture of membranes ≥ 18 hours (*if GBS status unknown/or IAP indicated – Refer to national guidance). • Prelabour ruptured membranes with known history of GBS • Placental or fetal abnormalities

	Green: Supported Care Pathway	Red: Assisted or Specialised Pathway
	Fetal: • Singleton, cephalic presentation • Vertex engaged • Appropriate fetal growth on SFH or USS >10th centile or <90th centile (using a 3 or 4 biometric measurement) • Fetal heart rate in line with national guidance • Normal fetal movement	**Fetal:** • Any abnormal presentation, including cord presentation • Transverse or oblique lie • High (4/5 to 5/5 palpable) or free-floating head in a nulliparous woman • Suspected fetal growth on SFH or on USS that is <10th centile or >90th centile (using a 3 or 4 biometric measurement) • Suspected anhydramnios/ oligohydramnios or polyhydramnios • Any fetal heart rate concerns
Medical factors (maternal)		• Confirmed cardiac disease • Asthma requiring increase in treatment/ hospital treatment in current pregnancy • Obstetric cholestasis • Platelets less than 100x10/L • Current active infection such as varicella/ rubella/genital herpes in the woman

Ongoing assessment and transfer criteria to the Assisted/Specialised Care Pathways,

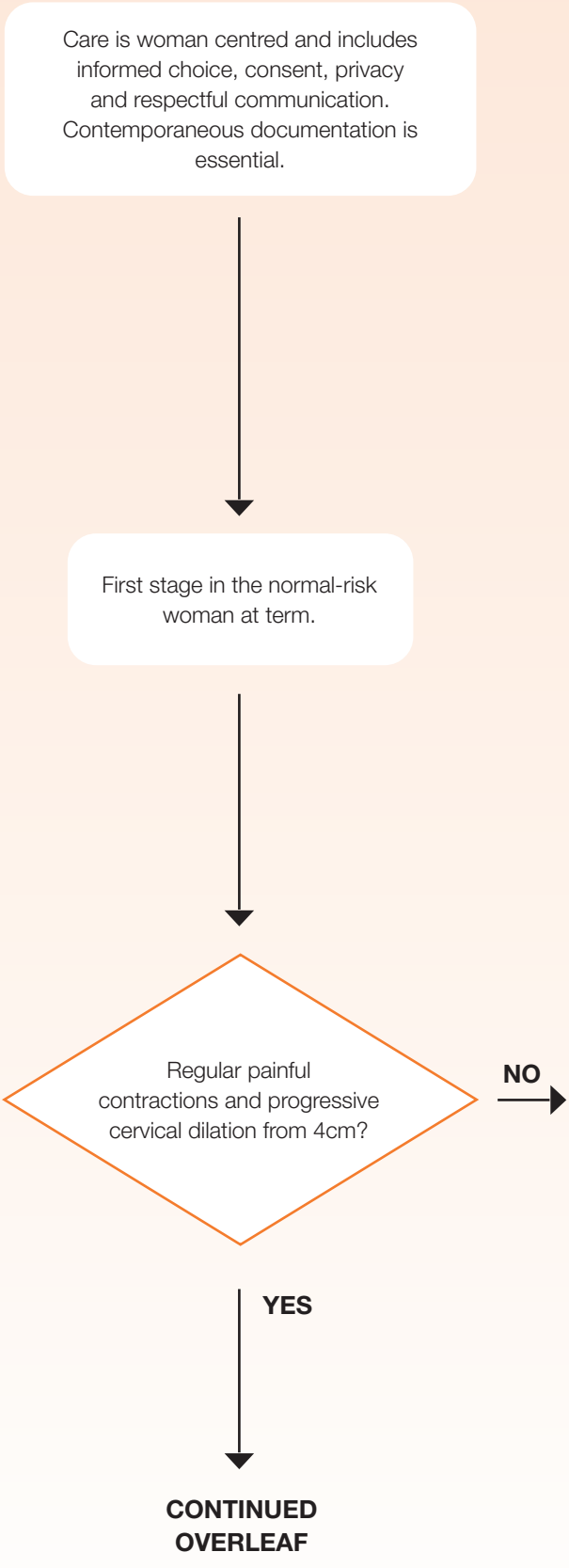
With consideration that if birth appears imminent, assess the suitability and safety of transfer at that point.

	Green: Supported Care Pathway	Red: Assisted or Specialised Pathway
Observations of the woman		• Maternal pulse >120 bpm on 2 occasions 15-30 minutes apart
		• A single reading of either raised **systolic** BP ≥160 mmHg or raised **diastolic** BP ≥110 mmHg • Either raised **systolic** BP ≥140 mmHg or raised **diastolic** BP ≥90 mmHg on 2 consecutive readings taken 15-30 minutes apart
		• Respiratory rate of less than 9 or greater than 21 on two occasions 15-30 minutes apart
		• A reading of ≥2+ of protein on urinalysis
		• Temperature ≥38°C on a single reading, or ≥37.5°C on 2 consecutive readings 1 hour apart

	Green: Supported Care Pathway	Red: Assisted or Specialised Pathway
		• Any vaginal blood loss other than a show
		• Rupture of membranes more than 18 hours. If *IAP administration possible, can remain up to 24hrs in SCP
	• Clear liquor	• Presence of meconium
		• Pain reported by the woman that differs from the pain normally associated with contractions
	• Coping with pain using non-pharmacological and pharmacological methods	• Request by the woman for additional pain relief using regional analgesia
	• Woman's preference to remain on the SCP	• Woman wishes to transfer care to Assisted/Specialised Care Pathway
Fetal wellbeing	• Fetal heart rate in line with national guidance	• Any fetal heart rate concerns
Progress in labour	**Established first stage of labour** • Progress of 2cm in 4 hours	**Confirmed delay in established first stage of labour if:** • progress of <1cm in 2 hours following promotion of physiological interventions such as mobilisation, emptying bladder and hydration **or** • progress of <1 cm in 2 hours following amniotomy
	Active second stage of labour • **Primiparous:** Birth anticipated within 2 hours of active second stage (See Algorithm 4) • **Multiparous:** Birth anticipated within 1 hour of active second stage (See Algorithm 5)	**Confirmed delay in the second stage if:** • **Primiparous:** Confirm delay after 2 hours of active 2nd stage of labour, birth would be expected to take place within 3 hours of the start of active 2nd stage • **Multiparous:** Confirm delay after 1 hour of active 2nd stage of labour, birth would be expected to have taken place within 2 hours of active 2nd stage
	Third stage of labour • **Placenta:** delivered within 30 minutes of active management **or** 60 minutes of physiological management • **Perineum:** Intact perineum/1st or 2nd degree tear	**Third stage of labour** • **Placenta:** undelivered after 30mins of active management **or** after 60mins of physiological management • **Perineum:** 3rd or 4th degree tear or other complex perineal trauma requiring suturing

	Green: Supported Care Pathway	Red: Assisted or Specialised Pathway
Obstetric/ Neonatal Emergencies	• No recognised obstetric/neonatal emergencies	• Obstetric/neonatal emergencies including but not limited to: intrapartum haemorrhage, cord prolapse, postpartum haemorrhage, shoulder dystocia, uterine inversion, maternal seizure or collapse or the need for advanced neonatal resuscitation

Algorithm 2: Care in the first stage of labour



Latent first stage

- Irregular painful contractions and some cervical effacement and dilatation less than 4cm
- Complete an initial assessment
- Reassure latent phase is normal
- Offer individualised support about rest, hydration, nutrition
- Advise mobilisation may establish contractions
- Discuss comfort strategies and their risks and benefits
- Involve support people/partner
- Offer admission or return/remain at home according to individual need/circumstances
- Provide information on when to return to hospital and/or notify healthcare professional
  - Increasing strength, frequency, duration of contractions
  - Requiring pain management
  - Vaginal bleeding, rupture of membranes
  - Reduced fetal movements
  - Any concerns
- Plan an agreed time for reassessment
- **Homebirth setting:** for women not in established labour following an assessment by a midwife, one of the following decisions should be made within 12 hours of assessment:
  - Remains at home
  - Established labour is diagnosed
  - Care is transferred to the Assisted/Specialised Care Pathway
- **Women admitted to hospital (on the SCP) if admitted and not in established labour**, within 12hrs one of the following decisions should be made:
  - Woman is discharged home
  - Labour is diagnosed
  - Transfer to the Assisted/Specialised Pathway

Established 1st Stage of Labour

Supportive care

- Consideration of emotional & psychological needs
- Labour companionship
- Pharmacological and non-pharmacological pain relief
- Nutrition and hydration
- Encouraging mobility
- Maternal choice of labour/childbirth position
- Continuous support

Monitor maternal condition

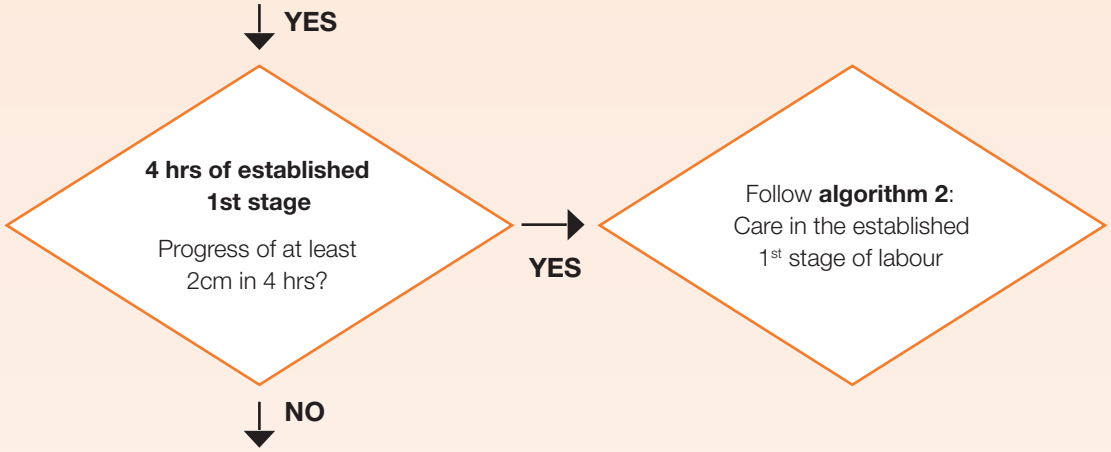
- Commence partogram for recording & provision of pictorial overview of progress in labour
- Hourly pulse
- 4 hourly temperature, blood pressure and respirations
- Frequency of passing urine
- Abdominal palpation: 4 hourly, prior to VE and as required to monitor progress
- Contractions: frequency, strength and duration of contractions every 30 minutes for 10 minutes
- Vaginal loss: hourly
- Offer VE: 4 hourly or as indicated
- Parameters of cervical dilation of:
  Primiparous: minimum of 2cm in 4 hours
  Multiparous: minimum of 2cm in 4 hours

Monitor fetal condition

- Fetal position,descent and rotation
- FHR: Auscultate every 15 minutes in line with national fetal monitoring guideline
- Colour and amount of amniotic fluid if membranes are ruptured
- fetal movement

Algorithm 3: Expected Progress in the Established 1st Stage of Labour for Primiparous and Multiparous women

Offer a vaginal examination within 2 hours of admission to the Supported Care Pathway with obvious signs of labour. If established labour is diagnosed i.e. regular painful contractions and progressive cervical dilation from 4cm, provide one to one midwifery care and commence partogram



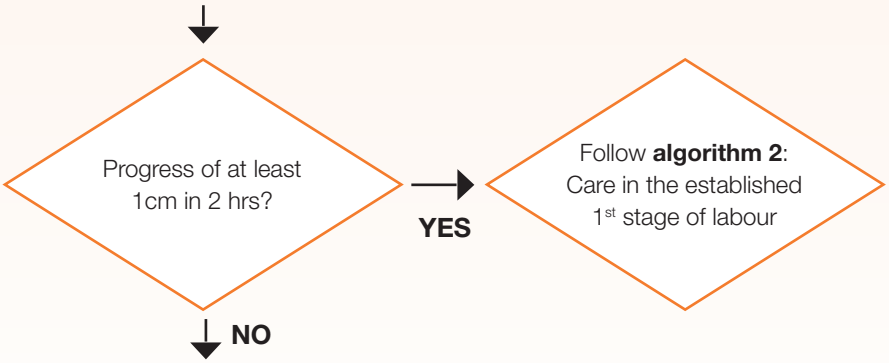
Suspect delay in established 1st stage of labour when cervical dilation <2cm in 4hrs

Assessment:

- Maternal and fetal condition
- Progress and descent of presenting part to include flexion, rotation and descent
- Uterine contractions – palpate length, strength, resting tone and frequency of contractions in a 10 minute period
- Auscultate fetal heart every 15 minutes[2]
- Coping strategies and pain relief
- Consider discussion with senior colleague

Actions:

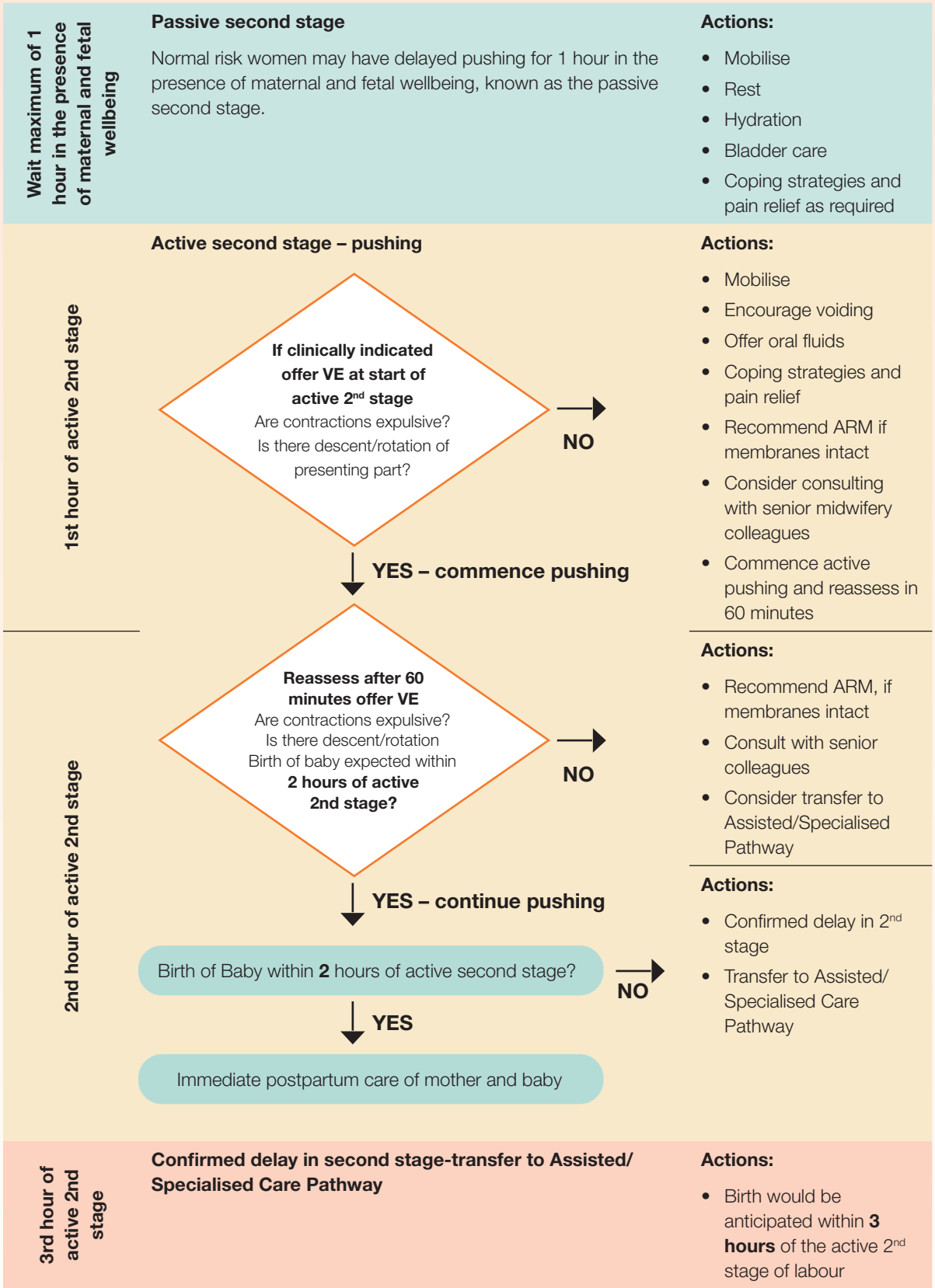
- Mobilise
- Bladder: monitor and encourage voiding
- Hydration and nutrition: offer oral fluids between contractions
- Consider ARM if membranes intact
- Re-examine in 2hours



Diagnose delay in 1st stage

Transfer to Assisted/Specialised Care Pathway

Algorithm 4: Expected progress in 2nd stage – primiparous woman



Algorithm 5: Expected progress in 2nd stage – multiparous woman

Wait maximum of 1 hour with no urge to push in the presence of maternal and fetal wellbeing

Passive second stage

Normal risk women may have delayed pushing for 1 hour in the presence of maternal and fetal wellbeing, known as the passive second stage.

Actions:

- Mobilise
- Rest
- Hydration
- Bladder care
- Coping strategies and pain relief as required

First 30 minutes of active 2nd stage

Active second stage – pushing

If clinically indicated offer VE at start of active 2nd stage
Are contractions expulsive?
Is there descent/ rotation of presenting part?

→ **NO**

YES – commence pushing

Actions:

- Mobilise
- Encourage voiding
- Offer oral fluids
- Coping strategies and pain relief
- Recommend ARM, if membranes intact
- Consider consulting with senior midwifery colleagues
- Commence active pushing and reassess in 30 minutes

Second 30 minutes of active 2nd stage

Reassess after 30 minutes – offer VE
Are contractions expulsive?
Is there descent/rotation
Birth of baby expected within **1 hour of active 2nd stage?**

→ **NO**

YES – continue pushing

Actions:

- Continue routine care (as above)
- Recommend ARM, if membranes intact
- Consult with senior colleagues
- Consider transfer to Assisted/Specialised Pathway

Birth of Baby within **1** hour of active second stage?

→ **NO**

YES

Immediate postpartum care of mother and baby

Actions:

- Confirmed delay in 2nd stage
- Transfer to Assisted/ Specialised Care Pathway

2nd hour of active 2nd stage

Confirmed delay in second stage-transfer to Assisted/ Specialised Care Pathway

Actions:

- Birth would be anticipated within **2 hours** of the active 2nd stage of labour

Algorithm 6: Management of the third stage of labour

Care is woman centred and includes informed choice, consent, privacy and respectful communication. Contemporaneous documentation is essential.

Active management of the third stage:
recommend for all births

- Oxytocin 10 IU IM after birth of baby
- Wait at least 1 minute and no more than 5 minutes after birth and then clamp and cut cord
- Controlled cord traction and uterine guarding after signs of separation
- **Prolonged after 30 minutes**

Physiological management of the third stage:

- Placenta birthed by maternal effort/gravity
- Oxytocin not administered
- Clamp cord after pulsation ceased
- Placenta delivered by maternal effort/gravity

Prolonged after 60 minutes

Ongoing care

- Encourage upright position
- Ensure bladder empty
- Maintain calm, warm and relaxed environment
- Support privacy and reduce unnecessary interruptions
- Observe general physical condition

>30 mins after birth with active management?

Prolonged Third Stage

>1 Hour after birth with physiological management?

If woman's condition is stable, i.e. not bleeding and placenta undelivered

Offer VE to assess need for manual removal

Use on-going care measures as detailed below: Upright position, empty bladder, skin-to-skin with newborn, consider breastfeeding; observe on-going physical condition

Revert to active management:

Give 10 IU Oxytocin IM or Syntometrine® 500 micrograms/5 IU

Following signs of separation and descent, apply controlled cord traction

Use on-going care measures: Upright position, empty bladder, skin-to-skin with newborn, consider breastfeeding; observe on-going physical condition.

Placenta delivered?

YES ← Routine postnatal care

NO → Secure IV access, transfer to the Assisted/Specialised Care Pathway

If at any stage there is excessive bleeding: secure IV access, administer IV Oxytocin and transfer to Assisted/Specialised Care Pathway

Definitions

Supported Care Pathway (SCP)	The Supported Care Pathway (SCP), is for women with uncomplicated singleton pregnancies, entering labour at low risk of developing intrapartum complications, and between 37 and 42 completed weeks of pregnancy. The SCP assumes labour starts spontaneously for the woman and that her unborn baby is in the vertex or head-down position.
'Normal-Risk' Pregnancy	A 'normal-risk' pregnancy is defined as a pregnancy where there is no identified risk factors, known pre-existing conditions or complications requiring additional tests or adapted management [1]
Latent first stage of labour	Latent first stage of labour is a period of time, not necessarily continuous, when there are contractions and there is some cervical change, including cervical position, consistency, effacement and dilatation up to 4 cm.
Established first stage of labour	Established first stage of labour is when there are regular uterine contractions and there is progressive cervical dilatation from 4cm.
Second stage of labour	The second stage of labour is the time from full dilatation of the cervix until birth of the baby. **Passive** second stage of labour: the time from when there is full dilatation of the cervix before or in the absence of involuntary or active pushing. **Active** second stage of labour is when the baby is visible or, there is involuntary or active pushing with full dilatation of the cervix.
Third stage of labour	The third stage of labour is the time from the birth of the baby to the expulsion of the placenta and membranes. **Active management** of the third stage involves a package of care comprising the following components: • routine use of uterotonic drugs • cord clamping and cutting of the cord • controlled cord traction after signs of separation of the placenta. **Physiological management** of the third stage involves a package of care that includes the following components: • no routine use of uterotonic drugs • no clamping of the cord until pulsation has stopped, or after delivery of the placenta • delivery of the placenta spontaneously
Immediate post-partum period	For the purpose of this guideline, the immediate postpartum period for the mother is defined as up to the first two hours after birth. The immediate postpartum period of the baby refers to the first few minutes after birth involving initial assessment and continued evaluation.

Key Recommendations

No.	Section 1: Birth environment and supportive strategies in labour	Grade
1.	Women on the Supported Care Pathway (SCP) should have access to birth environments including home, Alongside Birth Centres (ABCs) or a designated space, with the appropriate environment and processes, within a maternity unit.	Best practice
2.	Supportive birth environments should provide comfortable, low-technology birth equipment and access to labour aids e.g. birthing balls, stools, mats and pools to promote safe physiological labour and birth.	Best practice
3.	Respectful maternity care that maintains the woman's dignity, privacy and advocates for informed choice should be provided; this includes offering emotional support and aiming for freedom from harm for both the women and her family. The woman's consent should be sought before any procedures or observation.	Best practice
4.	Women should have support throughout labour and birth from a companion of her choice.	1C
5.	One-to-one care provided by a midwife is recommended for all women during labour and birth, preferably one known to her.	1A
6.	Maternity service provision should include the development of midwifery continuity of care models.	1A
	Section 2: Stratifying the pathway of care	
7.	A clinical assessment should be undertaken when pregnant women present in early or established labour to ensure the Supported Care Pathway is appropriate to her needs.	Best practice
8.	The initial midwifery assessment should include history taking, maternal and fetal observations, clinical examination, monitoring of the woman and her unborn baby and the woman's planned place of birth.	Best practice
9.	A pregnant woman with no antenatal care, presenting in labour, requires an obstetric assessment. The SCP is not considered an appropriate pathway of care.	Best practice
10.	On-going clinical assessment considers observation of the woman, the unborn baby and the woman's wishes for care.	Best practice
11.	Clinical features can change, a woman originally deemed suitable for the SCP may need to transfer, either temporarily or permanently, to another care pathway because of an emerging risk. She may also choose to transfer to another care pathway, e.g. if she wants an epidural, or if she chooses to be under the care of an obstetrician.	Best practice

12.	Women on the Assisted or Specialised Care Pathway who commence labour spontaneously may have their care transferred to the Supported Care Pathway if they are deemed to be normal risk for labour by a Consultant Obstetrician or a Registered Advanced Midwife Practitioner. This decision should be documented in the healthcare record.	Best practice
13.	All clinicians when transferring care should apply the core principles of safe and effective transfer of care: early recognition, transfer of care, preparation of the woman, clinical handover of care and continuity of carer.	Best practice
14.	**Principles of early recognition**: Escalation and de-escalation of care should be based on continuous risk assessment during labour and clinical judgement to prompt early recognition of when transfer is required.	Best practice
15.	**Principles of transfer of care:** a. The woman may require physical transfer of location with handover of clinical responsibility or solely handover of clinical responsibility. b. Transfer of care should be classified as urgent or non-urgent, depending on the clinical situation. c. In an emergency, it may be necessary to bring critical services to the woman in the Alongside Birth Centre and the clinical handover transfers the responsibility of care to the obstetrician. d. Depending on the indications for transfer, its urgency, time, distance to a maternity unit/hospital, the midwife caring for a woman in the home environment should use their clinical judgement to decide on the most appropriate mode of transport for transfer. If emergency transfer is indicated from the home, an ambulance must be called. e. Robust local protocols should be in place for transfer of care between birth settings (such as home, ABC, home-from-home rooms within a maternity unit or in the event specialist care is required e.g. neonatal intensive care). f. Skills and drills training should include 'dry runs' on a regular basis to ensure staff are aware of the shortest and fastest route to emergency facilities if required.	Best practice
16.	**Principles of preparation of the woman:** a. Women and families should be informed of their individual level of risk in relation to pregnancy and be included in decision making about their care. b. Women should be prepared both psychologically and physically to ensure respect and dignity is maintained during transfer of care. c. Clinical assessment of the woman and her baby should be maintained during physical transfer, alongside professional standards of care.	Best practice
17.	**Principles of clinical handover of care:** a. When arranging transfer of care from the Supported Care Pathway to the Assisted or Specialist Care Pathway, the coordinating midwife in the maternity unit should be informed of the transfer and make appropriate arrangements to receive the imminent transfer. b. At all stages of transferring care, clear communication of clinical information between healthcare professionals is required. Communicating care should be as per national communication guidelines using the ISBAR[3] clinical handover tool.	Best practice

18.	**Principles of continuity of carer:** In so far as is practical and possible, it should be aimed for the same midwife to continue the women's care as part of the integrated team after transfer of care to the Assisted or Specialised Care Pathway has occurred.	
	Section 3: First stage of labour	
19.	It is recommended standardised definitions, as outlined by the National Institute for Health and Care Excellence (NICE), are used to confirm the latent and established first stage of labour in conjunction with individual clinical assessment of the woman and with due regard to the signs of labour a woman reports.	1C
20.	Women with prolonged rupture of membranes greater than 18 hours and who require intrapartum antibiotic prophylaxis (IAP) for the prevention of GBS in term infants, can remain on the SCP only if IAP and postnatal neonatal observation can be provided in line with National Clinical Practice Guidelines for the Prevention of Early-onset Group B Streptococcal Disease in in Term Infants: Ireland (2023)	Best practice
21.	Women with prolonged rupture of membranes greater than 24 hours should be transferred to the Assisted or Specialised Care Pathway. If birth is imminent, the woman may remain on the SCP, following discussion with a senior clinician and including the woman.	Best practice
22.	Women should be informed of the benefits and risks of non-pharmacological and pharmacological pain-relieving strategies. Care should be individualised and have consideration for the woman's preferences and choice.	Best practice
23.	The provision of both non-pharmacological and pharmacological pain-relieving strategies should be made available to women in labour, including immersion in water**.**	1B
24.	When a woman contacts the maternity service, a detailed history should be taken and the woman's preferences taken into consideration.	Best practice
25.	Women should be listened to and an individualised plan of care is made in partnership with her.	Best practice
26.	A face to face early assessment of labour for all women contacting the midwife should be offered as appropriate.	Best practice
27.	Women presenting in the latent phase of labour should have a plan of care agreed with the midwife to include advice on coping strategies, accessing the maternity service and who to contact.	Best practice
28.	For the woman intending to birth at home who is not in established labour following assessment by a midwife, one of the following decisions should be made in collaboration with the woman within 12 hours of assessment: • Remains at home • Established labour is confirmed • Care is transferred to the Assisted or Specialised Care Pathway	Best practice

29.	In the event of a woman being admitted to Alongside Birth Centre (ABC) or maternity unit, who is not in established labour following assessment by a midwife, one of the following decisions should be made in collaboration with the woman within 12 hours of initial assessment: • The woman is discharged home • Established labour is confirmed and documented • Care is transferred to the Assisted or Specialised Care Pathway	Best practice
30.	An initial risk assessment should be carried out to determine if the woman is suitable for the SCP, irrespective of previous plans.	Best practice
31.	Digital vaginal examination at intervals of four hours should be offered for assessment of active first stage of labour, following abdominal palpation and assessment of vaginal loss. Vaginal examination includes assessment of dilation of the cervix, fetal position, descent and rotation.	1C
32.	Expected progress of cervical dilatation in the established first stage of labour is 2 cms in 4 hours for women on the Supported Care Pathway.	1A
33.	Use of a partogram is recommended for the recording and provision of a pictorial overview of progression in labour and to alert healthcare professionals when the need for escalation or transfer of care is required.	2C
34.	Plotting cervical dilation on a partogram should commence from the diagnosis of active first stage of labour at 4cm.	1A
35.	If there is a concern about the condition of the mother or the fetus, offer vaginal examinations more frequently following abdominal palpation and assessment of vaginal loss.	Best practice
36.	Maternal wellbeing should be assessed and recorded during the established first stage of labour. Every 30 minutes the frequency, strength and duration of uterine contractions should be recorded. Every 60 minutes maternal pulse should be recorded. Every four hours maternal temperature, blood pressure, respirations and frequency and ability to pass urine should be recorded.	Best practice
37.	Fetal wellbeing during the established first stage of labour should be assessed and recorded in line with the national clinical practice guideline on intrapartum fetal heart rate monitoring.	Best practice
38.	Routine amniotomy for spontaneous onset of labour with normal progress should not be performed.	1A
39.	The benefit of amniotomy should be discussed with the woman and if delay in established labour is suspected.	1A
40.	A delay in established first stage of labour should be suspected if progress of less than 2cm in 4 hours is confirmed on vaginal examination.	Best practice
41.	Women with suspected delay in progress with the membranes intact should be offered amniotomy, following explanation of the procedure and a discussion on the benefits and risks.	Best practice

42.	Women with suspected delay in the first stage of labour should be advised to have a vaginal examination two hours later regardless of having had an amniotomy performed or not.	Best practice
43.	Delay in the established first stage of labour should be confirmed if cervical dilation is less than 1cm after two hours of suspected delay. Care should be transferred to the Assisted or Specialised Care Pathway.	1C
44.	Transfer of care should be completed using the principles of safe and effective handover of care, including MDT communication and documentation.	Best practice
	Section 4: Second stage of Labour	
45.	It is recommended the following definitions of second stage of labour are used in clinical practice: • **Passive second stage of labour:** full dilatation of the cervix (determined by either vaginal examination or recognition of other external signs) before or in the absence of involuntary or active pushing. • **Active second stage of labour:** the baby is visible or there is involuntary or active pushing with full dilatation of the cervix.	1C
46.	Women in the active phase of the second stage of labour should be encouraged and supported to follow their own urge to push.	1C
47.	Maternal wellbeing assessment in the second stage of labour includes monitoring of uterine contractions, vital signs, frequency and ability of passing urine, vaginal loss including bleeding or discharge, psychological wellbeing and hourly vaginal examinations.	Best practice
48.	Fetal wellbeing assessment in the second stage of labour should include auscultation of the fetal heart (noting there is an increase in the frequency of monitoring in the second stage of labour), with the assessment of vaginal loss, including liquor if membranes have ruptured.	1C
49.	Assessment of progress also includes the woman's behaviour and ability to cope, the effectiveness of pushing on descent and rotation.	Best practice
50.	Women should be encouraged to adopt a position that is most comfortable and effective for her.	Best practice
51.	For women in the second stage of labour, techniques to reduce perineal trauma and facilitate spontaneous birth (including perineal massage and warm compresses) are recommended, based on a woman's preferences and available options.	2C
52.	Emergency equipment must be checked to ensure it is in good working order, with spare parts readily available in case of faulty equipment for all births. Standardised protocols for emergency equipment checking and neonatal resuscitation provide a consistent and higher standard of care.	Best practice
53.	Women with a normal risk pregnancy may have delayed pushing for 1 hour in the presence of maternal and fetal wellbeing, known as the passive second stage.	Best practice

54.	After one hour of passive second stage, if a woman has no expulsive contractions or there are no signs of descent or rotation of the fetal head, it is recommended to perform a vaginal examination and consider artificial rupture of membranes if intact.	Best practice
55.	Vaginal examination is recommended hourly or earlier if clinically indicated in the second stage of labour or sooner if there is a clinical suspicion of delay in progress. If there is no evidence of progress, such as descent and rotation an amniotomy should be considered if the membranes are intact.	Best practice
56.	Women should be encouraged with pushing, to change positions regularly, while also taking into consideration hydration, analgesia and bladder care.	Best practice
57.	If birth is not imminent after two hours pushing for a primiparous woman on the Supported Care Pathway, care should be escalated for diagnosed delay in the active second stage.	Best practice
58.	If birth is not imminent after one hour pushing for a multiparous woman on the Supported Care Pathway, care should be escalated for diagnosed delay in the active second stage.	Best practice
59.	Escalation and transfer of care to the Assisted or Specialised Care Pathway in the second stage should consider the principles of safe and effective transfer of care.	Best practice
	Section 5: Third stage of labour	
60.	Women should be informed of the benefits and risks of both active and physiological management of the third stage. Active management is the recommended practice for the management of the third stage of labour. The components of active management involves a package of care comprising of: a. routine use of uterotonic drugs b. deferred clamping of the cord c. controlled cord traction after signs of separation of the placenta.	2B
61.	Women who choose physiological management should be advised that it may be necessary to revert to active management if either of the following occurs: a. haemorrhage b. the placenta is not delivered within one hour from the birth of the baby	Best practice
62.	Prolonged third stage of labour should be diagnosed if it is not complete within 30 minutes of birth with active management or within 60 minutes of the birth with physiological management	Best practice
63.	In the event of a retained placenta: a. Secure intravenous access b. Provide the woman with an explanation as to what is happening c. In the event of excessive bleeding, intravenous oxytocic agents and resuscitative measures should be administered.	Best practice

64.	If the placenta is retained and there is a concern about the woman's condition: a. offer a vaginal examination to assess the need to undertake manual removal of the placenta b. Provide the woman with effective analgesia c. If uterine exploration is required and the woman is not in an obstetric unit, arrange urgent transfer using the principles of safe and effective transfer of care.	Best practice
65.	In the event of a postpartum haemorrhage, a retained placenta, incomplete placenta, maternal collapse, or any other concerns about the woman's wellbeing care should be escalated to a senior obstetrician. Transfer of care to the Assisted or Specialised Care Pathway should take place using the principles for safe and effective transfer of care.	Best practice
	Section 6: Immediate postnatal care of the mother and infant	
66.	All women and babies should have safe uninterrupted skin-to-skin contact. If a woman's condition does not allow for this or the woman declines, safe skin-to-skin contact should be facilitated with the birthing partner.	2B
67.	All postpartum women should have assessment of vaginal bleeding, uterine contraction, fundal height, and vital signs recorded on an IMEWS and escalation of care if abnormalities are identified within the first hour after birth.	Best practice
68.	All women should have a venous thromboembolism (VTE) risk assessment following birth prior to clinical handover of care to another healthcare provider or the midwife on leaving the home environment.	Best practice
69.	Clinical handover of care should include time and volume of any void post-delivery.	Best practice
70.	Transfer the woman with her baby to the Assisted or Specialised Care Pathway if any obstetric emergency is identified, if there is incomplete expulsion of the placenta, or if there is a clinical deterioration or concern for maternal wellbeing.	Best practice
71.	After vaginal birth, all women should have a systematic assessment of the vagina, perineum and anorectal area to identify the extent of bleeding, perineal trauma and repair significant injuries as soon as possible after delivery. Adequate exposure, lighting and analgesia are essential for a thorough examination.	Best practice
72.	Perineal tears should be classified using the accepted classification system recognised by the RCOG (2015) and NICE(2023): • First-degree tear: Injury to perineal skin and/or vaginal mucosa • Second-degree tear: Injury to perineum involving perineal muscles but not involving the anal sphincter • Third-degree tear: Injury to perineum involving the anal sphincter complex: – Grade 3a tear: Less than 50% of external anal sphincter (EAS) thickness torn – Grade 3b tear: More than 50% of EAS thickness torn – Grade 3c tear: Both EAS and internal anal sphincter (IAS) torn • Fourth-degree tear: Injury to perineum involving the anal sphincter complex (EAS and IAS) and anorectal mucosa	Best practice

73.	Women that need further surgical or anaesthetic expertise for perineal repair should be transferred with her baby to Assisted or Specialised Care Pathway following the principles for safe and effective transfer of care.	Best practice
74.	It is recommended to repair periclitoral, periurethral, and labial lacerations that are bleeding or alters anatomy. A clinician's decisions whether to suture a first or second degree tear or not should be based on clinical assessment and judgement of the extent, depth and approximation of the perineal tear, the extent of bleeding from the trauma and the woman's preference.	2C
75.	Continuous suturing techniques for perineal closure are recommended compared with interrupted methods.	2C
76.	Synthetic sutures are recommended due to the reduction in perineal pain experienced by women.	2C
77.	It is recommended as best practice that women are provided with information about the extent of the trauma, pain relief, diet, hygiene and the importance of pelvic-floor exercises following repair of perineal trauma. Provision of adequate pain relief is an essential principle of perineal repair.	Best practice
	Section 7: Infant	
78.	A second midwife skilled in neonatal resuscitation whose sole responsibility is management of the newborn should be in attendance at all births.	Best practice
79.	Time of birth should be recorded and the onset of regular respirations for all babies.	Best practice
80.	Immediately after birth the condition of the baby should be assessed to determine if resuscitation is required. This is done by evaluating-the baby's respiration, heart rate and tone. Resuscitation should be conducted in line with the American Heart Association (AHA)/American Academy of Paediatrics (AAP) Neonatal Resuscitation Programme (NRP).	Best practice
81.	Apgar scores at 1 minute and 5 minutes should be evaluated, documented and used as a tool for conveying information about the overall condition of the baby at the birth.	Best practice
82.	All babies should be risk assessed at birth to determine if neonatal observations are required, e.g. if there has been prolonged rupture of membranes for greater than 18 hours.	Best practice
83.	Mothers and babies should have immediate, unhurried and uninterrupted safe skin-to-skin contact if there are no clinical concerns with either, which is continued for at least 60 minutes or until after the first feed, considering the need for baby to be given time to go through the instinctive post birth stages.	2B
84.	All babies should be routinely monitored when in skin-to-skin contact with mother or birth companion in line with advice regarding Sudden Unexpected Postnatal Collapse (SUPC) of a Newborn Infant from Prof. John Murphy, National Clinical Lead for Neonatology, The National Women and Infants Health Programme (NWIHP) and Ms Angela Dunne, NWIHP Lead Midwife (Appendix 4)	Best practice

Chapter 1: **Initiation**

The National Clinical Effectiveness Committee (NCEC) and Health Information and Quality Authority (HIQA) define clinical guidelines as systematically developed statements, based on a thorough evaluation of the evidence, to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances, across the entire clinical spectrum[1].

1.1 Purpose

The purpose of this guideline is to provide comprehensive, evidence-based and person-centred guidance for both healthcare professionals and women in the Republic of Ireland.

1.2 Scope

Target users

The Guideline is a resource for all clinicians working in maternity settings. The target users include registered midwives of all grades and student midwives working under supervision, working within a hospital/unit and/or community setting.

Target population

The target population for this guideline is women with normal-risk pregnancies on the Supported Care Pathway (SCP) in spontaneous labour up to the immediate postpartum period, i.e. women who are pregnant with no identified risk factors, known pre-existing conditions or complications requiring additional tests or adapted management[1], their partners, families and carers. It may also include any woman deemed suitable for the SCP at labour onset by a Consultant Obstetrician who received antenatal care on the assisted or specialised pathway.

This Guideline will not address fetal monitoring in labour or the prevention of early onset of Group B Streptococcus. These topics are covered in existing national guidelines in Ireland[2, 3]. The guidance on water birth is beyond the scope of this guideline and reference should be made to National Clinical Practice Guideline Care of Women Using a Birthing Pool for Labour and/or Birth Waterbirth (in development at the time of writing).

1 National Clinical Effectiveness Committee (NCEC) and Health Information and Quality Authority (HIQA) (2015) National quality assurance criteria for clinical guidelines. Version 2. Dublin: NCEC and HIQA. https://assets.gov.ie/11533/2d070cb758a44fcb8b56f28784b10896.pdf

1.3 Objective

- To provide evidence based recommendations for the care of women with normal-risk pregnancies on the Supported Care Pathway (SCP) in spontaneous labour up to the immediate postpartum period.
- To standardise care for normal-risk women in labour nationally across all maternity hospitals/units/ Alongside Birth Centres/and in the home, to include the birth environments, supportive strategies, risk assessments, escalating and de-escalating care pathways, care in the stages of labour and the immediate postpartum period.

The focus of this Guideline is the care of women with normal-risk pregnancies on the Supported Care Pathway (SCP) in spontaneous labour up to the immediate postpartum period, i.e. women who are pregnant with no identified risk factors, known pre-existing conditions or complications requiring additional tests or adapted management[1,4].

1.4 Guideline development process

The Guideline Developers agreed to undertake this work under the direction of the Guideline Programme Team (GPT), and the Midwifery leadership team at the National Women and Infants Health Programme (NWIHP).

The Guideline Developer Group consisted of:

- *Nora Vallejo (Advanced Midwife Practitioner)*
- *Emer McCormack (Advanced Midwife Practitioner)*
- *Mary Rowland (Assistant Director of Midwifery)*
- *Maria Pia Dado (Clinical Skills Facilitator)*
- *Maria Healy (Senior Lecturer Midwifery)*
- *Mary Brosnan (Director of Midwifery)*
- *Mendinaro Imcha (Obstetrician and Gynaecologist)*
- *Consol Plans (Obstetrician and Gynaecologist)*

The Guideline writing group members were Nora Vallejo, Emer McCormack and Mary Rowland with contributions from Maria Pia Dado.

The National Expert Advisory Group (EAG) critically reviewed the Guideline on two occasions prior to submission to the National Women and Infants Health Programme (NWIHP) for final approval in 2025. The scope of the guideline, as defined by the care of women with normal-risk pregnancies on the Supported Care Pathway (SCP) in spontaneous labour, was considered and discussed as potentially limiting.

However, the scope was predetermined by Nursing and Midwifery Board of Ireland (NMBI) in their Scope of Midwifery Practice which states “the scope of midwifery practise is the expected range of roles, functions, responsibilities and activities that a registered midwife with NMBI is educated for and is competent and authorised to perform”. More specifically, the scope of midwifery practice is also identified in EC Directive of 2005 (2005/36/EC). As a result, the scope of this Guideline is defined by the midwifery role and responsibilities in labour. It is intended for women whose care is provided by midwives, regardless of where the midwife practices, including midwifery-led units, homebirths, and labour wards and forms the basis of midwifery practice.

See Appendix 1 for EAG membership and Appendix 2 for the Guideline Programme Process.

1.5 Stakeholder involvement

Stakeholders are people who have a common interest in improving health services. This includes persons that are responsible for delivering and those who receive services related to this clinical guideline.

Stakeholder development group including representation from Midwifery, Neonatology and service user representatives were invited to review the guideline during the development process (Appendix 3). The Guideline Development Group would like to acknowledge the reviewers' contribution in the development of this Guideline.

1.6 Disclosure of interests

Guideline developers and reviewers bring a range of experiences and perspectives to the work of the national Guideline Programme. It is likely that both Guideline developers and stakeholders/reviewers will have a variety of interests, arising from different contexts and activities done in a professional or personal capacity. These can include employment and other sources of income, speaking engagements, publications and research, and membership of professional or voluntary organisations. The involvement of individuals with relevant content expertise is essential for enhancing the value of Guideline recommendations, but these individuals may also have interests that can lead to conflicts of interest, as may peer reviewers, patient representatives and researchers.

All interests should be declared if, in the view of a reasonable person, they are relevant, or could be perceived to be relevant, to the work of the Clinical Practice Guideline in question[2]. Declaring an interest does not mean there is a conflict of interest. It is important that interests are openly declared so they can be appropriately managed. Conflicts of interest can bias recommendations and ultimately be harmful to women and the health system. Disclosures of interests and appropriate management of conflicts of interest, when identified, are therefore essential to producing high-quality, credible health guidelines.[3]

The Guidelines International Network (GIN), a global network of Guideline developers that aims to promote best practices in the development of high-quality guidelines, developed a set of 9 principles to provide guidance on how financial and non-financial conflicts of interest should be both disclosed and managed. It is recommended that Guideline developers follow the GIN principles.[4]

For this National Clinical Practice Guideline, all Guideline developers are asked to complete a conflict of interest declaration form. The response to declared interests will be managed by the Guideline programme team, in accordance with GIN principles. Conflicts of interest may be reported in the published Guideline and declarations of interest can be made available.

2 NICE (2019) Policy on declaring and managing interests for NICE advisory committees https://www.nice.org.uk/Media/Default/About/Who-we-are/Policies-and-procedures/declaration-of-interests-policy.pdf

3 Traversy G, Barnieh L, Akl EA, Allan GM, Brouwers M, Ganache I, Grundy Q, Guyatt GH, Kelsall D, Leng G, Moore A, Persaud N, Schünemann HJ, Straus S, Thombs BD, Rodin R, Tonelli M. CMAJ. 2021, 193(2):E49-E54. DOI: 10.1503/cmaj.200651 https://www.cmaj.ca/content/193/2/E49

4 Holger J. Schünemann, Lubna A. Al-Ansary, Frode Forland, *et al.*; for the Board of Trustees of the Guidelines International Network. Guidelines International Network: Principles for disclosure of interests and management of conflicts in guidelines. Ann Intern Med. 2015;163:548-553. doi:10.7326/M14-1885. https://www.acpjournals.org/doi/10.7326/m14-1885

1.7 Disclaimer

These guidelines have been prepared to promote and facilitate standardisation and consistency of good clinical practice, using a multidisciplinary approach. Information in this Guideline is current at the time of publication.

The ultimate judgement regarding a particular clinical procedure or treatment plan must be made by the Clinician in light of clinical data presented by the woman and the diagnostic and treatment options available.

Clinical material offered in this Guideline does not replace or remove clinical judgment or the professional care and duty necessary for each specific woman.

Clinical care carried out in accordance with this Guideline should be provided within the context of locally available resources and expertise.

This Guideline does not address all elements of standard practice and assumes that individual clinicians are responsible for:

- Discussing care with women in an environment that is appropriate and which enables respectful confidential discussion. This includes the use of interpreter services where necessary
- Advising women of their choices and ensure informed consent is obtained
- Provide care within professional scope of practice, meeting all legislative requirements and maintaining standards of professional conduct
- Applying standard precautions and additional precautions, as necessary, when delivering care
- Documenting all care in accordance with local and mandatory requirements

1.8 Use of language

Within this guidance we use the terms 'woman' and 'women's health'. However, it is important to acknowledge that people who do not identify as cis-gender women are excluded from this descriptor, including people who identify as transgender, gender diverse and gender non-binary[5]. While there has been a trend to remove the word 'woman/women' and use 'gender neutral' language in policy and practice in relation to women's reproductive health and wellbeing, there is no evidence base to inform this change.[6] We also appreciate that there are risks to desexing language when describing female reproduction[7] [8].

Services and delivery of care must be appropriate, inclusive and sensitive to the needs of people whose gender identity does not align with the sex they were assigned at birth. This includes training and education regarding diverse pathways to pregnancy and the use of practices which affirm the

5 Moseson H, Zazanis N, Goldberg E, *et al.* The Imperative for Transgender and Gender Nonbinary Inclusion. Obstet Gynecol. 2020;135(5):1059-1068. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7170432/

6 Council of Deans of Health. Midwifery Network position paper: use of sexed language. May 2023. https://www.councilofdeans.org.uk/2024/02/midwifery-network-position-paper-use-of-sexed-language/

7 Brotto LA, Galea LAM. Gender inclusivity in women's health research. BJOG: An International Journal of Obstetrics & Gynaecology. https://obgyn.onlinelibrary.wiley.com/doi/full/10.1111/1471-0528.17231

8 Gribble KD, Bewley S, Bartick MC, *et al.* Effective Communication About Pregnancy, Birth, Lactation, Breastfeeding and Newborn Care: The Importance of Sexed Language. *Frontiers in Global Women's Health*. 2022;3. Accessed June 9, 2022. https://www.frontiersin.org/article/10.3389/fgwh.2022.818856

sexual and gender identities of all people using Obstetrics and Gynaecology services. Finally, all those using maternal and reproductive health care and services should receive individualised, respectful care including use of the gender nouns and pronouns they prefer.[7]

Language use is key to effectively communicate options, recommendations, and respectfully accept a woman's fully informed decision[9]. With this in mind, the use of birth is preferable to the term delivery in all circumstances and is used consistently where possible throughout the guidelines. It is acknowledged that in some circumstances (e.g., in the case of a medically indicated intervention or surgery) and in some contexts, substituting with the term delivery is considered appropriate and this term may be used instead.

1.9 Adopting a trauma-informed approach to maternity care

Many women accessing maternity services may have experienced historical or current trauma prior to, or during pregnancy – including emotional, physical, sexual abuse, rape and torture. The perinatal period (pregnancy, birth and the postpartum) can be a time when previous trauma is triggered[10]. Maternity care procedures which may seem routine and 'non-invasive' to healthcare professionals (HCPs), e.g., abdominal palpation or providing breastfeeding support can be triggering for some women with a history of trauma, as can intimate procedures such as vaginal examinations[11].

Trauma-informed care (TIC) is a developing approach to healthcare which recognises the importance of psychological safety, and the need to prevent or resist re-traumatisation of individuals[12]. It is based on 4 key principles (known as the 4Rs): (1) realisation of trauma; (2) recognition of trauma; (3) responding to trauma and (4) resisting re-traumatisation[13,]. A trauma-informed approach to maternity care means that all staff in an organisation have an understanding of the impact of trauma on individuals, families and organisations[14]. While a universal approach is yet to be agreed, within clinical practice and research, many organisations recognise the need to move towards becoming trauma-informed in the provision of maternity care[15, 15]. Such an approach requires commitment, investment and transformation within maternity services.

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9 https://blogs.bmj.com/bmj/2018/02/08/humanising-birth-does-the-language-we-use-matter/

10 Horsche A., Garthus-Niegel S., Ayers S, Chandra P., Hartmann K., Caisbuch E., Lalor J (2024). Childbirth-related posttraumatic stress disorder: definition, risk factors, pathophysiology, diagnosis, prevention, and treatment. Am J Obstet Gynecol. 2024 Mar;230(3S): S1116-S1127. doi: 10.1016/j.ajog.2023.09.089

11 Montgomery E. Feeling safe: a metasynthesis of the maternity care needs of women who were sexually abused in childhood. Birth 40:88-95. Birth. 2013 Jun;40(2):88-95. doi: 10.1111/birt.12043

12 Vogel TM, Coffin E. (2021). Trauma-informed care on labor and delivery. Anesthesiol Clin. 2021 Dec;39(4):779-791. doi: 10.1016/j.anclin.2021.08.007

13 SAMHSA's concept of trauma and guidance for a trauma-informed approach Rockville. October 2014. https://library.samhsa.gov/product/samhsas-concept-trauma-and-guidance-trauma-informed-approach/sma14-4884

14 Law C, Wolfenden L, Sperlich M, Taylor J. A (2021). Good practice guide to support implementation of trauma-informed care in the perinatal period. The centre for early child development (Blackpool, UK) commissioned by NHS England and NHS Improvement in 2021. https://www.england.nhs.uk/publication/a-good-practice-guide-to-support-implementation-of-trauma-informed-care-in-the-perinatal-period/

15 Ayers, S., Horsch, A., Garthus-Niegel, S., Nieuwenhuijze, M., Bogaerts, A., Hartmann, K., Karlsdottir, S. I., Oosterman, M., Tecirli, G., Turner, J. D., Lalor, J., & COST Action CA18211 (2024). Traumatic birth and childbirth-related post-traumatic stress disorder: International expert consensus recommendations for practice, policy, and research. *Women and birth: journal of the Australian College of Midwives*, *37*(2), 362-367. https://doi.org/10.1016/j.wombi.2023.11.006

In simple terms, HCPs should recognise the impact of women's previous or current history of trauma (whether disclosed or not) and adopt a universally sensitive approach to care provision that recognises the impact of trauma on service users and HCPs. Examples of this include ensuring clear communication and consent is sought before any procedures/interventions, ensuring women are provided with dignity and respect at all times.

Chapter 2:
Clinical Practice Guideline

Background

Irish maternity services compare well internationally in terms of safety and clinical outcomes; however, historical service deficits have undermined public confidence in maternity services in recent years[5]. In light of this, a National Maternity Strategy[5] was developed to fundamentally overhaul maternity services and recognise the value of best available evidence, informing women about choices in maternity care, stratifying pregnancy risk and supporting women on their pregnancy journey.

A strategic priority of the National Maternity Strategy is to standardise practice, with consistent and equitable women-centred care across all settings nationally. The National Women and Infants Health Programme (NWIHP) provide improved oversight and governance of maternity services, raising quality and standardising care[5]. Maternity services have a responsibility to ensure equitable access to safe, quality healthcare regardless of means and location. The Strategy acknowledges pregnancy and birth as a normal physiological process where care is woman-centred, provided at the right time, by the right team, in the right place by a lead health care professional who has overall clinical responsibility [5].

Whilst the Strategy supports an evidence-based and team-based approach to care across all settings, it also advocates for integrated care as close to home as possible. This places midwives as part of the multidisciplinary team (MDT) between community and hospital, supporting the woman through all stages of her pregnancy. The Strategy endorses a risk-based approach to maternity service provision, placing the normal-risk woman within a midwifery-led care model, known as the Supported Care Pathway (SCP), whilst recognising the safety and importance of bi-directional escalation and de-escalation of care between professionals and care pathways. The Department of Health outlined recommendations for stratifying women into care pathways in the National Clinical Guideline No. 23 commissioned by the National Clinical Effectiveness Commitee[1].

This Clinical Guideline development group recognises the established influence of the bio-medical model of care in Ireland and its impact on maternity services, often criticised for an '*over medicalised model of childbirth for low risk women'* [6,7]. The Guideline Development Group concurs with international and national strategic bodies [5, 8] vision on excellence in maternity care, recognised as integrated team-based care, stakeholder involvement, strong midwifery leadership, robust governance structures and evidence-based practice guidelines. These elements are recognised as essential for care to be considered woman and family centred, safe and accessible.

The International Confederation of Midwives (ICM)[9] and the Nursing & Midwifery Board of Ireland (NMBI)[10] state that midwives offer care based on a philosophy recognising 'pregnancy and childbearing as usually a normal physiological process' and is a profound experience with significant meaning to a woman, her family and the community. Midwifery Practice Standards recognise the provision of safe competent, kind and compassionate care, informed by the best available evidence, the midwifes expertise, and the woman's experiences, preferences and values as fundamental standards of care[11]. The scope of midwifery practice[10] is inclusive of women during pregnancy, labour and into the postpartum period recognising midwives:

'care for and help the mother during labour and monitor the condition of the baby in the womb using appropriate clinical and technical means', 'conduct spontaneous deliveries' and 'recognise the warning signs of abnormality in the mother or baby's condition which need to be referred to a doctor, and assist the doctor if necessary'(p8 and 9)[10]

Midwives are deemed the most appropriate lead healthcare professional to provide autonomous care for women of normal risk on the Supported Care Pathway.

The Supported Care Pathway (SCP)

As per the National Maternity Strategy, the SCP is intended for normal risk women and babies, with midwives leading and delivering care within a multidisciplinary framework[5]. Responsibility for the coordination of a woman's care is assigned to a named clinical midwife manager, with care delivered by the midwifery team. When there is ambiguity in respect to eligibility for the SCP, clinical opinion should be sought from a senior clinical decision maker.

The aim of the SCP is to provide the majority of a woman's antenatal and postnatal care in the primary care setting, i.e. her community and home. The woman may exercise choice with her healthcare professional about the birth setting, which may be in an Alongside Birth Centre (ABC), in a maternity unit or at home. Transfer of care, either temporary or permanent, to another model of care, i.e. the Assisted or Specialised Care Pathways, maybe necessary because of an identified risk[1]. The woman may also choose to transfer to another care pathway, e.g., if she wants an epidural, or if she wishes to be under the care of an obstetrician[5].

Recommendations relevant to this Guideline:

- National Clinical Effectiveness Committee Communication (Clinical Handover) in Maternity Services National Clinical Guideline No. 5: Ireland (2014)[12]
- Policy and Procedure to Support SECM (Self Employed Community Midwife) to Transfer Women or Babies from Home to Hospital Maternity Services Revision No: 2. (2018)[13]
- Irish Maternity Early Warning System (IMEWS) (NCEC National Clinical Guideline No. 4 Version 2). (2019) [14]
- Health Service Executive (2020). National Standards for Antenatal Education in Ireland. Ireland[15]
- National Consent Policy. Health Service Executive(2022).[16]
- National Infant Feeding Policy for Maternity & Neonatal Services. (2019)[17]
- National Clinical Practice Guideline: Prevention and Management of Primary Postpartum Haemorrhage (2022)[18]
- Recording Clinical Practice: Professional Guidance (2017) Nursing and Midwifery Board of Ireland[19]
- National Clinical Practice Guideline: Prevention of Early-onset Group B Streptococcal Disease in in Term Infants: Ireland (2023)[3]
- National Clinical Practice Guideline: Induction of Labour (2023)[20]
- National Clinical Practice Guideline: Assisted Vaginal Birth (2025)[21]
- National Clinical Practice Guideline on Postnatal Midwifery Care for Mother and Infant. Ireland (Due 2025)
- National Clinical Practice Guideline: Fetal Heart Rate Monitoring (2025)[2]
- National Clinical Practice Guideline: Care of Women Using a Birthing Pool for Labour and/or Birth (Due 2025)

Section 1: Birth environment and supportive strategies in labour

Introduction

This section will discuss the international and national recommendations collated from reviews and literature on birth environment, supportive strategies inclusive of psychological, physiological and respectful care. Here and throughout the guidelines, where local evidence to support clinical practice was lacking, international guidelines were reviewed, including those produced by the National Institute for Health & Care Excellence (NICE), World Health Organisation (WHO), The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) and Guideline and Audit Implementation Network (GAIN) Northern Ireland. On the occasion where no clinical evidence has been identified to support clinical questions, clinical practice and recommendations were built on group consensus and expertise.

In respect to birth environment and supportive strategies for labour and birth, promoting physiological birthing for women with normal risk pregnancies in labour has been shown to have positive effects on birth outcomes for both women and their babies.

Clinical Question 2.1: What birth environment is most appropriate for women on the Supported Care Pathway?

Evidence Statement

Most births in Ireland take place in a hospital environment or obstetric unit (OU); a small proportion happen at home or within Alongside Birth Centres (ABCs) or also commonly known as Midwifery-Led Units (MLUs). Data from the Birthplace Cohort Study[22] identified that for 'low-risk' women the incidence of adverse perinatal outcomes (intra-partum stillbirth, early neonatal death, neonatal encephalopathy, meconium aspiration syndrome and specified birth related injuries such as brachial plexus injury) was low (4.3 events per 1000). The study found that for low risk multiparous women who planned to give birth at home or in a midwifery unit, either an ABC or a Free-Standing Midwifery Unit (FMU) had significantly fewer interventions, including fewer intrapartum caesarean sections and higher rates of spontaneous vaginal birth than those in OUs. The study also identified that low risk nulliparous women planning to give birth in a midwifery-led (ABC or FMU) had similar lower rates of interventions and the outcomes for the baby was no different compared with an obstetric unit. If a nulliparous woman planned for birth at home there is an increase in the risk of adverse outcomes for the baby compared to planned birth in a Midwifery unit (9.3 adverse perinatal outcome events per 1000 planned home births compared with 5.3 per 1000 births in Midwifery unit).

The National Maternity Strategy[5] following robust review of the evidence on birthplace recommends that women on the Supported Care Pathway give birth in an Alongside Birth Centre or at home. Women on the Supported Care Pathway can exercise a choice with regard to the birth setting. It is recommended that Alongside Birth Centre's should ideally be situated immediately alongside and contiguous to a Specialised Birth Centre (current labour ward). If a maternity unit is determined small sized, it is recommended by the strategy that a designated space with an appropriate environment and processes is established within a Specialised Birth Centre for normal risk women[5].

Fundamental to care is a woman and baby-friendly birth environment, see **Table 1**; one that is comfortable, clean, safe and promotes her well-being, that of her baby and that of the family. It respects her needs, preferences and privacy. The physical infrastructure should be of a high standard, provide a homely environment, and be calm and relaxing to support normal birth outcomes. Modern facilities including birthing aids and birthing pools should be available [8]. Every woman and every new-born baby should be protected against unnecessary intervention, practices that are not evidence based and that are disrespectful of culture, bodily integrity and dignity[23]

Table 1: Summary of criteria indicating a mother and newborn-friendly maternity facility FIGO (2015)[24]

Criteria	Indicators
Adopt preferred positions for women in labour and provide food and beverages	Written policy and implementation as observed during care
Privacy in labour/delivery	Curtains, walls, etc. observed
Choice of birthing partner	Accommodation of partners, including traditional birth attendant observed
Culturally competent care	Training, posters, policies, direct observations of care
No physical, verbal, emotional, or financial abuse	Written policy, display Charter of Human Rights, no abuse observed, exit questionnaires for mothers/families/partners
Affordable or free maternity care	Costs clearly posted and in line with national guidelines
No routine practice	Evidence-based interventions in protocols and seen in direct observation
Non-pharmacological and pharmacological pain relief	Training on pain relief, direct observation of relief methods
Skin-to-skin mother-baby care and breastfeeding	Protocols/policies on combined care of mother and baby, immediate breastfeeding, observations of care

Clinical Practice

Women on the Supported Care Pathway should have the choice to birth in an Alongside Birth Centre (ABC), at home or if a maternity unit is determined small sized, there should be a designated space with a low-tech environment and processes to support physiological birthing in a specialised birth centre.

For women in labour and their companions, clean, comfortable waiting areas should be available. There should be space for women to walk around, access to clean toilets, refreshments and drinking water.

All supportive birth environments provide comfortable, low-technology birth equipment and access to labour aids e.g. birthing balls, stools, mats and pools to promote safe physiological labour and birth.

Recommendations

1. Women on the Supported Care Pathway (SCP) should have access to birth environments including home, Alongside Birth Centres (ABC's) or a designated space, with the appropriate environment and processes, within a maternity unit.
2. Supportive birth environments should provide comfortable, low-technology birth equipment and access to labour aids e.g. birthing balls, stools, mats and pools to promote safe physiological labour and birth

Clinical Question 2.2: What supportive strategies should a woman receive in labour?

Evidence Statement

Supportive birth partner

Women value and benefit from the presence of a support person during labour and childbirth. Support from a partner of choice is positively associated with improved outcomes for both women and infants. In a Cochrane systematic review of 26 studies, involving more than 15,000 women from a wide variety of settings and circumstances, it was found that women in labour receiving continuous support from a doula, a midwife or companion of the woman's choice such as her partner, relative or friend was beneficial[25] Benefits include increased rates of spontaneous vaginal birth, shorter duration of labour, decreased incidence of caesarean birth, assisted vaginal birth, analgesia use, including regional analgesia, low five-minute Apgar score and negative feelings about childbirth experiences[25]. Although this evidence is of low quality due to limitations in study design, there was no evidence of harm associated with continuous labour support from a birth companion and appears to increase maternal satisfaction with the birth experience. The World Health Organisation[8] and National Maternity Strategy [5]support and encourage a supportive birth companion with women in labour.

Respectful maternity care

Support in labour may be considered as the provision of psychological care and physiological care[25]. It may be provided with reassurance, sharing of information about labour progress and advice regarding coping techniques, comfort measures (e.g. warm baths/showers, encouraging mobility, promoting adequate fluid intake and output) as well as advocating on behalf of the woman when needed[25]. Irrespective of where birth occurs, consensus supports a woman's right to a positive birth experience and to dignified, compassionate care during childbirth[23]. Evidence endorsed by International Federation of Gynaecology and Obstetrics (FIGO)[24] affirms women and babies be treated with dignity and respect regardless of background, health or social status. The World Health Organisation (WHO)[8] advocate for and recommends respectful maternity care. Respectful maternity care relates to care that is organised for and provided to all women that maintains 'dignity, privacy, advocates for informed choice, emotional support, and aims for freedom from harm'[26].

Model of professional care

In respect to professional support in labour, midwives are the most appropriate care providers to attend childbearing women[9]. A Cochrane systematic review examined midwife-led continuity models and compared with other models of maternity care in terms of morbidity, mortality, effectiveness and psychological outcomes[27].This review included 17 trials involving 18,533 randomised women in

total and included studies in the public health systems in Australia, Canada, China, Ireland and the United Kingdom. The review found that women who received midwife-led continuity models of care as compared to other models of care, were more likely to experience spontaneous vaginal birth 66% to 70% (risk ratio (RR) 1.05, 95% confidence interval (CI) 1.03 to 1.07; 15 studies, 17,864 participants; moderate-certainty evidence). There was a likely reduction in in caesarean sections from 16% to 15% (RR 0.91, 95% CI 0.84 to 0.99; 16 studies, 18,037 participants; moderate-certainty evidence). There were no statistically significant differences between groups for caesarean births or intact perineum[27]. For the secondary outcomes, when compared to other models of care, midwife continuity of care models likely reduce instrumental vaginal birth (forceps/vacuum) from 14% to 13% (average RR 0.89, 95% CI 0.83 to 0.96; 14 studies, 17,769 participants; moderate-certainty evidence), and may reduce episiotomy 23% to 19% (average RR 0.83, 95% CI 0.77 to 0.91; 15 studies, 17,839 participants; low-certainty evidence)[27]. In general, women reported more positive experiences during pregnancy, labour and postpartum with midwife-led continuity of care models compared to other models of care[27]. Similarly, these findings are also reflected at national level in Ireland. The National Maternity Experience Survey[28] found women's overall experience of midwifery-led care ranked the highest when compared to other types of maternity care. The Cochrane review did not identify any adverse effects of continuous support in labour[27]. One-to-one support in labour is recommended by international professional bodies [8, 29, 30].

Clinical practice

There was no evidence of harm associated with continuous labour support from a birth companion and it appears to increase maternal satisfaction with the birth experience. Women's choice of birth companion should be respected and supported.

Provide respectful maternity care maintaining the woman's dignity, respecting her privacy, advocating for informed choice, providing emotional support, and aiming for freedom from harm for the woman and her family. Gain the woman's permission and consent before any procedures or observations are conducted. In acknowledgment of a trauma-informed approach to care, recognise the impact of a woman's previous or current history of trauma (whether disclosed or not), and adopt a universally sensitive approach to care provision that recognises the impact of trauma on service users and HCPs. Examples of this include ensuring clear communication and consent is sought before any procedures/ interventions, ensuring a woman is provided with dignity and respect at all times.

The midwife has a role in providing physiological and psychological care, to include reassurance and encouragement alongside advice about coping techniques, progress, comfort measures and advocating on behalf of the woman. This care extends to the woman's birth companion.

Women should have an assigned midwife in labour, preferably one known to her, providing one to one care. For effective care and support, the National Standards for Safer Better Maternity Services recommend continuity of care(r) in labour should be promoted for a woman to ensure no element of her care '*falls through potential gaps in the maternity service'* (p.52) [31]. Women must know who is responsible and accountable for her care and that evidence-based information is available to her when clinical decisions are being made.

Recommendations

3. Respectful maternity care that maintains the woman's dignity, privacy and advocates for informed choice should be provided; this includes offering emotional support and aiming for freedom from harm for both the women and her family. The woman's consent should be sought before any procedures or observation.
4. Women should have support throughout labour and birth from a companion of her choice
5. One-to-one care provided by a midwife is recommended for all women during labour and birth, preferably one known to her.
6. Maternity service provision should include the development of midwifery continuity of care models.

Section 2: Stratifying the pathway of care

Introduction

The National Maternity Strategy[5] endorses a risk-based approach to maternity service provision recognising some women need more specialised care than others and one where '*women and babies have access to safe, high quality care in a setting that is most appropriate for their needs'* (pg. 5). All necessary safety nets should be in place and in line with patient safety principles aiming to deliver care at the lowest level of complexity, but with the capacity to provide specialised and complex care quickly and with smooth transfer between pathways of care[5]. Transfer of care, either temporary or permanent, to another pathway of care, i.e. the Assisted or Specialised Care Pathways, may be necessary because of an identified emerging risk. The term 'transfer of care' indicates escalation or de-escalation of the woman's care to a different care pathway. Transfer of care may be solely transfer of responsibility for the woman's care from a midwife to an obstetrician (i.e. the woman labouring in a home-away-from-home room situated on the obstetric unit may not require a physical transfer). Transfer of care also includes a transfer of responsibility for the woman's care from a midwife to an obstetrician as well as a physical transfer (i.e. a woman labouring at home or in an adjacent ABC would require a physical transfer of care from one location to another).

Clinical Question 2.3: What clinical assessments are performed to identify a woman as suitable for Supported Care Pathway?

Evidence Statement

Evidence from high resource countries supports that birth is generally safe for the woman and her baby, either multiparous or nulliparous women, who are at low risk of complications[8, 32]. The National Maternity Standards for Safer Better Maternity Services recommend that all staff have a responsibility to identify and manage risk and use evidence-based decision-making to maximise safe outcomes for women and their babies[31].

The National Clinical Guideline – Stratification of clinical risk in pregnancy classifies women into care streams, as outlined by the NMS[5], Supported (normal-risk), Assisted (medium-risk) and Specialised (high-risk) care streams. Although there are no studies identified in this guideline, due to limited literature, there are consensus based 'strong recommendations' that the level of risk should be kept under review before, during and after delivery and recognise that if the level of risk evolves women should be able to transition seamlessly between carestreams[1]. The aforementioned guideline, developed to manage the implementation and governance of risk assessment, recognises that *safe*, effective care and treatment ensures that patients get the best outcomes from their care[1]

The National Institute of Health and Care Excellence (NICE)[32] advocates an initial assessment when a woman presents in labour to determine if midwifery-led care in any setting is suitable, irrespective of any previous plans. It is recommended practice that at each point of maternity care contact, women undergo a full clinical assessment to determine they are receiving care from the most appropriate healthcare professional[33, 31, 23]. This initial assessment is the cornerstone for identifying if escalation or de-escalation of pathway of care is required for the normal risk woman in labour. Recommendations include that at each point of contact, a review is undertaken to ensure that the level of care provided is meeting the women's ongoing or emerging clinical needs [5, 31, 33].

High profile independent reviews into care provided to women in pregnancy, birth and the postnatal period[33] and national standards of care[31] recognise continued clinical assessments of maternal and fetal wellbeing with appropriate actions in labour, are considered an essential standard of quality maternity services. Clinical assessments, including the observation of the woman and her unborn baby with relevant parameters outlined in Clinical Practice, below. Achieving these standards ensures care meets the ongoing and emerging needs of women[8, 1]. Evolving risk factors may change recommendations with respect to care of the woman in labour. These should be shared with the woman so she has an opportunity to input into any decision and make an informed decision[1]. Any transfer should follow national guidance with appropriate documentation, including MDT discussion and handover of care[12, 32, 13].

A pregnant woman with no antenatal care, presenting in labour requires an obstetric assessment, a medical examination and a review of her medical, psychological and social history[34]. The Supported Care Pathway is not an appropriate level of care for women presenting with no antenatal care. A woman may need to transfer, either temporarily or permanently, to another model of care because of an emerging risk.

Clinical Practice

The Supported Care Pathway is appropriate for normal-risk women with uncomplicated singleton pregnancies, entering labour at low risk of developing intrapartum complications and between 37 and 42 weeks of pregnancy. It assumes labour starts spontaneously for the woman and that her unborn baby is in the vertex or head-down position.

The midwife's initial assessment includes history taking which is listening to the woman's story and considers her emotional and psychological needs. The midwifes' initial assessment considers history taking, observation, clinical examination and monitoring of the woman and her unborn baby. This includes:

Observation of the woman

- Review and discussion of her maternity care records, either electronic or paper, including all screening results, social and demographic details
- Record the length, strength and frequency of any uterine contractions she may be having

- Record any pain she may be experiencing
- Record her blood pressure, temperature, pulse and urinalysis
- VTE Screen
- Record any vaginal loss.

Observation of the unborn baby

- Ask about baby's movement, including the pattern, in the past 24 hours
- Palpate her abdomen to determine symphysis fundal height, baby's presentation, lie, engagement and position.
- Auscultate the fetal heart using intermittent auscultation with a Pinard or Doppler as per national clinical practice guideline[2]

Initial assessment determines if a woman's pregnancy is of normal-risk in labour and her suitability for intrapartum care commencing on the SCP. There may be mothers or babies considered to be at medium or high risk during pregnancy and hence stratified to the Assisted or Specialised Care Pathways during pregnancy. If the pregnancy risk is absent in labour, these women will stratify as eligible for the SCP following review and documented plan of care by a consultant obstetrician or Advanced Midwife Practitioner.

On-going clinical assessments considers observation of the woman, the unborn baby, and the woman's wishes for level of care. Clinical features can change; a woman originally deemed suitable for the SCP may require or request her care be transferred to the Assisted or Specialised Care Pathways. Observations requiring escalation of care for the woman and the unborn baby during labour and in the immediate postnatal period include:

Observations of the woman

- Pulse over 120 beats/minute on 2 occasions 15-30 minutes apart
- A single reading of either raised diastolic blood pressure of 110 mmHg or more or raised systolic blood pressure of 160 mmHg or more
- Either raised diastolic blood pressure of 90 mmHg or more or raised systolic blood pressure of 140 mmHg or more on 2 consecutive readings taken 15-30 minutes apart
- A respiratory rate of less than 9 or more than 21 breaths per minute on two occasions 15-30 minutes apart
- A reading of 2+ of protein on urinalysis and a single reading of either raised diastolic blood pressure (90 mmHg or more) or raised systolic blood pressure (140 mmHg or more)
- Temperature of 38°c or above on a single reading, or 37.5°c or above on 2 consecutive readings 15-30 minutes apart.
- Any vaginal blood loss other than a show
- The presence of meconium

- Rupture of membranes more than 18 hours before the onset of established labour, requiring Intrapartum Antibiotic Prophylaxis unless IAP and postnatal neonatal observation can be provided in line with National Clinical Practice Guidelines for the Prevention of Early-onset Group B Streptococcal Disease in in Term Infants: Ireland (2023)[3]. Women with prolonged rupture of membranes greater than 24 hours should be transferred to the Assisted or Specialised Care Pathway. If birth is imminent, the woman may remain on the SCP, following discussion with a senior clinician and including the woman.
- Pain reported by the woman that differs from the pain normally associated with contractions
- Confirmed delay in the first, second or third stage of labour
- Request by the woman for additional pain relief using regional analgesia
- An obstetric emergency including but not limited to antepartum haemorrhage, cord prolapse, postpartum haemorrhage, shoulder dystocia, uterine inversion, maternal seizure or collapse or the need for advanced neonatal resuscitation
- Retained placenta
- Third-degree or fourth-degree tear or other complex perineal trauma requiring suturing
- A request by the woman to transfer

Observations of the fetus/baby

- Any abnormal presentation, including cord presentation
- Transverse or oblique lie
- High (4/5 to 5/5 palpable) or free-floating head in a nulliparous woman
- Suspected fetal growth restriction or macrosomia
- Suspected oligohydramnios/anhydramnios or polyhydramnios
- Abnormal fetal heart rate, as outlined in national guidance[2]
- Any deceleration auscultated following a contraction
- Neonatal resuscitation
- Clinical concern with the condition of the new born infant

See ALGORITHM 1: 'Initial and On-Going Assessment for Women in Labour'

If a clinical risk is identified that requires an escalation of care to the Assisted or Specialist Care Pathway, the principles of safe and effective transfer of care should be adhered to.

The Supported Care Pathway is not an appropriate level of care for women presenting with no antenatal care.

Recommendations

7. A clinical assessment should be undertaken when a pregnant women presents in early or established labour to ensure the Supported Care Pathway is appropriate to her needs.
8. The initial midwifery assessment should include history taking, maternal and fetal observations, clinical examination, monitoring of the woman and her unborn baby and review the woman's planned place of birth.
9. A pregnant woman with no antenatal care, presenting in labour, requires an obstetric assessment and the SCP is not considered an appropriate pathway of care.
10. On-going clinical assessment considers observation of the woman, the unborn baby, and the woman's wishes for care.
11. Clinical features can change, a woman originally deemed suitable for the SCP may need to transfer, either temporarily or permanently, to another care pathway because of an emerging risk. She may also choose to transfer to another care pathway, e.g. if she wants an epidural, or if she chooses to be under the care of an obstetrician.
12. Women on the Assisted or Specialised Care Pathway who commence labour spontaneously may have their care transferred to the Supported Care Pathway if they are deemed to be normal risk for labour by a Consultant Obstetrician or a Registered Advanced Midwife Practitioner. This decision should be documented in the healthcare record.

Clinical Question 2.4: What are the core principles of safe and effective transfer of care from the Supported Care Pathway?

Evidence statement

Whilst healthy women with medically uncomplicated pregnancies at term and entering labour are at low risk of intrapartum complications, recommendations should be included for those that do develop complications[34].

HIQA[31] stipulate proactive identification, evaluation and management of immediate and potential risks to women and their babies and that necessary actions are taken to manage these risks as a standard of maternity care. These standards include structured arrangements to minimise risks to mothers and babies during transfer of care within and between service providers.

The National Maternity Strategy discusses the need for appropriate referral and transfer to an enhanced level of care when risk or needs profile changes[5].This should be in line with standardised protocols and adhere to NCEC[12] guidelines. The Strategy recognises escalation of care, prompt treatment and actions can ensure optimum outcomes for women and their babies[5, 1]. Timely and appropriate recognition of risk, assessment of the severity of the condition, accurate diagnosis of the condition and escalation to the correct senior staff from multiple disciplines is essential[5,1]. Further proposals for safe and effective transfer include recommendations for continuity of care(r)[1], and a maternal retrieval service to ensure the timely and appropriate transfer of a clinically deteriorating woman and/or baby to the most appropriate facility[5]. Transferring care to the Assisted or Specialist Care Pathway may occur for various reasons, for example due to a request by the woman for an epidural, if there is an identified need for continuous fetal

monitoring or any maternal/fetal concerns. It is recommended in so far as is possible the same midwife will continue the women's care[5].

NICE[34] define transfer of care as 'the transfer between midwifery-led care and obstetric-led care'. They further outline that transfer may or may not require transport from one location to another and that women receiving care in an obstetric unit may have responsibility for their care transferred without being physically moved. In the context of a woman planning a home birth 'transfer means move from one place to another' (Oxford Dictionary) and in the HSE Homebirth transfer policy[13] it means 'to move the woman or baby's care from home to a maternity unit/hospital for medical care under a consultant obstetrician'. In an emergency, the necessary critical services may be brought to the woman in the Alongside Birth Centre[5] if deemed the safest option. From the perspective of managing risk and safety in the maternity unit, all health care workers should be aware of the shortest and fastest route to theatres and that regular 'dry runs' are performed [31].

All stages of transferring care requires clear communication of clinical handover between healthcare professionals [5, 1, 12, 34, 35.] Communicating care should be as per national communication guidelines and using ISBAR3 tool [12]. Clinical handover is the transfer of professional responsibility and accountability for care of a patient to another healthcare professional on a temporary or permanent basis[12].

Women and families should be informed of their individual level of risk in relation to pregnancy and be included in decision making about their care[1, 34]. Shared decision making and informed consent is an essential component of maternity care[16, 36, 32, 13].

Clinical Practice

Early recognition

Continuous risk assessment during labour using clinical judgement and risk assessment tools will assist timely, proactive identification of potential and emerging risks to women and their babies during labour. Appropriate referral and transfer to an enhanced level of care, i.e. the Assisted or Specialised Care Pathway should occur when risk or need profile changes. This should be in line with standardised protocols and adhere to NCEC guidelines.

Transfer of care

The term 'transfer of care' indicates escalation or de-escalation of the woman's care to a different pathway. Transfer of care may be solely transfer of clinical responsibility for the woman's care from a midwife to an obstetrician or accompanying transferring clinical responsibility, a physical transfer from one location to another, e.g. from an ABC or the woman's home to an obstetric unit. Each maternity care provider should ensure structured arrangements are in place to minimise risk to mothers and babies during transfer of care within and between service providers. Local protocols and procedures should be developed to ensure safe, timely and effective care of women and their babies. It is recommended all maternity care providers have an opportunity to practice skills in a simulation based environment, e.g. 'dry runs' to theatre or from an ABU, familiarising staff with local layout, equipment, protocols and the expected standards of care. Transferring care to the Assisted or Specialist Care Pathway will occur, for example, due to a request by the woman for an epidural, if there is an identified need for continuous fetal monitoring or if there is an identified delay in progress in the stages of labour.

Assessment by the midwife as to the urgency of the transfer is essential. Consider that multiple risk factors may increase the urgency of a transfer, particularly if they have a cumulative effect: obstetric emergency, including antepartum haemorrhage, cord prolapse, shoulder dystocia, maternal seizure or collapse, uterine inversion, post-partum haemorrhage or a need for advanced neonatal resuscitation. In an emergency, the necessary critical services may be brought to the woman in the Alongside Birth

Centre and the clinical handover transfers the responsibility of care to the obstetrician. Depending on the indications for transfer, urgency, time, and distance to a maternity unit/hospital, a midwife caring for a woman in the home environment should use their clinical judgement to decide on the most appropriate mode of transport to use for transfer. If emergency transfer is indicated from the home, an ambulance must be called[13].

Care during transfer

Women and families should be informed of their individual level of risk in relation to pregnancy and birth, and be included in decision making about their care. The reason for transfer should be discussed with the woman and family. Shared decision making and informed consent is an essential component of maternity care. Women should be prepared psychologically and physically, to ensure privacy and dignity are maintained during transfer of care. A seamless transfer between pathways of care should occur. When transferring a woman from one location to another ensure:

- The woman is dressed, wrapped in a blanket or covered comfortably to maintain dignity
- The woman is as comfortable as possible during transfer aiming to adopt positions of comfort
- Explain arrangements and communicate with the woman
- Aim for continuity of carer in so far as is possible
- Continue fetal heart rate monitoring as appropriate for her stage in labour
- Facilitate the woman's birthing partner to accompany in so far as is possible and practical
- Ensure if a woman has birthed in one location either home or ABC that her baby is transferred along with her if safe to do so.

Clinical handover of care

All stages of transferring care require clear communication of clinical information between healthcare professionals. When arranging transfer of care from the Supported Care Pathway to the Assisted or Specialist Care Pathway, ensure the coordinating midwife in the maternity unit is aware. The coordinating midwife will alert relevant personnel of the imminent transfer of care and prepare for the arrival of the woman and baby. Communicating care should be clear concise and in a systematic format using the ISBAR3 tool as per national communication guidelines[12]. Clinical handover is the transfer of professional responsibility and accountability for care of a patient to another healthcare professional on a temporary or permanent basis. Communication should include sharing relevant information about:

- The pregnancy, birth, postnatal period and any complications
- A plan of ongoing care, including any condition that needs long-term management
- Problems related to previous pregnancies that may be relevant to current care
- Previous or current mental health concerns
- Female genital mutilation (mother or previous child)
- Who has parental responsibility for the baby, if known
- The woman's next of kin
- Safeguarding issues or child protection concerns
- Concerns about the woman's health and care, raised by her, her partner or a healthcare professional
- Concerns about the baby's health and care, raised by the parents or a healthcare professional
- How the baby is feeding and record of baby's urine and stool output.

Clear documentation of the reasons for transfer and any communication with the Multidisciplinary Team

(MDT), including hand-over of care should be maintained as per national and professional standards.

Continuity of carer

It is recommended in so far as is possible the same midwife will continue the woman's care when transfer of care pathway is required.

Recommendations

13. All clinicians when transferring care should apply the core principles of safe and effective transfer of care: early recognition, transfer of care, preparation of the woman, clinical handover of care and continuity of carer.
14. **Principles of early recognition:**

    Escalation and de-escalation of care should be based on continuous risk assessment during labour and clinical judgement to prompt early recognition of when transfer is required.
15. **Principles of transfer of care:**
    a. The woman may require physical transfer of location with handover of clinical responsibility or solely handover of clinical responsibility
    b. Transfer of care should be classified as urgent or non-urgent, depending on the clinical situation
    c. In an emergency, it may be necessary to bring critical services to the woman in the Alongside Birth Centre and the clinical handover transfers the responsibility of care to the obstetrician
    d. Depending on the indications for transfer, its urgency, time, distance to a maternity unit/hospital, the midwife caring for a woman in the home environment should use their clinical judgement to decide on the most appropriate mode of transport for transfer. If emergency transfer is indicated from the home, an ambulance must be called
    e. Robust local protocols should be in place for transfer of care between birth settings (such as home, ABC, home-from-home rooms within a maternity unit or in the event specialist care is required e.g. neonatal intensive care)
    f. Skills and drills training should include 'dry runs' on a regular basis to ensure staff are aware of the shortest and fastest route to emergency facilities if required

16. **Principles of preparation of the woman:**
    a. Women and families should be informed of their individual level of risk in relation to pregnancy and included in the decision making about their care
    b. Women should be prepared both psychologically and physically to ensure respect and dignity is maintained during transfer of care.
    c. Clinical assessment of the woman and her baby should be maintained during physical transfer, alongside professional standards of care.
    d. Seamless transfer between pathways of care should be strived for at all times.
    e. Clear documentation of the reasons for transfer and any communication with the Multidisciplinary Team (MDT), including hand-over of care should be maintained as per national guidance and professional standards.
17. **Principles of clinical handover of care:**
    a. When arranging transfer of care from the Supported Care Pathway to the Assisted or Specialist Care Pathway, the coordinating midwife in the maternity unit will be informed of the transfer and make appropriate arrangements to receive the imminent transfer.
    b. At all stages of transferring care, clear communication of clinical information between healthcare professionals is required. Communicating care should be as per national communication guidelines using the ISBAR[3] clinical handover tool.
18. **Principles of continuity of carer:**

    In so far as is practical and possible, it should be aimed for the same midwife to continue the women's care as part of the integrated team after transfer of care to the Assisted or Specialised Care Pathway has occurred.

Section 3: First stage of labour

Introduction

In this section the CDG examined international evidence to define the stages of the first stage of labour. The evidence supporting the assessment, management and supportive care a woman should receive in labour is addressed.

Clinical Question 2.5: What is the definition of labour?

Evidence Statement

Exact definitions, understanding of and the duration of time from the start of labour contractions until progressive dilatation can be challenging for women and healthcare professionals alike. It calls for a collaborative approach to care, with an individualised and mutually agreeable plan that also provides encouragement and support as needed[37].

There are a number of definitions available for latent and active labour. Three systematic reviews on the definitions of onset of latent and active phases of the first stage of labour were identified[38 39 40.] The World Health Organisation (WHO) considered the evidence provided in the systematic reviews[38,39 40] to determine the following definitions for labour in their recommendations for *Intrapartum Care for a Positive Childbirth Experience*[8]**:**

> *'The latent first stage is a period of time characterised by painful uterine contractions and variable changes of the cervix, including some degree of effacement and slower progression of dilatation up to 5 cm for first and subsequent labours'.*
>
> *Active labour is a period of time characterised by regular painful uterine contractions, a substantial degree of cervical effacement and more rapid cervical dilatation from 5 cm until full dilatation for first and subsequent labours'* WHO[8, p.35]

Variation exists in respect to the agreed degree of cervical dilatation and the onset of the active or established phase of labour; the American College of Obstetricians and Gynaecologists[41] suggests this does not occur until the woman is 5-6 cm dilated.

The National Institute for Health and Care Excellence provides the following definitions[32]:

- **Latent first stage of labour:** Is a period of time, not necessarily continuous, when there are contractions and some cervical change, including cervical position, consistency, effacement and dilatation up to 4 cm
- **Established first stage of labour:** When there are regular painful contractions and there is progressive cervical dilatation from 4cm.

A meta-synthesis of primigravid women's experiences in early labour[42] included eleven studies and found that many women reported that increasing pain was an indication of active labour and therefore a reason to attend hospital. Strong pain was a sign that labour was progressing where the women felt professional support was needed and felt vulnerable if their reports of pain and labour were not believed, highlighting the need for individual assessment.

Clinical Practice

To date, there is an absence of nationally agreed definitions of labour in the Republic of Ireland. The majority of midwifery-led services have adopted definitions from the UK's National Institute for Health & Care Excellence (NICE) *Intrapartum Care*[32], however in many settings disparities remain in determining when a woman may be in active labour.

For the purpose of this guideline, the following definitions of the first stage of labour should be used:

- **Latent first stage of labour** is a period of time, not necessarily continuous, when: there are contractions and there is some cervical change, including cervical position, consistency, effacement and dilatation up to 4 cm.
- **Established first stage of labour** when there are regular contractions and there is progressive cervical dilatation from 4cm.

Recommendation

19. **It is recommended standardised definitions, as outlined by the National Institute for Health and Care Excellence (NICE), are used to confirm the latent and established first stage of labour in conjunction with individual clinical assessment of the woman and with due regard to the signs of labour a woman reports**

Clinical Question 2.6: How should women with rupture of membranes greater than 18 hours in labour be managed on the Supported Care Pathway?

Evidence statement

The evidence appraised in the National Clinical Practice Guideline – Prevention of Early Onset Group B Streptococcal Disease in Term Infants, outlines the indications for the use of intrapartum antibiotic prophylaxis (IAP). The consensus of GDG is to concede to the recommendations outlined within the Clinical Practice Guideline[3]

Clinical Practice

Women who require IAP for prolonged rupture of membranes greater than 18 hours may remain on the Supported Care Pathway if IAP can be provided and there is 24 hour access to neonatal services. In the case whereby IAP cannot be provided, the woman should be transferred to a birth setting where IAP can be. Women should be transferred to the Assisted or Specialised Care Pathway once there is prolonged rupture of membranes greater than 24 hours, regardless of GBS status [3]. In the event of imminent birth, the woman may remain on the SCP, following a discussion with a senior clinician and the woman.

Recommendations

20. **Women with prolonged rupture of membranes greater than 18 hours and who require intrapartum antibiotic prophylaxis (IAP) for the prevention of GBS in term infants, can remain on the SCP only if IAP and postnatal neonatal observation can be provided in line with National Clinical Practice Guidelines for the Prevention of Early-onset Group B Streptococcal Disease in in Term Infants: Ireland (2023)**
21. **Women with prolonged rupture of membranes greater than 24 hours should be transferred to the Assisted or Specialised Care Pathway. If birth is imminent, the woman may remain on the SCP, following discussion with a senior clinician and including the woman.**

Clinical Question 2.7: What pain relieving strategies are available for labour?

Evidence Statement

Multiple physiological and psychosocial factors can influence women's experience of pain during labour, including the care context and the care provider[8]. Pain management strategies include non-pharmacological and pharmacological interventions[43]. Most methods of non-pharmacological pain management are non-invasive and appear to be safe for mother and baby[43,44].

Pain in labour has multiple systemic effects such as increased blood pressure, hyperventilation and oxygen consumption that may cause respiratory alkalosis and reduce the amount of blood flow to the fetus. Moreover, it is associated with an increased release of maternal catecholamine and cortisol, which in turn increases the risk of feto-maternal complications and labour dystocia[43,44].

Non-pharmacological pain relief options, including continuous labour support, are based on the understanding of the complex hormonal physiology and neurophysiological mechanisms that regulate the experience of pain and are recognised as safe and with the potential to reduce obstetric interventions, increase breastfeeding rates, and improve the mother's satisfaction without increasing morbidity[44].

Non-pharmacological pain-relieving strategies

Relaxation techniques (breathing exercises, yoga hypnosis, and mindfulness)

A Cochrane systematic review examined the effects of mind-body relaxation techniques for pain relief during labour and included 19 trials (2519 women). Interventions included relaxation, yoga, music and mindfulness[45]. Relaxation compared to usual care provided, lowered the intensity of pain (measured on a scale of 0 to 10 with low scores indicating less pain) during the latent phase of the first stage of labour (mean difference (MD) -1.25, 95% confidence interval (CI) -1.97 to -0.53, one trial, 40 women). The review concluded that results showed that relaxation, yoga, and music may help women to manage pain in labour, however the quality of the evidence varied from low and very low[45].

Water Immersion

Many recent studies show that water for labour and birth for healthy women with uncomplicated pregnancies incurs no further maternal or neonatal adverse outcomes than those who give birth 'on land'[24,32,46]. A systematic review including 157,546 participants, showed that the use of water immersion

during labour has clear benefits for healthy women and their newborns[47]. Water immersion significantly reduced use of epidural (k=7, n=10 993; OR 0.17 95%CI 0.05 to 0.56), injected opioids (k=8, n=27 391; OR 0.22 95%CI 0.13 to 0.38), episiotomy (k=15, n=36 558; OR 0.16; 95%CI 0.10 to 0.27), maternal pain (k=8, n=1200; OR 0.24 95%CI 0.12 to 0.51) and postpartum haemorrhage (k=15, n=63 891; OR 0.69 95%CI 0.51 to 0.95). There was an increase in maternal satisfaction (k=6, n=4144; OR 1.95 95%CI 1.28 to 2.96) and odds of an intact perineum (k=17, n=59 070; OR 1.48; 95%CI 1.21 to 1.79) with water immersion. Waterbirth was associated with increased odds of cord avulsion (OR 1.94 95%CI 1.30 to 2.88), although the absolute risk remained low (4.3 per 1000 vs 1.3 per 1000). There were no differences in any other identified neonatal outcomes[47]. As water is a non-invasive and removable form of analgesia and because all women are different, and labours vary, there should be no starting point for water immersion[47]. Labour should be assessed on an individual basis and water immersion used as a method of pain relief if and when the woman requests it[48].

Manual techniques (massage, reflexology, warm packs)

A Cochrane systematic review examined the effect, safety and acceptability of massage, reflexology and other manual methods to manage pain in labour[49]. The review found that massage provided a greater reduction in pain intensity than usual care during the first stage of labour (standardised mean difference (SMD) –0.81, 95% confidence interval (CI) –1.06 to –0.56, six trials, N=362 women). One trial reported less anxiety during the first stage of labour for women receiving massage (MD -16.27, 95% CI –27.03 to –5.51, 60 women). One trial found an increased sense of control from massage (MD 14.05, 95% CI 3.77 to 24.33, 124 women, low-quality evidence)[49]. The review concluded that massage and warm packs may have a role in reducing pain, reducing length of labour and improving women's sense of control and experience, however the quality of evidence ranges from low to very low.

Acupuncture and acupressure

A Cochrane systematic review examined the effects of acupuncture and acupressure for pain management in labour[50]. A total of 28 trials were included in the review (13 trials on acupuncture and 15 trials on acupressure). Due to the evidence to be very low quality, it was uncertain if acupuncture reduces pain intensity when compared to usual care (standardised mean difference (SMD) -1.31, 95% CI -2.14 to -0.49, 4 trials, 495 women). It was also found that acupuncture may have little to no effect on satisfaction with pain relief (low-certainty evidence). Similar findings were reported in relation to the use of acupressure when compared to usual care. The reviewers were uncertain if acupressure reduced pain intensity in labour (MD -1.93, 95% CI -3.31 to -0.55, 6 trials, 472 women) due to evidence being of low certainty[50].

Transcutaneous nerve stimulation (TENS)

Dowswell *et al.*[51] assessed the effects of TENS on pain in labour. The Cochrane review included seventeen trials (1466 women) and concluded that there is only limited evidence that the use of TENS reduces pain in labour and did not appear to have either any positive or negative effect on the outcomes for mothers or babies.

Sterile water

When compared with placebo injections, sterile water injections and standard care (massage, bath and movement), are shown to have limited benefit in terms of general labour pain, back pain during labour and maternal satisfaction[32]. A Cochrane Review in 2012[52], including seven studies with 766 participants, found limited conclusions for sterile water injections for labour pain relief in clinical practice. It called for further large, methodologically rigorous studies to determine their efficacy. While NICE[32] considers sterile water injections a potential pain relief option for women in labour with back pain, injections may only be given by a midwife trained in their use.

Birthing ball

A birthing ball is a large exercise ball that women in labour sit on to perform movements such as rocking and pelvic rotation to help reduce pain[53]. A systematic review and meta-analysis sought to assess whether the use of birthing balls in labour reduces maternal pain[54]. Seven randomised controlled trials (533 women) were included in the review. It found that labour pain significantly decreased in the birthing ball groups compared to the control group (no birthing balls) (MD –1.70 points; 95% CI –2.20 to –1.20)[54].

As clinical practice demonstrates, women in labour may often try a number and combination of non-pharmacological pain relieving strategies. A qualitative study of women's experiences in early labour found that women reported adopting a variety of coping strategies to reduce pain in early labour, however coping strategies were not always successful[42]. Despite preparations for labour, there was a difference between some women's expectation versus reality where the pain experienced was worse than anticipated[42]. Women reported that advice should to be tailored to the individual, taking into consideration the women's wishes and distress experienced rather than using one set plan for all women[42].

NICE recommends that women should be advised that breathing exercises, having a shower or bath, and massage may reduce pain during the latent first stage of labour[32.] Women should be offered the opportunity to labour in water for pain relief. The use of aromatherapy, yoga or acupressure should not be offered for pain relief during the latent first stage of labour however if the woman chooses to use these techniques, she should be supported in her decision[32]. Women should be informed that other forms of pain relief can be used alongside TENS if needed by the woman[32]. In the event of a woman seeking advice or attending maternity services with painful contractions, but is not in established labour, offer her individualised support and analgesia if needed[32].

Pharmacological pain relieving strategies

Entonox (a 50:50 mixture of oxygen and nitrous oxide)

Self-administered via a mouthpiece/mask, entonox is rapidly cleared from the blood of the woman and unborn infant, which makes it safe to use throughout labour[55]. Maternal side effects associated with the use of entonox include a feeling of nausea and light-headedness[32].

Pethidine

Pethidine has been widely used for many years in pregnancy without apparent concern[56]. It appears to provide some pain relief in labour and moderate maternal satisfaction but is associated with maternal side effects including nausea, vomiting, pruritus, sedation, and respiratory depression[57]. Administration during labour may cause respiratory depression in the newborn, is known to traverse the placenta and is excreted in breast milk[56]. Pethidine should be available in all birth settings[32] and women should be advised of the maternal and fetal side effects[32]. If women choose to use pethidine, an antiemetic should also be administered to counteract possible maternal side effects[32].

Pethidine is rapidly absorbed intramuscularly, has a peak effect at 15-120 minutes and the analgesic effect usually lasts for 2 to 4 hours however, clinicians should be aware there are wide individual variations[56]. Women should not enter water (a birthing pool or bath) within two hours of opioid administration or if they feel drowsy[32.]

Epidural/Remifentanil

Epidurals may reduce pain during labour effectively with increased levels of maternal satisfaction with pain relief. There is low-certainty evidence to suggest that epidural analgesia may relieve pain scores in women during labour, when compared with parenteral opioid analgesia[58].The use of remifentanil patient-controlled analgesia (PCA) should be considered instead of intramuscular opioids for women who want ongoing pain relief during labour but who do not want an epidural[32]. Due to the increased level of monitoring, epidural or remifentanil PCA should be provided in an obstetric unit where the lead clinician is an obstetrician.

Clinical Practice

Women's experience of pain is unique and may be expressed verbally or non-verbally. Women should be supported in their choice of pain relief strategies in both the latent and established first stage of labour. Mixed quality systematic reviews recommend the use of breathing exercises, water immersion/ showering and massage as they may reduce pain experience in latent phase of labour and are not known to cause any harm. Women should be provided with information on the benefits and risks of both non-pharmacological and pharmacological pain-relieving strategies so they can make an informed choice. The woman should be supported in her decision. In the event of a woman choosing epidural or remifentanil as a form of pain relief, timely transfer to an obstetric unit should occur. In order to maintain continuity of carer, the midwife should remain with the woman if feasible and practical.

Recommendations

22. **Women should be informed of the benefits and risks of non-pharmacological and pharmacological pain relieving strategies. Care should be individualised and have consideration for the woman's preferences and choice.**
23. **The provision of both non-pharmacological and pharmacological pain-relieving strategies should be made available to women in labour.**

Clinical Question 2.8: What assessment and care is recommended for women in the latent first stage of labour?

Evidence Statement

Latent first stage of labour is a period of time, not necessarily continuous, when: there are contractions and there is some cervical change, including cervical position, consistency, effacement and dilatation up to 4 cm.

It is necessary to recognise that a woman may experience painful uterine contractions without cervical change, and although she is described as not being in labour, she may well consider herself as being 'in labour' by her own definition[32]. It is important that midwives listen to the woman and provide sympathetic support during this time[59]. Listen to her needs and offer analgesia, etc.

Clinical Practice

In the event of a woman contacting the maternity service and reporting signs of labour – a detailed history should be taken and documented in her healthcare record (HCR) including:

- Previous/current obstetric history/gestation
- Known risk factors
- Uterine contractions
- Vaginal loss
- Fetal movements
- Pain, coping strategies
- Distance to hospital, available transport and social factors.

Consider and offer a face to face early assessment of labour for all women contacting the midwife, comprising of one to one midwifery care for at least one hour.

Include the following in any early or triage assessment of labour:

- Ask the woman how she is, and about her birth wishes, expectations and any concerns she has
- Ask the woman about the baby's movements, including any changes in the pattern of movement
- Give information about what the woman can expect in the latent first stage of labour and how to work with any pain she experiences
- Give information about what to expect when she accesses care
- Agree a plan of care with the woman, including guidance about who she should contact next and when
- Provide guidance and support to the woman's birth companion(s).

The midwife conducting the triage should document the guidance that she gives to the woman. This should be recorded in the woman's healthcare record.

When a woman attends the maternity service or is being assessed in her own home, the initial assessment should comprise of the following:

Observations of the woman

- Review the antenatal notes (including all antenatal screening results) and discuss these with the woman
- Ask her about the length, strength and frequency of her uterine contractions
- Ask her about any pain she is experiencing and discuss her options for pain relief
- Measure her pulse, blood pressure, respirations, temperature, urinalysis and record in the Irish Maternity Early Warning System (IMEWS)[14] chart
- Assessment of any vaginal loss such as liquor, bleeding, discharge.

Observations of the unborn baby

- Ask the woman about the baby's movements in the last 24 hours
- Palpate the woman's abdomen to determine the fundal height, the baby's lie, presentation, position, engagement of the presenting part, and frequency and duration of contractions.
- Auscultate the fetal heart rate by using either a Pinard or Doppler in line with the national clinical practice guideline[2].

Conducting a vaginal examination

If there is uncertainty about whether the woman is in established labour, a vaginal examination may be helpful after a period of assessment, but is not always necessary. If the woman appears to be in established labour, offer a vaginal examination.

- Be sure that the examination is necessary and will add important information to the decision-making process, such as cervical effacement, dilatation and fetal position and descent.
- Recognise that a vaginal examination can be very distressing for a woman, especially if she is already in pain, highly anxious and in an unfamiliar environment
- Explain the reason for the examination and what will be involved. Ensure the woman's informed consent is obtained and her privacy, dignity and comfort maintained.
- Explain sensitively the findings of the examination and any impact on the birth plan to the woman and her birth companion.

Management of latent first stage

Offer the woman individualised support and analgesia if needed. Encourage her to remain at or return home, unless doing so leads to a significant risk that she could give birth without a midwife present or become distressed. Some women who are in the latent stage of labour may be reluctant to go home and wish to remain in hospital.

For the woman intending to birth at home who is not in established labour following assessment by a midwife, one of the following decisions should be made in collaboration with the woman within 12 hours of assessment:

- Remains at home
- Established labour is confirmed and documented
- Care is transferred to the Assisted or Specialised Care Pathway
- The decision and plan of care should be documented in the healthcare record.

In the event of a woman being admitted to an ABC or maternity unit who is not in established labour following assessment by a midwife, one of the following decisions should be made in collaboration with the woman within 12 hours of initial assessment:

- The woman is discharged home
- Established labour is confirmed and documented
- Care is transferred to the Assisted or Specialised Care Pathway
- The decision and plan of care should be documented in the healthcare record.

Recommendations

24. When a woman contacts the maternity service, a detailed history should be taken and the woman's preferences taken into consideration.
25. Women should be listened to and an individualised plan of care is made in partnership with her.
26. A face to face early assessment of labour for all women contacting the midwife should be offered as appropriate.
27. Women presenting in the latent phase of labour should have a plan of care agreed with the midwife to include advice on coping strategies, accessing the maternity service and who to contact.
28. For the woman intending to birth at home who is not in established labour following assessment by a midwife, one of the following decisions should be made in collaboration with the woman within 12 hours of assessment:
    - Remains at home
    - Established labour is confirmed
    - Care is transferred to the Assisted or Specialised Care Pathway
29. In the event of a woman being admitted to ABC or maternity unit, who is not in established labour following assessment by a midwife, one of the following decisions should be made in collaboration with the woman within 12 hours of initial assessment:
    - The woman is discharged home
    - Established labour is confirmed and documented
    - Care is transferred to the Assisted or Specialised Care Pathway
30. An initial risk assessment should be carried out to determine if the woman is suitable for the SCP, irrespective of previous plans.

Clinical Question 2.9: What is the recommended care for women in the established first stage of labour?

Evidence Statement

Care in labour that promotes, supports and protects the hormonally driven, physiological process of labour optimises birth, breastfeeding and attachment; assisting women and their babies during this life-changing event[8]. When women and babies have access to competent midwifery care within a philosophy optimising normal biological, psychological, social and cultural processes of childbirth, the need for interventions are diminished[60,61]. Outcomes are further enhanced when care is given by midwives who are integrated within the maternity system and working in partnership with interdisciplinary teams, with ready access to specialised care as needed[62].

Irrespective of where birth happens, monitoring the wellbeing of the woman and the unborn baby along with labour progress, are customary features of care in the first stage of labour. Systematic reviews[8] identified supportive care, monitoring the wellbeing of the woman and the unborn baby and assessment of progress in labour as features of care in the first stage of labour that have positive benefits for the woman and their unborn baby.

Assessing progress in labour: Vaginal examination

The evidence to support the use of intrapartum vaginal examination to assess cervix, fetal position, and fetal descent is limited with few randomised trials evaluating the optimal frequency and timing[62]. Despite this limited evidence, it is recognised that an ability to assess progress is a key component of intrapartum care. However, the frequency and total number of vaginal examinations a woman is exposed to during labour should be restricted especially in the presence of risk factors for infection (e.g. prolonged rupture of membranes and long duration of labour[63]). To assess progress in labour, the vaginal examination should include; the position of the fetal head, descent, caput and moulding[32].

Assessing progress in labour: Partogram

The partogram (or partograph) is the most commonly used labour monitoring tool, widely supported by health professionals and recommended by the World Health Organisation for use in established labour[64]. Its purpose is to enable health professionals monitor the wellbeing of the woman and her unborn baby, progress in labour and provide timely intervention when required[65].

A Cochrane systematic review[64] looked at 11 trials, involving 9475 women. Most trials reported caesarean section rates and Apgar scores less than 7 at five minutes. All other outcomes were not consistently reported. The review group acknowledged that extensive use of the partogram in both high- and low-income settings had potential in respect to quality of care benefits such as ease of recording, provide a pictorial overview of progress, auditing of care, training of clinicians and a trigger for referral and transfer of care, when it was used appropriately[64]. However, high grade evidence of improved clinical outcome was inconclusive.

In the 3 trials (1813 women) comparing partogram use against no partogram use, there was no clear difference between the two in terms of caesarean section rates, oxytocin augmentation, length of the first stage or Apgar scores < 7 at five minutes. A comparison was made between partograms with either 2, 3- or 4-hour action lines, involving 4 trials and 5051 women. When the 2- and 4-hour groups were compared, the 2-hour group was more likely to receive oxytocin augmentation. There was no difference in caesarean section rates, the duration of the first stage of labour, maternal experience or Apgar scores of <7 at five minutes seen between the 2 and 4-hour action lines. The authors concluded they could not be certain of the effects of routine use of the partogram as part of standard labour management and care, or which design might be most effective. They suggested further evidence is needed.

In the last decade the validity of 'alert' and 'action' lines on a partogram have been questioned due to the considerable contention around confirmation and progress of normal labour[8]. In health care situations where interventions such as augmentation and caesarean section cannot be performed, the alert line may be beneficial when identifying women requiring additional care. In the context of this guideline, this may be interpreted as women in low risk environments such as the home or Alongside Birth Centres. The use of supportive care, careful monitoring of wellbeing in conjunction with the use of an alert line on the partogram should prompt transfer of women to the Assisted/Specialised Care Pathway where there is a confirmed delay in the established first stage or active second stage of labour.

In the same Cochrane review, local determination in the use of a partogram was suggested[64]. In light of the extensive application of the partogram within Irish maternity units, it is prudent to continue its use in the recording of maternal and fetal wellbeing during established labour, including the application of an alert line[8]. Plotting is recommended following clinical consultation with an examination of the woman, including cervical dilatation, indicating the onset of established labour.

Assessing progress in labour: Duration of the established first stage of labour

Evidence suggests that the threshold of at least 1 cm per hour cervical dilatation in labour is suboptimal in identifying women at risk of adverse birth outcomes, with the risk of false positive findings leading to unnecessary and potentially harmful labour interventions[8].

WHO[8] performed an extensive systematic review using the GRADE methodology exploring expected duration of the first stage of labour in normal risk women. This review identified the median duration of a first (primiparous woman) active labour with a starting reference point of 4 cm was in the range of 3.7-5.9 hours (with 95th percentile thresholds of 14.5-16.7 hours). Moderate certainty evidence was reported for studies reporting the mean duration of labour progressing from 4 to 10 cm dilatation was 3.1-8.1 hours, with statistical limits of 7.1-19.4 hours[8].

For multiparous women in the active first stage of labour, systematic review[8] with moderate-certainty evidence from two studies suggests that the median duration of the active phase for women with parity of 1 or more, with onset defined as 4 cm, was 2.2-4.7 hours, with a range of 13.0-14.2 hours for 95th percentile thresholds. Progress in labour should consider not just cervical dilatation, but also descent and rotation of the fetal head and strength, duration and frequency of contractions.

International Obstetric and Gynaecological organisations agree cervical dilation is on average 0.5cm per hour for all women in active first stage of labour[8,30,32,66]. All agree delay in active first stage of labour should be suspected if progress is less and outline recommended actions.

It is recognised by this GDG that the application of safe upper limits on the duration of active first stage of labour has the potential to reduce over-medicalisation of labour for women on the SCP. Interventions such as artificial rupture of membranes and augmentation of normally progressing labour should not be routine before the upper limits have been reached in the presence of maternal and fetal wellbeing. Plotting of progress on a partogram should commence from 4cm dilation.

Clinical Practice

Labour outcomes are enhanced with supportive care, monitoring the wellbeing of the woman and her unborn baby along with assessment of progress in labour.

Supportive care may be defined as provision of labour companionship, pharmacological and non-pharmacological pain relief, oral fluid, encouraging mobility, maternal choice of labour/childbirth positions and one-to-one care from a midwife.

Consideration of the woman's emotional and psychological needs includes her desire for pain relief. Encourage the woman to communicate her needs during labour.

Ongoing assessment of fetal, maternal wellbeing and labour progress may assist health care professionals in respect to decision making. Assess, monitor and record both maternal and fetal wellbeing during the established first stage of labour:

Assess and record maternal wellbeing during the established first stage of labour

- Half hourly record the frequency, strength and duration of uterine contractions
- Hourly pulse
- 4 hourly temperature and blood pressure
- frequency of passing urine
- Any vaginal loss such as vaginal bleeding or discharge.

Assess and record fetal wellbeing during the established first stage of labour

- Auscultate the fetal heart rate by using either a Pinard or Doppler in line with the national clinical practice guideline[2].
- Assess and document fetal movements
- Assess colour of liquor or other vaginal loss such as bleeding.

Health care professionals plot cervical dilatation versus time on the partogram, as well as other parameters (including fetal heart rate, caput succedaneum, moulding, status of amniotic fluid, fetal descent, maternal temperature, blood pressure and urinary output) to monitor the well-being of the woman and her baby.

Evidence supports cervical dilatation of 2cm in 4 hours for women on the Supported Care Pathway in the established first stage of labour. Established first stage of labour should not extend beyond 12 hours.

Offer four-hourly vaginal examinations in labour, after abdominal palpation and assessment of vaginal loss. However, vaginal examinations may be warranted at more frequent intervals, dependant on the condition of the woman or the unborn baby. Vaginal examinations by multiple healthcare professionals should be avoided.

Do not advise or offer clinical interventions if labour is progressing normally and the woman and baby are well.

If any of the indications for transfer to the Assisted or Specialised Care Pathway are met, escalate to senior clinician and transfer the woman's care. Follow the principles of safe and effective transfer of care to the Assisted or Specialised Care Pathway, including MDT communication and documentation.

- **For summary of management of care in the first stage of labour refer to algorithm 2: 'Care in the First Stage of Labour'**
- **Progress in the first stage of labour follow refer to algorithm 3: 'Expected Progress in the Established First Stage of Labour'**

Recommendations

31. Digital vaginal examination at intervals of four hours should be offered for assessment of active first stage of labour, following abdominal palpation and assessment of vaginal loss. Vaginal examination includes assessment of dilation of the cervix, fetal position, descent and rotation.
32. Expected progress of cervical dilatation in the established first stage of labour is 2cm in 4 hours for women on the Supported Care Pathway.
33. Use of a partogram is recommended for the recording and provision of a pictorial overview of progress in labour and to alert health care professionals when the need for escalation or transfer of care is required.
34. Plotting cervical dilation on a partogram should commence from the diagnosis of active first stage of labour at 4cm.
35. If there is a concern about the condition of the mother or the baby, offer vaginal examinations more frequently following abdominal palpation and assessment of vaginal loss.
36. Maternal wellbeing should be assessed and recorded during the established first stage of labour. Every 30 minutes the frequency, strength and duration of uterine contractions should be recorded. Every 60 minutes maternal pulse should be recorded. Every four hours maternal temperature, blood pressure, respirations and the frequency and ability to pass urine should be recorded.
37. Fetal wellbeing during the established first stage of labour should be assessed and recorded in line with the national clinical practice guideline on intrapartum fetal heart rate monitoring.

Clinical Question 2.10: Does the evidence support routine amniotomy in spontaneous labour with normal progress?

Evidence Statement

Artificial Rupture of the Membranes (ARM), is one of the most common interventions in obstetric and midwifery practice[67]. This may be due to the perceived effect on accelerating and strengthening contractions and hence allegedly shortening labour[68]. As well as efforts to speed-up labour, caregivers perform an amniotomy for the purpose of visualising the amniotic fluid to detect meconium stained liquor to identify factors suspicious of fetal compromise[67]. However, there is an estimation that meconium-stained amniotic fluid may be seen in up to 20% of normal-risk term pregnancies[69].

The potential risks of amniotomy include umbilical cord prolapse, cord compression, fetal heart rate decelerations, ascending infection, bleeding from fetal or maternal vessels and the actual discomfort of the procedure itself[70].

In a Cochrane systematic review of evidence on amniotomy for shortening spontaneous labour, identified there was no statistically significant reduction in the length of the first stage of labour with routine amniotomy[67]. Examination of subgroups of primiparous and multiparous women identified no difference in results. Due to the significant implications and consequences of having a caesarean section, it should be noted the review reported a trend towards near significance that women in the amniotomy group had an increased risk of caesarean section. The indication for caesarean section was often unclear in the trial reports and the reviewers note that confounding variables such as fetal heart monitoring in labour may have demonstrated this causative effect[67].

A further Cochrane systematic review compared early amniotomy and oxytocin to routine care[71]. Eleven trials included in the review recruited women who were in normal spontaneous labour, allocating them either to early amniotomy and oxytocin if slow progress ensued or to expectant/routine management. The analysis found that early augmentation with amniotomy and oxytocin for women in spontaneous labour was associated with a modest reduction in the number of caesareans births (RR 0.87; 95% CI 0.77 to 0.99; 11 trials; 7753 women) when applied as a preventative measure for delay in the first stage of labour[71]. There was no definitive degree of delay to justify intervention and authors called for further studies.

Clinical Practice

Routine amniotomy for a woman in spontaneous labour with normal progress is not a recommended practice. Evidence suggests that the use of amniotomy as an intervention for labour with suspected delay may reduce the incidence of dysfunctional labour.

See ALGORITHM 3: 'Expected Progress in the Established First Stage of Labour'

Recommendations

38. **Routine amniotomy for spontaneous onset of labour and with normal progress should not be performed.**
39. **The benefit of amniotomy should be discussed with the woman and if delay in established labour is suspected.**

Clinical Question 2.11: How is delay in the established first stage of labour identified and managed?

Evidence statement

There is evidence that delay may occur in up to one third of women in their first labour, where delay is defined as progress of less than 2cm cervical dilatation in 4 hours in the established first stage phase[72]. This may be an unanticipated complication which impacts a woman's choice and her plans for birth. It is recognised prolonged first stage of labour is one of the most frequent indications for caesarean section[72]. Suspected delay in the first stage of labour may be related to uterine factors, fetal factors, pelvic issues, or most often because of inadequate uterine action or dystocia[72].

NICE Intrapartum care guideline[32] recommend if a delay in the established first stage is **suspected**, the woman's parity, cervical dilatation and rate of change, uterine contractions, station and position of the presenting part should be taken into account[32]. It suggests an assessment and diagnosis of **suspected**

delay of progress in labour should include:

- cervical dilatation of less than 2 cm in 4 hours for first labours
- cervical dilatation of less than 2 cm in 4 hours or a slowing in the progress of labour for second or subsequent labours
- descent and rotation of the baby's head
- Changes in the strength, duration and frequency of uterine contractions[32]

It recommends to offer the woman support, hydration, and appropriate and effective pain relief. Discuss the findings and the options available with the woman and advise the women to have a vaginal examination two hours later. Delay in labour is **confirmed** when there is less than 1cm cervical dilatation after two hours and recommendations include transferring the women to obstetric-led care[32].

Clinical Practice

If delay in the first stage of labour is **suspected** the following should be assessed, discussed with the woman and documented:

- Uterine contractions – palpate length, strength, resting tone and frequency of contractions in a 10 minute period
- Cervical dilation and progress in labour
- Station, position and rotation of the presenting part
- The woman's emotional and psychological state
- Mobility
- Hydration
- Micturition
- Pain relief
- Fetal wellbeing including auscultation of fetal heart and observation of liquor of membranes ruptured
- Is there a need for transfer of care?

Consideration should be given to amniotomy in women with the membranes intact following explanation of the procedure, discussion on the benefits and risks.

Advise all women with suspected delay in the first stage of labour to have a vaginal examination 2 hours later regardless of amniotomy or not. **Confirm delay** in established first stage of labour if cervical dilation is less than 1cm.

Transfer care to Assisted or Specialised Care Pathway if delay in established first stage of labour is **confirmed**. Continuity of carer should be aimed for in so far as is possible. Transfer care using the principles of safe and effective handover of care, including MDT communication and documentation.

See ALGORITHM 3: 'Expected Progress in the Established First Stage of Labour'

Recommendations

40. A delay in established first stage of labour should be suspected if progress of less than 2cm in 4 hours is confirmed on vaginal examination.
41. Women with suspected delay in progress with the membranes intact should be offered amniotomy, following explanation of the procedure and a discussion on the benefits and risks.
42. Women with suspected delay in the first stage of labour should be advised to have a vaginal examination two hours later regardless of having had an amniotomy performed or not.
43. Delay in the established first stage of labour should be confirmed if cervical dilation is less than 1cm after two hours of suspected delay. Care should be transferred to the Assisted or Specialised Care Pathway.
44. Transfer of care should be completed using the principles of safe and effective handover of care, including MDT communication and documentation

Section 4: Second stage of labour

Clinical Question 2.12: What is the recommended care for women in the second stage of labour?

Introduction

In most cases, in a normal-risk pregnancy, despite uteroplacental circulation being reduced during the second stage, there is enough reserve to maintain oxygenation of the fetus until birth[73]. FIGO discuss the importance of high quality and safe care in the second stage of labour to prevent adverse neonatal outcomes arising from fetal hypoxia, and maternal mortality and morbidity from complications such as vesicovaginal fistula, anal sphincter injury, sepsis, and haemorrhage and worsening hypertensive disease[73].

Evidence Statement

The definition of the second stage is accepted by international maternity care agencies as the period of time between full cervical dilatation and birth of the baby, during which the woman has an involuntary urge to bear down, as a result of expulsive uterine contractions[8,32].

The National Institute for Health and Care Excellence provide the following definitions[32]:

- The passive second stage of labour is when there is full dilatation of the cervix (determined by either vaginal examination or noting other external signs of full dilatation) before or in the absence of involuntary or active pushing
- Onset of the active second stage of labour is when the baby is visible, or there is involuntary or active pushing with full dilatation of the cervix.

Maternal and fetal monitoring in the second stage of labour

The following observations as a minimum are recommended in the second stage of labour for healthy low risk mothers and fetus' [8,30,32,73]. The observations should continue to be recorded on the partogram for ease of visualisation of assessment and recognition of need for escalation or transfer of care, or further intervention:

- Half-hourly documentation of the frequency of contractions
- Hourly blood pressure
- Continued 4-hourly temperature
- Frequency of passing urine
- Offer a vaginal examination hourly in the active second stage, or in response to the woman's wishes (after abdominal palpation)
- Auscultation of the fetal heart rate in conjunction with maternal pulse to differentiate between the two heartbeats.

Emergency equipment must be checked to ensure it is in good working order and there are spare parts readily available in case of faulty equipment for all births. Standardised protocols for emergency equipment checking and neonatal resuscitation provide a consistent and higher standard of care.

Ongoing consideration should be given to the woman's position, hydration, coping strategies and pain relief throughout the second stage. Continue to take into account the woman's emotional and psychological needs and provide respectful care[32].

Birth position and pushing

Discourage the woman from lying supine or semi-supine in the second stage of labour. The woman should be encouraged to adopt a position that is most comfortable and effective for her. Non-directive pushing should be encouraged, enabling the woman to be led by her instinctive actions. If pushing is ineffective or there is a delay in the second stage, or if requested by the woman, offer strategies to assist birth, such as support, change of position, emptying of the bladder and encouragement[32].

Perineal care

There are different techniques used in clinical practice for reducing perineal trauma and tears – for example, massage, hands-on support and warm compresses, however the evidence to support the use of one over another is limited[32]. Evidence shows that when compared to standard care, the application of a warm wet compress to the perineum in the second stage of labour, shows a reduction in third-and fourth-degree perineal tears, urinary incontinence and postpartum perineal pain[32].

A Cochrane meta-analysis of 20 trials involving 15,181 women compared warm compresses versus control group of hands off or no warm compress, identified warm compresses applied to the perineum during the second stage of labour reduced the risk of third and fourth degree tears[74]. Research studies have also reported a reduction in perineal pain both during birth and in the early postnatal period when warm compresses are used during vaginal birth[75]. More recently meta-analysis on the use of warm perineal compresses[76] reported a higher rate of intact perineum and a lower rate of episiotomy when warm perineal compresses are used during vaginal birth.

The evidence for 'hands poised' (also known as hands off), a method where the midwife keeps the hands poised not touching the head or perineum and 'hands on', a method whereby the midwife's hands are used to put pressure on the baby's head (to flex the head) and support ('guard') the perineum was reviewed as part of the NICE Intrapartum Care guidance[32]. The evidence from 3 studies[77-79] suggested that hands poised is beneficial for reducing the incidence of episiotomies, first-degree perineal tears (in nulliparous women in the BMI overweight range), second-degree perineal tears (in nulliparous women in the BMI overweight range) and third-degree perineal tears when compared to hands on, but that hands on may be effective for reducing perineal pain 10 days after birth. Due to the lack of strong new evidence for the hands on/hands poised and the variation in practice, there is no recommended practice in terms of technique used[32].

The routine use of episiotomy during spontaneous vaginal birth is not recommended[32]. Adopting a policy of selective episiotomy resulted in 30% fewer women experiencing severe perineal or vaginal trauma (RR 0.70, 95% CI 0.52 to 0.94; 5375 women; eight RCTs; low-certainty evidence)[80]. Episiotomy should be performed if there is a clinical need such as suspected fetal compromise[32]. Provide tested, effective analgesia before performing an episiotomy, except in an emergency because of acute fetal compromise[32]. If an episiotomy is performed, the recommended technique is a mediolateral episiotomy originating at the vaginal fourchette and usually directed to the right side. The angle to the vertical axis should be between 45 and 60 degrees at the time of the episiotomy[32].

Water Birth

There is growing evidence to support giving birth in water[47] and no evidence of any increased adverse effects to the woman or her baby from giving birth in water. This care option is associated with higher maternal satisfaction[47]. Guidance on water birth is beyond the scope of this guideline and reference should be made to National Clinical Guideline on Waterbirth (in progress at the time of writing).

Clinical Practice

Based on the evidence reviewed for the purpose of defining the second stage of labour, the following definitions should be used[32]:

- **Passive second stage of labour:** when there is full dilatation of the cervix (determined by either vaginal examination or recognition of other external signs of full dilatation) before or in the absence of involuntary or active pushing.
- **Active second stage of labour is when:** the baby is visible or there is involuntary or active pushing with full dilatation of the cervix.

Assessment of maternal wellbeing during the second stage of labour

- Half hourly record the frequency, strength and duration of uterine contractions
- Hourly pulse
- 4 hourly temperature and blood pressure
- frequency of passing urine
- Vaginal loss including bleeding or discharge
- Offer a vaginal examination hourly in the active second stage, or in response to the woman's wishes (after abdominal palpation and assessment of vaginal loss)
- Continue to provide supportive strategies and respectful care taking the woman's emotional and psychological needs into account
- Record findings on partogram and document provision of care in the woman's health care record

Assessment of progress should include the woman's behaviour and ability to cope, the effectiveness of pushing on descent and rotation progression. These factors will assist in deciding the timing of further vaginal examination and if there is a need for transfer to the Assisted or Specialised Care Pathway.

Ongoing supportive strategies, respectful midwifery care and consideration of the woman's position, hydration, coping strategies and pain relief throughout the second stage of labour remain essential elements of care.

Assessment of fetal wellbeing during the second stage of labour

- Auscultate the fetal heart rate in line with the national clinical practice guideline[2] **– note the increase in the frequency of monitoring for the second stage of labour.**
- Assess and record vaginal loss including liquor if membranes ruptures

Perineal Care

Discuss the woman's preference regarding techniques to reduce perineal trauma during birth. Once the presenting part distends the perineum in the second stage of labour, offer to apply a warm wet compress to the perineum and continue this until birth. Check the temperature of the compress is comfortable for the woman. Consider massage of the perineum with a water-soluble lubricant in the second stage of labour, if perineal massage is acceptable to the woman and she prefers this to a warm compress.

An episiotomy should be performed only following an individualised assessment and when clinically indicated, such as in suspected fetal compromise. Effective analgesia should be provided prior to the procedure except in an emergency due to acute fetal compromise.

Recommendations

45. It is recommended the following definitions of second stage of labour are used in clinical practice:
    - **Passive second stage of labour:** full dilatation of the cervix (determined by either vaginal examination or recognition of other external signs) before or in the absence of involuntary or active pushing.
    - **Active second stage of labour:** the baby is visible or there is involuntary or active pushing with full dilatation of the cervix.
46. Women in the active phase of the second stage of labour should be encouraged and supported to follow their own urge to push.
47. Maternal wellbeing assessment in the second stage of labour includes monitoring of uterine contractions, vital signs, frequency of passing urine, vaginal loss including bleeding or discharge, psychological wellbeing and hourly vaginal examinations.
48. Fetal wellbeing assessment in the second stage of labour should include auscultation of the fetal heart (noting there is an increase in the frequency of monitoring in the second stage of labour), with the assessment of vaginal loss, including liquor if membranes have ruptured.
49. Assessment of progress also includes the woman's behaviour and ability to cope, the effectiveness of pushing on descent and rotation.
50. Women should be encouraged to adopt a position that is most comfortable and effective for her.
51. For women in the second stage of labour, techniques to reduce perineal trauma and facilitate spontaneous birth (including perineal massage and warm compresses) are recommended, based on a woman's preference and available options.
52. Emergency equipment must be checked to ensure it is in good working order and there are spare parts readily available in case of faulty equipment for all births. Standardised protocols for emergency equipment checking and neonatal resuscitation provide a consistent and higher standard of care.

Clinical Question 2.13: What is the expected duration of the second stage of labour?

Evidence Statement

There is currently wide variation in the recommended length of the second stage[8,72,73], and interpretation of the available evidence is complex[8]. Concerns revolve around associations between the duration of the second stage and relative risk of adverse neonatal outcomes[8,30,81]. Some low quality studies identified a difference in neonatal outcomes dependant on the length of time a woman was pushing.

A Swedish population-based cohort study reviewed neonatal outcomes of 42,539 nulliparous women with term, singleton pregnancies and the use of 'delayed pushing' in the second stage of labour. The term 'delayed pushing' was defined as the commencement of pushing when there is expulsive contractions or active pushing, for example use of the Valsalva technique when the fetal head is at or almost at

the pelvic floor. The retrospective review conducted over a five year period found that increasing the duration of the second stage of labour (i.e. 'delayed pushing) was associated with an increased relative risk of birth asphyxia related complications and admission to NICU, after adjusting for maternal and infant characteristics, and delivery management[81]. Overall, the rates of umbilical artery acidosis, birth asphyxia-related complications and admission to NICU were 1.08, 0.63 and 6.42%, respectively. The study[81] identified a gradual increase in birth asphyxia related complications corresponding with the duration of the second stage from 0.42% at less than 1 hour duration to 1.29% at greater than or equal to 4 hours duration (adjusted RR 2.46 (95% CI 1.66 to 3.66). However, the outcomes were relatively rare and, hence, the absolute risk difference for birth asphyxia-related complications and acidosis was small.

The findings from Sandstrom *et al.*'s[81] study reflected observations from a large observational study in the USA[81] of 53,285 nulliparous and multiparous women. This study by Grobman *et al.*[82] concluded that longer durations of pushing were associated with an increased relative risk, but small absolute difference in risk, of neonatal complications. Of the primiparous women who continued to push after 4 hours, 78% had vaginal deliveries and 97% of them did not have the composite adverse neonatal outcome and of the 82% of multiparous women who continued to push after more than 2 hours, 97% of women that had vaginal deliveries did not have an adverse neonatal outcome.

The findings of these studies have informed recent consensus based guidance from international obstetric and gynaecological associations in relation to the duration of the second stage of labour. These associations recommend a more individualised approach to care in association with the timeframes outlined below[8,30,32,73]

'*Women should be informed that the duration of the second stage varies from one woman to another. In first labours, birth is usually completed within 3 hours whereas in subsequent labours, birth is usually completed within 2 hours'.* [8, pg 120]

And

'*Decisions to expedite birth in the second stage of labour should not be based solely on specific time frames. Clinical decisions should be based on clinical assessment of the maternal and fetal condition, the progress of labour (including fetal descent) and on the woman's informed decisions'.* [30 pg 16]

RANZCOG[30] recommend escalation of care to an obstetrician for low risk pregnancies if a nulliparous woman has been pushing for two hours and a multiparous woman for one hour. They further discuss that it is reasonable in the presence of maternal and fetal wellbeing to extend active pushing for a further hour, which provides time for transfer of care and access to appropriate resources[30]. This new recommendation by RANZCOG is in line with NICE[32] where:

- For a nulliparous woman without epidural analgesia, birth would be expected to occur within three hours from the start of the active second stage, however, if birth is not imminent after two hours of pushing the woman's care should be escalated for senior review and a decision on place and mode made.
- For a multiparous woman's without an epidural, birth would be expected to occur within two hours from the start of the active second stage, however, if birth is not imminent after one hour of pushing the woman's care should be escalated for senior review and a decision on place and mode of birth made.

Both institutions recommend regular assessment of progress, contractions and maternal and fetal wellbeing. NICE[32] expand further on their recommendations stipulating that:

- If a primiparous woman after one hour of active pushing has no signs of progress in terms of rotation or descent, amniotomy should be considered if membranes remain intact. It would be expected that birth would be imminent after two hours pushing and if not escalation of care to a senior clinician is recommended.
- If a multiparous woman after thirty minutes of active pushing has no signs of progress in terms of rotation or descent, a vaginal examination and consideration of amniotomy if membranes remain intact is recommended. It would be expected that birth would be imminent after one hour of pushing and if not escalation of care to a senior clinician is recommended.

If there is delay in the active second stage of labour, or if the woman is excessively distressed, consider support and sensitive encouragement and the woman's need for analgesia[23].

If there is delay in the active second stage of labour and the decision is made to transfer the woman to obstetric-led care, the general principles of transfer of care should be followed[12].

Continued clinical assessment of fetal well-being is essential during the second stage especially when the duration of second stage and pushing increases. It is beyond the scope of this guideline to recommend fetal monitoring practices in the second stage of labour and reference to National fetal monitoring guidelines in the second stage of labour is essential[2].

Clinical Practice

Expected progress in the passive second stage

In the presence of maternal and fetal wellbeing and no identified risk factors, a woman on the SCP who is fully dilated on vaginal examination, may delay pushing for a period of time known as the passive second stage. During this phase, the fetal head progressively descends through the maternal pelvis, and internal rotation and flexion occurs.

After 1 hour of passive second stage if a woman has no expulsive contractions or there are no signs of descent or rotation of the fetal head, it is recommended to perform a vaginal examination. If the membranes are intact discussion and shared decision-making should consider artificial rupture of membranes (ARM).

Expected progress in the active second stage

Primiparous: It would be expected that birth would be imminent after two hours of active second stage for a primiparous woman on the SCP.

Delay in the second stage of labour should be confirmed if birth is not imminent at two hours active second stage. Escalate and transfer the woman to the assisted care pathway using the principles of safe and effective transfer of care.

It would be expected birth would occur within three hours from the start of the active second stage in most primiparous women. This time line allows for a physical transfer and/or clinical handover of care and preparations for birth, if delay is confirmed at two hours of active second stage.

Multiparous: It would be expected that birth would be imminent from one hour of active second stage for a multiparous woman on the SCP.

Delay in the second stage of labour should be confirmed if birth is not imminent at one hour of active second stage. Escalate and transfer the woman to the assisted care pathway using the principles of safe and effective transfer of care.

It would be expected birth would occur within two hours from the start of the active second stage in most multiparous women. This time line allows for a physical and/or clinical handover of care and preparations for birth, if delay is confirmed at 1 hour of active second stage.

Vaginal examination

Vaginal examination is recommended hourly in the second stage of labour or sooner if clinical suspicion of delay in progress. If there are no signs of progress, such as descent and rotation an amniotomy should be considered if the membranes are intact. The woman should be encouraged to change positions to her comfort, encouraged with pushing and consideration of hydration, analgesia and bladder care should occur at all times.

See ALGORITHM 4: 'Expected Progress in the Second Stage Primiparous Woman'

See ALGORITHM 5: 'Expected Progress in the Second Stage, Multiparous Woman'

Recommendations

53. Women with a normal risk pregnancy may have delayed pushing for 1 hour in the presence of maternal and fetal wellbeing, known as the passive second stage.
54. After one hour of passive second stage, if a woman has no expulsive contractions or there are no signs of descent or rotation of the fetal head, it is recommended to perform a vaginal examination and consider artificial rupture of membranes if intact.
55. Vaginal examination is recommended hourly or earlier if clinically indicated in the second stage of labour or sooner if there is a clinical suspicion of delay in progress. If there is no evidence of progress, such as descent and rotation, an amniotomy should be considered if the membranes are intact.
56. Women should be encouraged with pushing, to change positions regularly, while also taking into consideration hydration, analgesia and bladder care.
57. If birth is not imminent after two hours pushing for a primiparous woman on the Supported Care Pathway, care should be escalated for confirmed delay in the active second stage.
58. If birth is not imminent after one hour pushing for a multiparous woman on the Supported Care Pathway, care should be escalated for confirmed delay in the active second stage.
59. Escalation and transfer of care to the Assisted or Specialised Care Pathway in the second stage of labour should consider the principles of safe and effective transfer of care.

Section 5: Third stage of labour

Introduction

The third stage of labour is the time from the birth of the baby to the expulsion of placenta and membranes and achievement of haemostasis; it is also the time when the woman and her birth companions are meeting and getting to know baby. The third stage of labour can be actively or physiologically managed[32].

Clinical Question 2.14: What is the recommended care for women in the 3rd stage of labour?

Evidence Statement

The following definitions are provided by NICE Intrapartum Care guideline[32]:

- Active management of the third stage involves a package of care comprising of the following: routine use of uterotonic drugs, cord clamping and cutting the cord, followed by controlled cord traction after signs of separation of the placenta after signs of separation of the placenta.
- Physiological or expectant management of the third stage involves a package of care that includes the following components: no routine use of uterotonic drugs, no clamping of the cord until pulsation has stopped or after delivery of the placenta, and delivery of the placenta spontaneously or by maternal effort[32]. This spontaneous process can be from 10 minutes to one hour to complete, with a median of 13 minutes[83].

A Cochrane systematic review compared the effects of active versus physiological or expectant management of the third stage of labour on severe postpartum haemorrhage and other maternal and neonatal outcomes[84].

The review included three studies, 3134 women at low risk of bleeding. When compared with expectant management, it is uncertain whether active management reduces severe primary PPH >1000 mL or more (average RR 0.31, 95% CI 0.05 to 2.17, 2 studies, 2941 women); maternal Hb > 9 g/dL at 24 to 72 hours (RR 0.17, 95% CI 0.02 to 1.47, 1 study, 193 women), noting the very low quality evidence[84]. Secondary outcomes found that for women at risk of PPH, when compared with expectant/physiological management, active management probably reduces therapeutic uterotonics during the third stage and/or within the first 24 hours (average RR 0.15, 95% CI 0.11 to 0.21, 3 studies, 3134 women) (moderate-quality evidence). Active management (with low-quality evidence) may reduce, primary blood loss >500 mL, (average RR 0.33, 95% CI 0.20 to 0.56, 2 studies, 2941 women), mean maternal blood loss (mL) (MD –78.80, 95% CI –95.96 to –61.64, 2 studies, 2941 women), maternal blood transfusions (average RR 0.30, 95% CI 0.10 to 0.88, 3 studies, 3134 women) [84]. This evidence has informed the recommendation that the third stage of labour should be actively managed[8,32,85]

Women should be informed of the relative risks of an adverse outcome occurring with active management of the third stage compared with physiological management[32].

Women should be informed that with active management:

- About 68 women per 1,000 would be expected to have a haemorrhage of more than 500 mL (932 per 1,000 would not)
- About 13 women per 1,000 would be expected to have a haemorrhage of more than 1 litre (987 per 1,000 would not)
- About 13 women per 1,000 would be expected to need a blood transfusion (987 per 1,000 would not)
- About 30 women per 1,000 would be expected to have anaemia (970 per 1,000 would not)

Women should be informed that with physiological management[32]:

- About 188 women per 1,000 would be expected to have a haemorrhage of more than 500 mL (812 per 1,000 would not)
- About 29 women per 1,000 would be expected to have a haemorrhage of more than 1 litre (971 per 1,000 would not)
- About 35 women per 1,000 would be expected to need a blood transfusion (965 per 1,000 would not)
- About 60 women per 1,000 would be expected to have anaemia (940 per 1,000 would not)

If a woman requests physiological management of the third stage, a discussion should include her level of risk so she can make an informed choice and support her in her choice[32.] This discussion and her decision that is agreed with the woman about the management of the third stage should be documented in the woman's healthcare record. The woman should be advised that a change from physiological management to active management may be required if either haemorrhage occurs or if the placenta has not separated after 60 minutes[32,83].

Delayed cord clamping is recommended for term newborn infants who are vigorous at birth[86,87]. Delayed cord clamping provides benefits for the newborn, [86,88] and does not appear to have maternal benefits or harms[89]. The optimum amount of time before cord clamping has not been established[89]; however, the American College of Obstetrics & Gynecology suggest a delay of at least 30-60 seconds[87]. The joint statement from the Society of Obstetricians and Gynaecologists of Canada and Canadian Paediatric Society[90] further endorses this. Delaying cord clamping should not interfere with timely care of the newborn and should never compromise the safety of either the woman or her newborn.

With active management of the third stage, after administration of the uterotonic, the cord should not be clamped earlier than one minute, unless there is a concern about the integrity of the cord or the baby has a heart rate below 60 beats a minute that is not getting faster[32.] The cord should be clamped before five minutes, in order to perform controlled cord traction, as part of active management. After cutting the cord, perform controlled cord traction as part of active management, only after administration of oxytocin and signs of separation of the placenta[32].

Prolonged third stage of labour should be diagnosed if it is not complete within 30 minutes of birth with active management or within 60 minutes of the birth with physiological management[32]. In this event, IV access should be secured and oxytocic agents should be given. If the woman is not in an obstetric unit, transfer arrangements should be made[32].

Clinical Practice

It is recommended that women should have active management of the third stage of labour, as it is associated with a lower risk of a postpartum haemorrhage and/or blood transfusion. The woman should be informed of the benefits and risks of both active and physiological management of the third stage. The woman should be advised that active management of the third stage of labour is recommended.

If a woman at low risk of postpartum haemorrhage requests physiological management of the third stage, support her in her choice and document the decision that is agreed with the woman in her healthcare record.

Active management of the third stage of labour

Administer 10 International units of oxytocin by intramuscular injection with the birth of the anterior shoulder or immediately after the birth of the baby and before the cord is clamped and cut.

After administering oxytocin, clamp and cut the cord.

- Do not clamp the cord earlier than one minute from the birth of the baby unless there is concern about the integrity of the cord or the baby has a heart rate below 60 beats per minute that is not getting faster.
- Clamp the cord before five minutes in order to perform controlled cord traction as part of active management.
- If the woman requests that the cord is clamped and cut later that five minutes, support her in her choice. After cutting the cord, use controlled cord traction.
- Perform controlled cord traction as part of active management only after administration of oxytocin and signs of separation of the placenta.
- The Brandt-Andrews manoeuvre should be used to perform control cord traction. This is performed by placing a hand on the woman's abdomen to secure the uterine fundus to hold it in a fixed position. The second hand exerts sustained downward traction on the clamped umbilical cord.
- As the placenta emerges from the vagina, slowly rotate the placenta in circles as it is delivered can reduce the membranes from tearing and possibly being retained in the uterine cavity.

Physiological management of the third stage of labour

- Ensure the woman is haemodynamically stable.
- Oxytocin is not administered.
- The cord is clamped once pulsation of the cord has ceased unless there is concern about the integrity of the cord or the baby has a heart rate below 60 beats per minute that is not getting faster.
- The placenta is birthed by maternal effort, aided by gravity, nipple stimulation, breastfeeding and skin-to-skin contact. Ensure the woman has an empty bladder.
- Advise a change from physiological management to active management if either of the following occurs: haemorrhage or if the placenta is not delivered within one hour of the birth of the baby.

Maternal observations in the third stage

Record the following observations for the woman in the third stage of labour:

- Her general physical condition, as shown by her colour, respirations and her own report of how she feels
- Vaginal blood loss

If there is postpartum haemorrhage, a retained placenta or maternal collapse, or any other concerns about the woman's wellbeing, transfer care to the Assisted or Specialised Care Pathway using the principles for safe and effective transfer of care. Carry out frequent observations and initiate resuscitation as required.

Observations of the placenta

- Record the timing of cord clamping in both active and physiological management.
- The placenta, umbilical cord and fetal membranes should be systematically examined. The fetal side is assessed for any evidence of vessels coursing to the edge of the placenta and into the membranes, suggestive of a succenturiate placental lobe.
- The number of vessels in the cord is recorded.
- All findings should be recorded in the healthcare record.
- Transfer the woman with her baby to the Assisted or Specialised Care Pathway if the placenta is incomplete.

Retained Placenta

In the event of a retained placenta:

- Secure intravenous access and provide the woman with an explanation as to what is happening.
- In the event of excessive bleeding, intravenous oxytocic agents should be administered and resuscitative measures – refer to the National Clinical Practice Guideline: Prevention and Management of Primary Postpartum for further guidance[88].
- If the placenta is retained and there is a concern about the woman's condition: offer a vaginal examination to assess the need to undertake manual removal of the placenta. Provide the woman with effective analgesia. If uterine exploration is required and the woman is not in an obstetric unit, arrange urgent transfer using the principles of safe and effective transfer of care.

Postpartum Haemorrhage

The early recognition of excessive blood loss is paramount for the optimal management of PPH. Refer to the National Clinical Practice Guideline: Prevention and Management of Primary Postpartum for further guidance[18]. **See ALGORITHM 6: 'Third Stage of Labour**

Recommendations

60. Women should be informed of the benefits and risks of both active and physiological management of the third stage. Active management is the recommended practice for the management of the third stage of labour. The components of active management involves a package of care comprising of:
    a. routine use of uterotonic drugs
    b. deferred clamping of the cord
    c. controlled cord traction after signs of separation of the placenta.
61. Women who choose physiological management should be advised that it may be necessary to revert to active management if either of the following occurs:
    a. haemorrhage
    b. the placenta is not delivered within one hour from the birth of the baby
62. Prolonged third stage of labour should be diagnosed if it is not complete within 30 minutes of birth with active management or within 60 minutes of the birth with physiological management.
63. In the event of a retained placenta:
    a. Secure intravenous access
    b. Provide the woman with an explanation as to what is happening.
    c. In the event of the excessive bleeding, intravenous oxytocic agents and resuscitative measures should be administered.
64. If the placenta is retained and there is a concern about the woman's condition:
    a. offer a vaginal examination to assess the need to undertake manual removal of the placenta
    b. Provide the woman with effective analgesia
    c. If uterine exploration is required and the woman is not in an obstetric unit, arrange urgent transfer using the principles of safe and effective transfer of care.
65. In the event of a postpartum haemorrhage, a retained placenta, incomplete placenta, maternal collapse, or any other concerns about the woman's wellbeing care should be escalated to a senior obstetrician. Transfer of care to the Assisted or Specialised Care Pathway should take place using the principles for safe and effective transfer of care.

Section 6: Immediate postnatal care of the mother and infant

Introduction

Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity support a continued need to identify risk and that risk is not static, but dynamic[91]. Women and infants on the Supported Care Pathway should have risk continually assessed using Algorithm 1 **Initial and On-going Assessment for Women in Labour** while continuously respecting the process of the parents and infant dyad bonding. Reference should also be made to the *National Clinical Practice Guideline Postnatal Care* (pending, 2025) and *National Standards for Infant Feeding in Maternity Services*[92]. This section of the guideline refers to the first few minutes of life for the infant and the first post-natal hour for the woman.

Clinical Question 2.15: What are the immediate postnatal care needs of the woman?

Evidence Statement

All women should be cared for in the early postpartum period by caregivers experienced in the management of the early puerperium and its complications[30].

The concept of parent-infant bonding dates back to a study by Klaus et. al in 1972[93]. The process of enabling parents and infants to involuntarily create nurturing connections is recognised as essential for the future development of the infant[94,95]. A literature review by Johnson[96] on Maternal-infant bonding identified that the process of the bond was not only essential but also the quality of the process, in the first hour of life can have significant affects on the mother's mental health and the new-borns wellbeing, development and adaptation through life. Safe uninterrupted skin-to-skin contact has physiological benefits for both mother, baby, and is recommended practice[8,32,97,98].

National Clinical Practice Guideline, Prevention and Management of Primary Postpartum Haemorrhage recommend care providers should be vigilant for symptoms and signs of postpartum haemorrhage, monitoring for signs of hypovolemia[18]. Blood pressure should be measured shortly after birth[35]. The Department of Health[14] recommend the last set of vital signs for a woman after labour should be documented on an IMEWS chart with appropriate escalation of abnormal findings, if necessary, prior to the transfer to a postnatal setting. Examination of the placenta and membranes following birth is an essential component of managing risk for postpartum haemorrhage[18].

All women should be monitored and encouraged to void within four to six hours post-delivery or removal of a urinary catheter as early identification is the key to management of urinary retention[99]. Handover of care should include the time and volume of the first void after birth.

Thrombosis and thromboembolism remains the leading cause of direct maternal death during or up to six weeks after the end of pregnancy[91,100]. All women should have a VTE risk assessment completed in the postpartum period using a Rapid Risk Assessment Tool for VTE Thromboprophylaxis in Pregnancy/ Post-partum[101].

Clinical Practice

All women and babies should have safe uninterrupted skin-to-skin contact. If a woman's condition does not allow for this time or the woman declines, safe skin-to-skin contact should be facilitated with the birthing partner. Respectful midwifery care allows for privacy and time for the mother-baby dyad relationship to develop and should be facilitated if the clinical condition of the mother and baby is well.

All postpartum women should have assessment of vaginal bleeding, uterine contraction, fundal height, and vital signs recorded in the healthcare record and escalation of care if abnormalities are identified[14]. The placenta and membranes should be assessed for their condition, structure, cord vessels and completeness.

Complete a venous thromboembolism (VTE) risk assessment following birth prior to clinical handover of care to another healthcare provider or when leaving the home environment. Handover of care should include time and volume of any void post-delivery. After birth in the home, ensure the woman has passed urine prior to the midwife departing.

Transfer the woman with her baby to the Assisted or Specialised Care Pathway if any obstetric emergency is identified, if there is a clinical deterioration or concern for maternal wellbeing. Use of clinical risk assessment **ALGORITHM 1 'Initial and On-going Assessment' page 6** is recommended. Transfer care using the principles of safe and effective handover of care, including MDT communication and documentation, Section 2, Clinical Question 2.4.

Recommendations

66. All women and babies should have safe uninterrupted skin-to-skin contact. If a woman's condition does not allow for this or the woman declines, safe skin-to-skin contact should be facilitated with the birthing partner.
67. All postpartum women should have assessment of vaginal bleeding, uterine contraction, fundal height, and vital signs recorded on an IMEWS chart with escalation of care if abnormalities are identified within the first hour after birth
68. All women should have a venous thromboembolism (VTE) risk assessment following birth prior to clinical handover of care to another healthcare provider or leaving the home environment.
69. Clinical handover of care should include time and volume of any void post-delivery.
70. Transfer the woman with her baby to the Assisted or Specialised Care Pathway if any obstetric emergency is identified, or if there is a clinical deterioration or concern for maternal wellbeing.

Clinical Question 2.16: How should perineal lacerations and tears be assessed and managed?

Evidence Statement

All women should have a systematic assessment of the genital tract and perineum[18], including a rectal examination, to exclude all genital trauma, including buttonhole tears[32, 102].

Classification of perineal trauma described by Sultan[103] and adopted by the International Consultation on Incontinence[104], the Royal College of Obstetricians and Gynaecologists[105] and NICE[32] should be used to classify perineal tears:

- First-degree tear: Injury to perineal skin and/or vaginal mucosa.
- Second-degree tear: Injury to perineum involving perineal muscles but not involving the anal sphincter.
- Third-degree tear: Injury to perineum involving the anal sphincter complex:
  - Grade 3a tear: Less than 50% of external anal sphincter thickness torn.
  - Grade 3b tear: More than 50% of external anal sphincter thickness torn.
  - Grade 3c tear: Both EAS and internal anal sphincter torn.
- Fourth-degree tear: Injury to perineum involving the external and internal anal sphincter complex and anorectal mucosa.

If there is any doubt about the degree of third-degree tear, it is advisable to classify it to the higher degree rather than the lower degree[105]. The repair of third and fourth degree lacerations require an operating room for ready access to appropriate equipment and lighting, anaesthesia support, and maintenance of aseptic conditions[102].

A small RCT of eighty primiparous women[106] with minor perineal lacerations compared suturing a laceration or allowing spontaneous healing on the discomfort women experienced, effects on breastfeeding and sexual intercourse. Minor laceration was defined as laceration to the labia minora, vagina or perineum that was not bleeding, the edges were aligned and it did not exceed 2x2cm in length or depth on the perineum. There was no significant difference in the healing process but the group who were sutured experienced more pain, with more follow up visits with the midwife and felt the laceration had a negative effect on breastfeeding. The authors concluded minor perineal lacerations could be left to heal spontaneously following informed decision with the benefit of avoiding the discomfort of anaesthesia and suturing. Expert opinion outlined by the American Academy of Obstetricians and Gynaecologists[107] recommends repairing periclitoral, periurethral, and labial lacerations that are bleeding or alters anatomy.

Elharmeel *et al.*[108],in a RCT, involving 154 women identified there is limited evidence to guide choice between surgical or non-surgical repair of first or second degree perineal tears with regard to clinical outcomes up to eight weeks postpartum.

Fleming *et al.*[109] showed differences in wound closure and poor wound approximation in the non-sutured group repair, with both studies identifying a similar degree of discomfort[108,109]. Until further evidence becomes available, women should be informed about this lack of long-term outcomes and the possible chance of a slower wound healing process, but possible better overall feeling of wellbeing if left un-sutured. A clinicians' decisions whether to suture or not should be based on their clinical judgement

and the women's preference [108,109]. A Cochrane review[110] of sixteen studies, involving 8184 women identified continuous suturing techniques for perineal closure, compared with interrupted methods, are associated with less short-term pain, need for analgesia and suture removal. The review[110] also examined the evidence comparing different suture materials for perineal repair after vaginal delivery. Standard synthetic sutures were associated with less perineal pain up to three days postnatal (risk ratio (RR) 0.83, 95% confidence interval (CI) 0.76 to 0.90) and less analgesic use up to ten days postnatal (RR 0.71, 95% CI 0.59 to 0.87) when compared with catgut in 8 RCT's (10,171 women)[110]. More women with catgut sutures required re-suturing (15/1201) compared with synthetic sutures (3/1201) (RR 0.25, 95% CI 0.08 to 0.74); while more women with standard synthetic sutures required the removal of unabsorbed suture material (RR 1.81, 95% CI 1.46 to 2.24). The review[110] concluded there was little differences between standard and rapidly absorbing synthetic sutures except the need for more suture removal with standard sutures and catgut may increase short-term pain when compared with synthetic sutures.

An Irish longitudinal cohort study of 832 nulliparous women recruited antenatally and surveyed up to 12 months postpartum, assessing for sexual health issues and associated risk factors, identified perineal trauma as a risk factor for postpartum sexual health issues (MAMMI study) [111]. Nulliparous women who had 2nd degree perineal tears (OR 1.6, 95% CI 1.0-2.3), episiotomy (OR 1.7, 95% CI 1.2-2.5) or 3rd degree perineal tears (OR 3.7, 95% CI 1.5-9.3), were significantly more likely to experience dyspareunia at 6 months postpartum when compared to nulliparous women with an intact perineum. Dyspareunia persisted to 12 months for women that had episiotomies and 3rd degree perineal tears. The study also identified women with both 2nd and 3rd degree perineal tears had a loss of interest in sexual activity at 6 months postpartum. The authors [111] concluded that preparing the woman and their partners for these sexual health issues is an essential component of care, which has the potential to remove stress, anxiety and fears regarding intimacy after birth.

Clinical Practice

Perineal tears should be classified using the accepted classification system recognised by the RCOG[105] and NICE[32]:

- First-degree tear: Injury to perineal skin and/or vaginal mucosa.
- Second-degree tear: Injury to perineum involving perineal muscles but not involving the anal sphincter.
- Third-degree tear: Injury to perineum involving the anal sphincter complex:
    - Grade 3a tear: Less than 50% of external anal sphincter (EAS) thickness torn.
    - Grade 3b tear: More than 50% of EAS thickness torn.
    - Grade 3c tear: Both EAS and internal anal sphincter (IAS) torn.
- Fourth-degree tear: Injury to perineum involving the anal sphincter complex (EAS and IAS) and anorectal mucosa.

Before assessing for genital trauma

- Explain to the woman what is planned and why
- Gain informed consent for the procedure[16]
- Ensure privacy and dignity is maintained at all times
- Offer inhalational analgesia
- Ensure good lighting

- Position the woman so that she is comfortable and so that the genital structures can be seen clearly
- Perform the initial examination gently and with sensitivity. It may be done in the immediate period after birth[16]
- If genital trauma is identified after birth, offer further systematic assessment, including a rectal examination[16]

Include the following in a systematic assessment of genital trauma

- Provide a further explanation of what is planned and why
- Confirmation by the woman that there is effective local or regional analgesia in place
- Visual assessment of the extent of perineal trauma to include the structures involved, the apex of the injury and assessment of bleeding.
- A rectal examination to assess whether there has been any damage to the external or internal anal sphincter if there is any suspicion that the perineal muscles are damaged[16]

Ensure that the timing of this systematic assessment does not interfere with mother-baby bonding unless the woman has bleeding that requires urgent attention. Assist the woman to adopt a position that allows adequate visual assessment of the degree of trauma and for repair. Only maintain this position for as long as necessary for systematic assessment and repair.

Seek advice from a more experienced midwife or obstetrician if it is not possible to adequately assess the trauma or there is uncertainty about the nature or extent of the trauma. Transfer the woman with her baby to Assisted or Specialised Care Pathway following the principles for safe and effective transfer of care if the repair needs further surgical or anaesthetic expertise. Third- and fourth-degree lacerations require an operating room for ready access to appropriate equipment and lighting, anaesthesia support, and maintenance of aseptic conditions.

Document the systematic assessment and its results fully, consider pictorially.

Women should be informed spontaneous healing of a minor perineal laceration has the same healing process as if the laceration was sutured. The woman should also be informed if the laceration is sutured more pain may be experienced, they may require more follow up visits with the midwife and may have a negative effect on breastfeeding. It is however recommended to repair periclitoral, periurethral, and labial lacerations that are bleeding or alters anatomy.

Clinicians' decisions whether to suture a first or second-degree tear or not should be based on clinical assessment and judgement of the extent, depth and approximation of the perineal tear, the extent of bleeding from the trauma and the women's preference. Women should be informed there is limited evidence available with regard to overall clinical outcomes at eight weeks postpartum if a first or second-degree tear is sutured or not, however surgical repair is known to promote better wound approximation at six weeks than if left unsutured.

Primarily based on consensus and expert opinion it is recommended that the repair of the perineum should be undertaken as soon as possible to minimise the risk of infection and blood loss.

When carrying out perineal repair:

- ensure that tested effective analgesia is in place, a single dose of lidocaine should not exceed 4.5 mg/kg body weight (or 300 mg)[112] or equivalent
- If the woman reports inadequate pain relief at any point, address this immediately.

There is robust evidence to support the use of continuous non-locked suturing techniques for perineal closure when compared with interrupted methods. Continuous non-locking method is associated with less short-term pain, need for analgesia and suture removal.

Synthetic sutures are recommended, due to the reduction in perineal pain up to three days and less need for analgesic use up to ten days experienced by women. If the skin is opposed after suturing of the muscle in second-degree trauma, there is no need to suture it. If the skin does require suturing, use a continuous subcuticular technique. A continuous subcuticular closure of the perineal skin is preferred to interrupted transcutaneous stitches.

The following recommendations are based primarily on consensus and expert opinion:

Observe the following basic principles when performing perineal repairs:

- Repair perineal trauma using aseptic techniques
- Check equipment and count swabs and needles before and after the procedure
- Good lighting is essential to see and identify the structures involved
- Ensure that difficult trauma is repaired by an experienced practitioner in theatre under regional or general anaesthesia
- Ensure that good anatomical alignment of the wound is achieved and that consideration is given to the cosmetic results.
- Carry out rectal examination after completing the repair to ensure that suture material has not been accidentally inserted through the rectal mucosa.
- After completion of the repair, document an accurate detailed account covering the extent of the trauma, the method of repair and the materials used.
- Provide the woman with information about the extent of the trauma, pain relief, diet, hygiene and the importance of pelvic-floor exercises.
- Offer rectal non-steroidal anti-inflammatory drugs routinely after perineal repair of first- and second-degree trauma provided these drugs are not contraindicated.

Recommendations

71. After vaginal birth, all women should have systematic assessment of the vagina, perineum, and anorectal area to identify the extent of bleeding, perineal trauma and repair significant injuries as soon as possible after delivery. Adequate exposure, lighting, and analgesia are essential for a thorough examination.
72. Perineal tears should be classified using the accepted classification system recognised by the RCOG and NICE:
    - First-degree tear: Injury to perineal skin and/or vaginal mucosa
    - Second-degree tear: Injury to perineum involving perineal muscles but not involving the anal sphincter
    - Third-degree tear: Injury to perineum involving the anal sphincter complex:
        - Grade 3a tear: Less than 50% of external anal sphincter (EAS) thickness torn
        - Grade 3b tear: More than 50% of EAS thickness torn
        - Grade 3c tear: Both EAS and internal anal sphincter (IAS) torn
    - Fourth-degree tear: Injury to perineum involving the anal sphincter complex (EAS and IAS) and anorectal mucosa
73. Women that need further surgical or anaesthetic expertise for perineal repair should be transferred with her baby to Assisted or Specialised Care Pathway following the principles for safe and effective transfer of care.
74. It is recommended to repair periclitoral, periurethral and labial lacerations that are bleeding or alters anatomy. A clinicians' decisions whether to suture a first or second degree tear or not should be based on clinical assessment and judgement of the extent, depth and approximation of the perineal tear, the extent of bleeding from the trauma and the women's preference.
75. Continuous suturing techniques for perineal closure are recommended, compared with interrupted methods.
76. Synthetic sutures are recommended due to the reduction in perineal pain experienced by women.
77. It is recommended as best practice that women are provided with information about the extent of the trauma, pain relief, diet, hygiene and the importance of pelvic-floor exercises following repair of perineal trauma. Provision of adequate pain relief is an essential principle of perineal repair.

Section 7: Infant

Clinical Question 2.17: What are the immediate postnatal care needs of the newborn?

Evidence Statement

At least 90% of new-borns make the transition from intrauterine to extra uterine life without difficulty with approximately 10% conversely, requiring some form of neonatal resuscitation[113]. At every birth, the health care professional should be prepared to resuscitate a newborn. It is standard practice that at each birth there should be one person skilled in neonatal resuscitation whose sole responsibility is management of the new-born[113], including for home birth, were it is the responsibility of the primary midwife to have a second midwife '*on call for attendance at the home birth*' [114]. The American Heart Association (AHA)/ American Academy of Paediatrics (AAP) Neonatal Resuscitation Programme stipulate evaluation of the condition of the baby – specifically respiration, heart rate and tone – is essential in order to determine whether resuscitation is needed accordingly[113]. Initial and ongoing evaluation of the baby's condition is essential in the postnatal period.

The Apgar score is an objective method quantifying the newborn's condition at birth[113]. Apgar scores are a useful tool for conveying information about overall condition of the baby and the response to neonatal resuscitation[113]. They should be documented at 1 and 5 minutes for all births[32].

If a baby is born in poor condition, for example with abnormal heart rate, tone or breathing, it is recommended that paired cord blood samples for blood gas analysis are taken [32]. In order to take good quality cord blood samples the cord should be double clamped using two cord clamps. Routine cord blood samples are not recommended[32].

Standardised checking of neonatal resuscitation equipment ensuring they are in good working order and standardised protocols ensure the provision of safe and high-quality care[8]. Neonatal resuscitation should comply with American Heart Association (AHA)/American Academy of Paediatrics (AAP) Neonatal Resuscitation Programme[113].

Skin to skin

Skin to skin contact is usually referred to as the practice where a baby is dried and laid directly on the mothers' bare chest after birth, both of them covered in a warm blanket and given the opportunity for undisturbed skin to skin for at least an hour or until the first feed[97]. Skin to skin contact has physiological benefits for both the woman and baby and is recommended practice[8,32,97,98]. Antenatal discussion on the benefits of skin-to-skin contact is recommended[92]. With the mothers' consent, the baby should be placed on her chest after birth, to enable skin-to-skin contact to take place. This process triggers both the baby and mother's instinctive behaviours, which helps to establish mother and baby attachment and supports the baby to seek out food[115].

A Cochrane systematic review has shown that skin-to-skin contact in the first hour after birth[115]:

- calms and relaxes both mother and baby
- regulates the baby's heart rate and breathing, helping them to better adapt to life outside the womb
- stimulates digestion and an interest in feeding
- regulates the baby's temperature
- enables colonisation of the baby's skin with the mother's friendly bacteria, thus providing protection against infection
- stimulates the release of hormones to support breastfeeding and mothering.

For the purpose of this guideline, the focus is the immediate postnatal care of the newborn. The immediate postnatal care for the newborn is defined as in the first few minutes after birth involving initial assessment and continued evaluation. Refer to the American Heart Association (AHA)/American Academy of Paediatrics (AAP) Neonatal Resuscitation Programme[113]

Clinical Practice

Preparation for the birth

All births should have a second midwife skilled in neonatal resuscitation whose sole responsibility is management of the newborn in attendance. Emergency equipment must be checked to ensure in good working order and there are spare parts readily available in case of faulty equipment for all births. It is recognised that the use of standardised protocols for emergency equipment checking and neonatal resuscitation provide more consistent and care of a higher standard than without them.

Care in the first minutes after birth (all birth settings)

Record the time of birth to the onset of regular respirations for all babies. Assess and evaluate the condition of baby evaluation immediately after birth – specifically respiration, heart rate and tone – is essential in order to determine whether resuscitation is required. Apgar scores at 1 minute and 5 minutes are a useful tool for conveying information about overall condition of the baby and the response to neonatal resuscitation. The Apgar score should be routine part of communication at the clinical handover.

In the hospital setting

In the event the baby is born in poor condition (abnormal breathing, heart rate or tone), follow AAP resuscitation guidelines. Continue to evaluate and record the baby's condition until it is improved and stable. Escalate care as appropriate, keeping the mother and birth partner informed of the plan of care. Take paired cord blood samples for blood gas analysis, after clamping the cord using two clamps. Document the results of the cord blood samples in the maternity healthcare record, maternal and neonatal, and inform the paediatrician/neonatologist of any abnormal results.

In the homebirth setting

In the event the baby is born in poor condition (abnormal breathing, heart rate or tone), follow AAP resuscitation guidelines. Continue to evaluate and record the baby's condition until it is improved and stable. Arrange emergency transfer of the newborn to hospital. Transfer should be made in line with the HSE Home Birth Service Transfer Policy[13]. Keep the mother and birth partner informed of plans of care.

Skin-to-Skin contact

In order to keep the baby warm, dry and cover him or her with a warm, dry blanket or towel while maintaining skin-to-skin contact with the woman. Mothers and babies have immediate, unhurried and uninterrupted safe skin-to-skin contact, which is continued for at least 60 minutes or until after the first feed, considering the need for baby to be given time to go through the instinctive post birth stages.

If the mother cannot initiate skin-to-skin contact immediately after birth, she should be supported in doing so as soon as possible. Birth companions should be given the support and opportunity to do so where appropriate. Avoid separation of a woman and her baby within the first hour of the birth for routine postnatal procedures, for example, weighing, measuring and bathing, unless the woman requests these measures or they are necessary for the baby's immediate care.

All babies should be routinely monitored when in skin-to-skin contact with their mother or birth companion. This is outlined in the advice regarding Sudden Unexpected Postnatal Collapse (SUPC) of a Newborn Infant by Prof. John Murphy, National Clinical Lead for Neonatology, The National Women and Infants Health Programme (NWIHP), and *Ms* Angela Dunne, NWIHP Lead Midwife (Appendix 4).

Recommendations

78. A second midwife skilled in neonatal resuscitation whose sole responsibility is management of the newborn, should be in attendance at all births
79. Time of birth should be recorded and the onset of regular respirations for all babies
80. Immediately after birth the condition of the baby should be assessed to determine if resuscitation is required. This is done by evaluating the baby's respiration, heart rate and tone. Resuscitation should be conducted in line with the American Heart Association (AHA)/American Academy of Paediatrics (AAP) Neonatal Resuscitation Programme (NRP)
81. Apgar scores at 1 minute and 5 minutes should be evaluated, documented and used as a tool for conveying information about the overall condition of the baby at the birth.
82. All babies should be risk assessed at birth to determine if neonatal observations are required.
83. Mothers and babies should have immediate, unhurried and uninterrupted safe skin-to-skin contact if there are no clinical concerns with either, which is continued for at least 60 minutes or until after the first feed, considering the need for baby to be given time to go through the instinctive post birth stages.
84. All babies should be routinely monitored when in skin-to-skin contact with mother or birth companion in line with advice regarding Sudden Unexpected Postnatal Collapse (SUPC) of a Newborn Infant from Prof. John Murphy, National Clinical Lead for Neonatology, The National Women and Infants Health Programme (NWIHP) and Ms Angela Dunne, NWIHP Lead Midwife (Appendix 4)

Chapter 3: **Development Of Clinical Practice Guideline**

3.1 Literature search strategy

A comprehensive literature review undertaken for each clinical question and included national and international publications. Details of the evidence-based literature for this guideline are referred to in chapter two. The search included national and international publications for each aspect of intrapartum care; first, second, third stage of labour and the initial postnatal care of mother and baby. The search included electronic databases PUBMED, MEDLINE, CINAHL and the Cochrane Library. The focus was on reviewing recent evidence in the last ten years, related to intrapartum midwifery care.

We searched databases using relevant headings and keywords. Key words and terms used included "labour & birth", "partogram", "analgesia", "support in labour", "risk assessment", "perineal care", "partogram", "midwifery-led care", and "continuity of care", however this list is not exhaustive. There were no restrictions placed on any of the search, other than publications from 2014 onwards. The results from these searches were reviewed and discussed by the team as the review of the literature was carried out. Reference lists for key papers were searched by hand.

International guidelines were reviewed including the National Institute for Health and Care Excellence (NICE) Intrapartum Care (NG235), 2023[32,34]; World Health Organisation (WHO) Recommendations – Intrapartum care for a positive childbirth experience (2018)[8]; Guideline and Audit Implementation Network (GAIN) Guideline for Admission to Midwife-Led-Units in Northern Ireland & Northern Ireland Normal Labour & Birth Care Pathway (2018)[117]; The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) (2023)[30], and the American Academy of Pediatrics, Neonatal Resuscitation Program, 8th Edition Learning Platform Neonatal Resuscitation Program (aap.org)[113]. National policy and guidelines also informed the guidance, as developed by the Department of Health (DoH), Health Service Executive (HSE), Health Information and Quality Authority (HIQA), Institute of Obstetricians and Gynaecologists (IOG) and the National Women and Infants Health Programme (NWIHP).

3.2 Appraisal of evidence

Following a comprehensive literature review the quality, validity and relevance of the evidence gathered were critically appraised by the guideline developers under the following headings:

- Study design
- Relevance of primary and secondary outcomes
- Consistency of results across studies
- Magnitude of benefit versus magnitude of harm
- Applicability to practice context

A number of evidence-based recommendations for midwifery intrapartum care for women on the Supported Care Pathway were agreed upon. They have been adapted to reflect care in the Irish healthcare setting. Where evidence to support clinical practice was lacking, international guidelines were reviewed, including those outlined previously. On the occasion where no clinical evidence has been identified to support clinical questions, clinical practice and recommendations were built on group consensus and expertise.

3.3 AGREE II process

While being developed, the Guideline was assessed using the AGREE II checklist (Appendix 4) as recommended by the Department of Health in the 'How to Develop a National Clinical Guideline: a manual for guideline developers', 2019[16].

The purpose of AGREE II is to provide a framework to:

1. Assess the quality of guidelines;
2. Provide a methodological strategy for the development of guidelines; and
3. Inform what information and how information ought to be reported in guidelines

3.4 Literature review

Details of supportive evidence based literature for this Guideline are reported in chapter two. The review of the literature was conducted between November 2022 and March 2024, new emerging evidence was reviewed and included in the guideline, where relevant.

- The final documents selected were reviewed by the guideline group and amendments made
- The evidence reviewed comes from both national and international studies and has been adapted to fit the Irish context
- Literature was used when the evidence was relevant, strong and applicable to the Irish setting and omitted when this was not the case. When the quality of evidence available was insufficient to support certain recommendations, these were made based on group consensus and committee expertise.

3.5 Grades of recommendation

GRADE offers a transparent and structured process for developing and presenting evidence summaries and for carrying out the steps involved in developing recommendations.[17]

While we acknowledge that for this particular work an extensive GRADE approach is not possible, we have used the suggested language set out in the GRADE table when making recommendations.[18] (Appendix 5)

16 Department of Health (2019). How to develop a National Clinical Guideline: a manual for guideline developers. Available at: https://www.gov.ie/en/collection/cd41ac-clinical-effectiveness-resources-and-learning/

17 Guyatt, Gordon, *et al.* "GRADE Guidelines: 1. Introduction – GRADE Evidence Profiles and Summary of Findings Tables." *Journal of Clinical Epidemiology*, vol. 64, no. 4, 2011, pp. 383-94, https://doi.org/10.1016/j.jclinepi.2010.04.026.

18 SMFM adopts GRADE (Grading of Recommendations Assessment, Development, and Evaluation) for clinical guidelines. Society for Maternal-Fetal Medicine (SMFM), Chauhan SP, Blackwell SC. Am J Obstet Gynecol. 2013 Sep;209(3):163-5. doi: 10.1016/j.ajog.2013.07.012. PMID: 23978245 https://pubmed.ncbi.nlm.nih.gov/23978245/

3.6 Future research

There is ample evidence related to the value of midwifery-led care. While midwifery led care and continuity of care are relatively recent developments in Ireland, the need for further research highlighted during the development of this guideline includes:

- How does the provision of accurate, evidence-based information affect women's decision-making process and choice of place of birth?
- Impact of intrapartum midwifery-led care on women and their babies in Ireland
- Women's experience of midwifery-led care in the intrapartum period
- Women's experience of early labour
- What is the effectiveness of hands on, or hands poised in the second stage of labour for reducing perineal trauma?
- What is the appropriate time for the second stage of labour?
- What is the appropriate length of time of pushing in the second stage of labour?

Chapter 4: Governance and Approval

4.1 Formal governance arrangements

This Guideline was written by the Guideline developers under the direction of the Guideline Programme Team (GPT). An Expert Advisory Group was formed to review the Guideline prior to submission for final approval with the National Women and Infants Health Programme. The roles and responsibilities of the members of each group and their process were clearly outlined and agreed.

4.2 Guideline development standards

This Guideline was developed by the Guideline Developer Group (GDG) within the overall template of the HSE National Framework[19] for developing Policies, Procedures, Protocols and Guidelines (2023) and under supervision of the Guideline Programme Team.

A review was conducted by a group of stakeholders (Appendix 3) and then experts, specialists and advocates (the EAG) prior to approval by the Clinical Advisory Group (CAG) of the National Women and Infants Health Programme (NWIHP) with final sign off for publication by CAG Co-Chairs, the Clinical Director of NWIHP and the Chair of the IOG. See appendix 6 for list of CAG members.

19 Health Service Executive (2023). How to develop HSE National Policies, Procedures, Protocols and Guidelines (PPPGs).

Chapter 5: **Communication And Dissemination**

A communication and dissemination plan for this Guideline has been developed by the GPT and endorsed by NWIHP.

Effective ongoing clear communication is essential in explaining why the Guideline is necessary and securing continued buy-in. It provides an opportunity to instil motivation within staff, helps overcome resistance to change and gives an opportunity for feedback[20].

The Clinical Guideline will be circulated and disseminated through the Guideline Programme Team as well as through the professional networks who participated in developing and reviewing the document.

Senior management within the maternity units are responsible for the appropriate dissemination of new and updated guidelines. Local hospital groups including Guideline committees are also instrumental in the circulation of new and updated guidelines and promoting their use in the relevant clinical settings.

The HSE will make this Guideline available to all employees through standard networks as well as storing it in the online PPPG repository. Electronic versions available on the NWIHP https://www.hse.ie/eng/about/who/acute-hospitals-division/woman-infants/clinical-guidelines/and RCPI websites (https://www.rcpi.ie/faculties/obstetricians-and-gynaecologists/national-clinical-guidelines-in-obstetrics-and-gynaecology/) and other communication means can be used to maximise distribution. The NWIHP website will also provide a training webinar introducing each Guideline and where relevant a downloadable version of the recommended algorithm will be available.

20 Department of Health (2018). NCEC Implementation Guide and Toolkit. Available at: https://www.gov.ie/en/collection/cd41ac-clinical-effectiveness-resources-and-learning/?

Chapter 6: **Implementation**

6.1 Implementation plan

Implementation was considered at the beginning, and throughout the Guideline development process. The local multidisciplinary clinical team, senior executive and clinical management in each maternity and gynaecology hospital/unit are ultimately responsible for the appropriate structured adoption and implementation of the Guideline within their area of responsibility. They must ensure that all relevant personnel under their supervision have read and understood the Guideline and monitor both its effectiveness and adoption.

Within each site, local multidisciplinary teams are responsible for the clinical implementation of Guideline recommendations, and ensuring that their local clinical practices and processes reflect and are aligned with the Guideline recommendations.

To support maternity services in the implementation of this guideline, algorithms have been developed and are referenced in this document.

The following have been put in place to help facilitate the implementation of this Guideline.

- Quick Summary Document (QSD) for clinical staff (includes key recommendations, auditable standards, algorithms and recommended reading)
- Clinical Guideline mobile application
- Plain language summary

6.2 Education plans required to implement the Guideline

It is acknowledged that this Guideline should be complemented by ongoing education, training and assessment where required.

Multidisciplinary education on implementation of this Guideline should be provided both locally and nationally.

6.3 Barriers and facilitators

To ensure successful implementation of guidelines, it is first necessary to look at potential barriers and facilitators. Taking these into account when developing the implementation plan should improve levels of support from relevant users. (DOH 2018, 2019)

Barriers may be categorised as internal (specific to the Guideline itself) or external (specific to the clinical environment).

The Guideline Development Group has aimed to address any internal barriers during the development of this Guideline.

Potential external barriers include:

- Structural factors (e.g. budget or service redesign)
- Organisational factors (e.g. lack of facilities or equipment)
- Individual factors (e.g. knowledge, skills, training)
- Woman's perceptions

In the case of this Guideline it will be necessary to examine possible barriers and consider implementation strategies to address them. By example, this may include discussion with relevant management groups with regards budgetary impact or providing training to the relevant staff.

In the case of this Guideline, potential barriers may include:

- Women's access to low technology birthing rooms or access to home birth settings
- Integration of midwifery-led intrapartum care in existing obstetric units/hospitals
- The provision on one-to-one midwifery care in the intrapartum period

6.4 Resources necessary to implement recommendations

The implementation of this Guideline should be undertaken as part of the quality improvement of each hospital. Hospitals should review existing service provision against this Guideline, identifying necessary resources required to implement the recommendations in this Guideline.

In the case of this Guideline:

- Dedicated midwifery teams to deliver care to women on the Supported Care Pathway
- Organisational support and structures to develop and facilitate delivery of the Supported Care Pathway
- Development of National Standards for the Supported Care Pathway

Chapter 7: Audit and Evaluation

7.1 Introduction to audit

It is important that both implementation of the Guideline and its influence on outcomes are audited to ensure that this Guideline positively impacts on the care of the woman. Institutions and health professionals are encouraged to develop and undertake regular audits of Guideline implementation with an intention of identifying areas for improvement. The GDG acknowledges currently there is no standardised intrapartum data collection, despite all maternity units collecting similar information. The integration and expansion of current SCP intrapartum data gathering tools is recommended, currently limited to the homebirth services, to incorporate and standardise the data collection for women availing of the SCP within the maternity units. Personnel tasked with the job of conducting the audit should be identified on receipt of the most recent version of the Guideline.

7.2 Auditable standards

Audit using the key recommendations as indicators should be undertaken to identify where improvements are required and to enable changes as necessary. Audit should also be undertaken to provide evidence of continuous quality improvement initiatives.

Auditable standards for this Guideline include:

1. Women who accessed intrapartum care on the Supported Care Pathway were within the defined SCP criteria after initial assessment, with specific reference to Algorithm 1.
2. Women and/or infants transferred either in or out of the intrapartum SCP, that the reason for transfer was identified and recorded, and complied with principles outlined in the guideline, including the time from decision to actual transfer.
3. Maternal and neonatal outcomes, including but not limited to – place of birth, mode of delivery, water immersion for labour and/or birth, maternal position for birth, birthing aids used, use of intrapartum analgesia, amniotomy, perineal trauma, Apgar score, uninterrupted skin to skin contact, infant feeding.
4. Documentation of care in the first, second and third stage of labour is in line with this recommended clinical guidance and time parameters as guided by Algorithms 1 to 6
5. Numbers of women and infants who required escalation of care e.g. high dependency/intensive care, postnatal readmission, including indications for admission.

7.3 Evaluation

Evaluation is defined as a formal process to determine the extent to which the planned or desired outcomes of an intervention are achieved[21].

Implementation of this Guideline will be audited periodically at national level, with standards for this set by the NWIHP. Evaluation of the auditable standards should also be undertaken locally by senior hospital clinical management to support implementation.

21 Health Information Quality Authority (2012). National Standards for Safer Better Healthcare [Internet]. Available from: https://www.hiqa.ie/reports-and-publications/standard/national-standards-safer-better-healthcare

Chapter 8: **Revision Plan**

8.1 Procedure for the update of the Guideline

It may be a requirement to amend, update or revise this Guideline as new evidence emerges. This Guideline will be reviewed at national level every three years, or earlier if circumstances require it, and updated accordingly.[22]

The Guideline Development Group will be asked to review the literature and recent evidence to determine if changes are to be made to the existing Guideline. If the Guideline Development Group are unavailable, the GPT along with the NWIHP senior management team will select a suitable expert to replace them.

If there are no amendments required to the Guideline following the revision date, the detail on the revision tracking box must still be updated which will be a new version number and date.

The recommendations set out in this Guideline remain valid until a review has been completed.

8.2 Method for amending the Guideline

As new evidence become available it is inevitable that Guideline recommendations will fall behind current evidence based clinical practice. It is essential that clinical guidelines are reviewed and updated with new evidence as it becomes available.

In order to request a review of this Guideline one of the following criteria must be met:

a. 3 years since the Guideline was published

b. 3 years since last review was conducted

c. Update required as a result of new evidence

Correspondence requesting a review of the Guideline should be submitted to the National Women and Infants Health Programme. Any such requests should be dealt with in a timely manner.

22 Health Service Executive (2023). How to develop HSE National Policies, Procedures, Protocols and Guidelines (PPPGs).

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Supporting Evidence

GRADE: http://www.gradeworkinggroup.org/

AGREE: http://www.agreetrust.org/agree-ii/

Glossary
(for the Purpose of this Guideline)

ABC Alongside Birth Centre (may also be known as a MLU or Midwifery led unit)

AGREE Appraisal of Guidelines for Research and Evaluation

ACOG American College of Obstetricians and Gynaecologists

ARM Artificial rupture of membranes

CAG Clinical Advisory Group

CQ Clinical question

EAG Expert Advisory Group

FMU Free standing Midwifery Unit

GPT Guideline Programme Team

GRADE Grading of Recommendations, Assessments, Developments and Evaluations

HCR Health care record

HCP Health care professional

HIQA Health Information and Quality Authority

HSE Health Service Executive

IAP Intrapartum Antibiotics Prophylaxis

IV Intravenous

IOG Institute of Obstetricians and Gynaecologists

FIGO International Federation of Gynaecology and Obstetrics

MDT Multidisciplinary Team

NICE National Institute for Health and Care Excellence

NCEC National Clinical Effectiveness Committee

NMS National Maternity Strategy

NRP Neonatal Resuscitation Programme

NWIHP National Women and Infants Health Programme

PCA Patient controlled analgesia

PPPG Policy, Procedures, Protocols and Guidelines

Primiparous a woman giving birth for the first time

OU Obstetric Unit

RCOG Royal College of Obstetricians and Gynaecologists

RCPI Royal College of Physicians of Ireland

SCP Supported Care Pathway

SECM Self Employed Community Midwife

TIC Trauma Informed Care

USS Ultra sound scan

Appendix 1: **Expert Advisory Group Members 2024-**

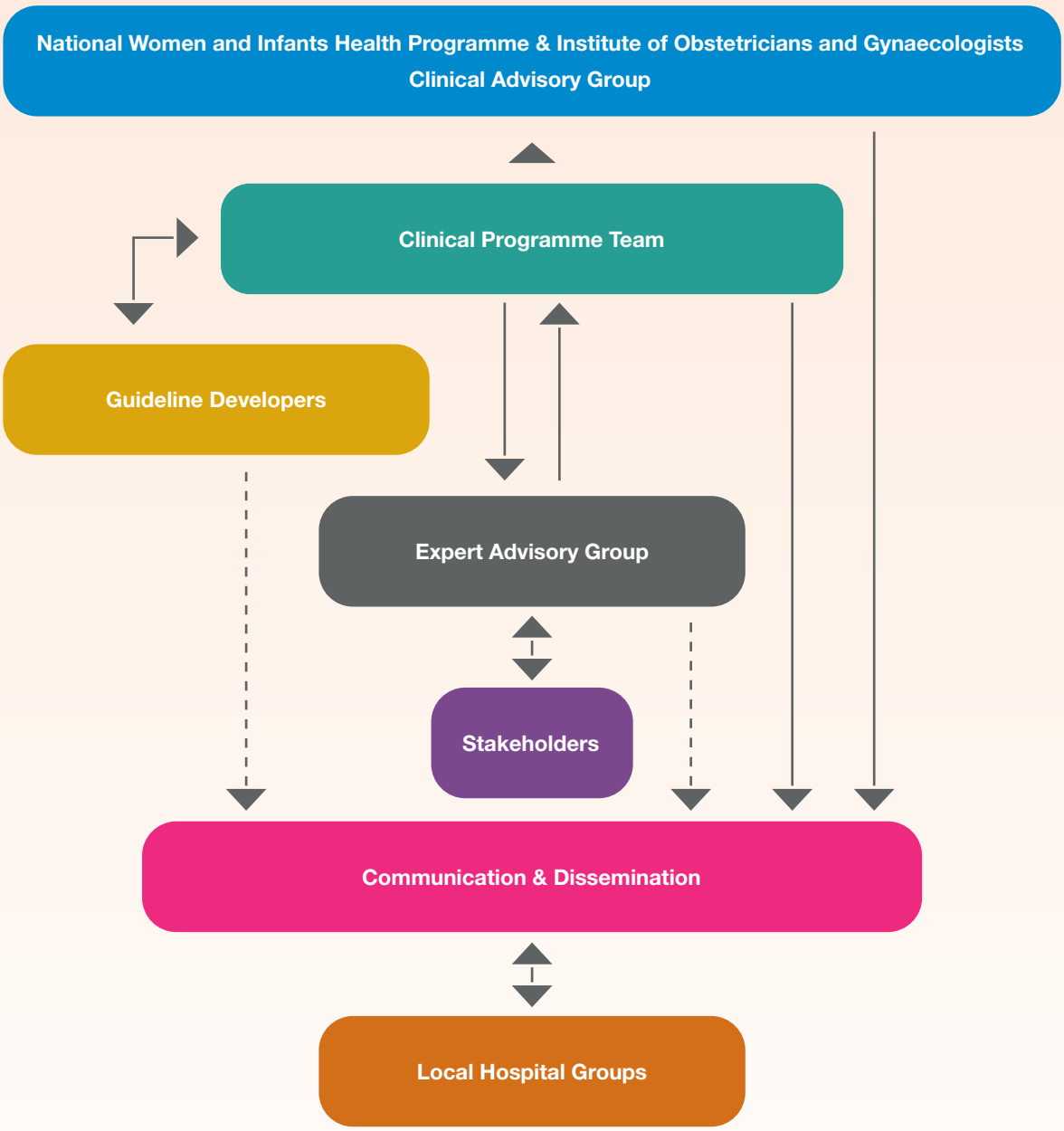
Member	Profession	Location
Dr Mairead Butler	Consultant Obstetrician and Gynaecologist	University Hospital Waterford
Dr Nicholas Barrett	Consultant Anaesthesiologist, Lead for Obstetric Anaesthesiology services	Limerick University Hospital
Dr Venita Broderick	Consultant Obstetrician and Gynaecologist	National Maternity Hospital Dublin
Ms Siobhan Canny	Group Director of Midwifery	Saolta University Health Care Group
Ms Triona Cowman	Director of the Centre for Midwifery Education	Centre for Midwifery Education, Coombe Women & Infants University Hospital
Ms Marie Culliton	Lab Manager/Chief Medical Scientist	National Maternity Hospital Dublin
Ms Niamh Connolly-Coyne *And* Ms Mandy Daly *(Shared nomination)*	Board of Directors Members	Irish Neonatal Health Alliance
Ms Sinéad Curran	Dietician Manager	National Maternity Hospital
Dr Niamh Conlon	Consultant Histopathologist	Cork University Hospital
Ms Georgina Cruise	National Manager	Patient Advocacy Service
Dr Orla Donohoe	Specialist Registrar, Obstetrics and Gynaecology and SWEC Fellow	St George Hospital, Sydney, Australia
Ms Alana Dineen	Senior Clinical Pharmacist	Cork University Maternity Hospital
Prof Maeve Eogan	Consultant Obstetrician and Gynaecologist National Clinical Lead SATU (HSE)	Rotunda Hospital Dublin
Dr Brendan Fitzgerald	Consultant Perinatal Pathologist	Cork University Hospital

Member	Profession	Location
Dr Daniel Galvin	Specialist Registrar, Obstetrics and Gynaecology	Cork University Maternity Hospital
Ms Stacey Grealis	Patient Research Partner	Independent Living Movement Ireland
Ms Fiona Hanrahan	Director of Midwifery and Nursing	Rotunda Hospital Dublin
Ms Laura Harrington	Principal Medical Social Worker	National Maternity Hospital Dublin
Ms Marita Hennessy	Post-Doctoral Researcher	Pregnancy Loss Research Group, INFANT Centre, University College Cork
Ms Caroline Joyce	Principal Clinical Biochemist PhD Candidate	Cork University Hospital University College Cork
Dr Chaitra Jairaj	Consultant Perinatal Psychiatrist	Coombe Women & Infants University Hospital, Dublin Midland Regional Hospital Portlaoise
Dr Cathy Monteith	Consultant Obstetrician and Gynaecologist	Our Lady of Lourdes Hospital Drogheda
Prof John Murphy	Consultant Neonatologist Clinical Lead for the National Clinical Programme for Paediatrics and Neonatology	National Women and Infants Health Programme
Ms Janet Murphy	Advanced Midwifery Practitioner	University Hospital Waterford
Dr Jill Mitchell	Specialist Registrar, Obstetrics and Gynaecology	Cork University Maternity Hospital
Dr Aisling McDonnell	Specialist Registrar, Obstetrics and Gynaecology	Mater Misericordiae University Hospital Dublin
Dr Ciara McCarthy	General Practitioner ICGP and NWIHP Women's Health Lead	Irish College of General Practitioners
Ms Orla McCarthy	Clinical Specialist Physiotherapist in Pelvic Health	Cork University Maternity Hospital
Dr Donough J. O'Donovan	Director Neonatal Intensive Care Unit Consultant Neonatologist/Paediatrician	University College Hospital Galway

Member	Profession	Location
Mr Fergal O' Shaughnessy *And* Dr Brian Cleary *(Shared nomination)*	Senior Pharmacist, Honorary Lecturer *And* Chief Pharmacist, Honorary Clinical Associate Professor and Medications Lead, Maternal & Newborn Clinical Management System	Rotunda Hospital Dublin Royal College of Surgeons in Ireland
Dr Gillian Ryan	Consultant Obstetrician and Gynaecologist	University Hospital Galway
Prof Valerie Smith	Chair of Midwifery	University College Dublin
Ms Nora Vallejo	Advanced Midwife Practitioner	Coombe Women & Infants University Hospital, Dublin

Member 2021-2023	Profession	Location
Dr Katherine Astbury	Consultant Obstetrician and Gynaecologist	University Hospital Galway
Dr Richard Duffy	Consultant Perinatal Psychiatrist	Rotunda Hospital Dublin
Ms Clare Farrell	Physiotherapy Manager	Coombe Women & Infants University Hospital, Dublin
Ms Marie Finn	Medical Social Work Counsellor	Saolta University Health Care Group
Prof Declan Keane	Consultant Obstetrician, Gynaecologist, Professor of Obstetrics and Gynaecology	National Maternity Hospital Dublin, Royal College of Surgeons in Ireland
Ms Áine Kelly	Physiotherapy Manager	Coombe Women & Infants University Hospital, Dublin
Dr Fergus McCarthy	Consultant Obstetrician, Gynaecologist	Cork University Maternity Hospital, University College Cork
Dr Sarah Petch	Specialist Registrar, Obstetrics and Gynaecology	National Maternity Hospital Dublin
Ms Margaret Quigley	National Lead for Midwifery	Office of Nursing and Midwifery Services Director

Appendix 2:
Guideline Programme Process



Appendix 3: **Stakeholder Review Group**

Name	Profession	Location
Angela Dunne	National Lead Midwife	National Women and Infant Health Programme
Clare Kennedy	Assistant Director of Midwifery	National Women and Infant Health Programme
Sinead Thompson	Project Co-ordinator for Antenatal Education	National Women and Infant Health Programme
Professor John Murphy	Clinical Lead Neonatology & Consultant Neonatologist	National Women and Infant Health Programme
Margo Dunworth	Neonatal Nurse Lead	National Women and Infant Health Programme
Dr Karn Cliffe	Director of Nursing & Midwifery – Research, Practice Standards & Quality	Dublin Midlands Hospital Group
Edel Ryan	Midwife Tutor Specialist Co-ordinator	Centre of Nursing & Midwifery Education
Nicolai Murphy	Programme Manager – National Maternity Guidelines	National Women and Infant Health Programme
Dr Denise O'Brien	Assistant Professor/Lecturer & Associate Dean	University College Dublin
Dr Linda Biesty	Associate Professor/Senior Lecturer in Midwifery	National University of Galway
Margaret Quigley	National Lead for Midwifery	Office of the Nursing & Midwifery Services Director
Bernadette Toolan	Clinical Midwife Manager 3	University Maternity Hospital, Limerick
Emmeliene Farrell	Designated Midwifery Officer	St Luke's General Hospital, Kilkenny
Laura Mc Hugh	National Breastfeeding Co-ordinator	HSE Health & Wellbeing, Strategy and Research

Name	Profession	Location
Dr Krysia Lynch	Chair of AIMS Ireland	Dublin
Kara Spratt	Service User Advocate	
Ursula Nagle	Advanced Midwife Practitioner Specialist Perinatal Mental Health Service	Rotunda Hospital
Grainne Milne	Director of Midwifery	Our Lady of Lourdes Hospital, Drogheda
Katie Bourke	Director of Midwifery	Cork University Maternity Hospital
Sandra O'Connor	Director of Midwifery	University Hospital Kerry
Maggie Dowling	Director of Midwifery	Tipperary University Hospital

Appendix 4: **Sudden Unexpected Postnatal Collapse of the Newborn**

Clár Sláinte Náisiúnta do Mhná agus do Naíonáin
Feidhmeannacht na Seirbhíse Sláinte,
An Foirgneamh Brunel, An Ceantar Theas,
Baile Átha Cliath DOS X03F
T: 076 695 9993

National Women and Infants Health Programme
Health Service Executive,
The Brunel Building, Heuston South Quarter,
Dublin D08 X03F
T: 076 695 9993

To:	Clinical Leads, Neonatology and Directors of Midwifery
From:	Prof. John Murphy, National Clinical Lead for Neonatology, The National Women and Infants Health Programme (NWIHP)*Ms* Angela Dunne, NWIHP Lead Midwife
Date:	20th August, 2024
Subject:	Sudden Unexpected Postnatal Collapse (SUPC) of a Newborn Infant

By Email Only

Dear Colleagues,

Please find communication on risk assessment and management of Sudden Unexpected Postnatal Collapse (SUPC) of a newborn infant.

The main emphasis of this advisory memo is to increase awareness of the SUPC entity. However, it is interchangeable with other pieces of work undertaken by NWIHP such as the evidence based educational video and poster developed in conjunction with the Rotunda Hospital for Service User's on safe skin-to-skin care (SSC) practices[1].

We acknowledge that SUPC cannot be eradicated but this guidance is to heighten Health Care Professional (HCP) awareness.

Definition[2]

For the purpose of this guidance, SUPC is commonly defined as any term or near-term infant (³ 35 weeks' gestation), who

- is apparently well at birth (with a 5-minute Apgar score at 7 or above and deemed suitable for routine post-natal care) who
- collapses unexpectedly, particularly within the first two hours of age[3] and requires neonatal resuscitation

Background:

In Ireland, there are 4 cases of SUPC in maternity services annually.

The literature is consistent in how catastrophic SUPC is with serious life threatening and/or fatal consequences: 40-50% of survivors have significant neonatal encephalopathy and neurodevelopment sequelae[4, 5]; deaths occur in over 50% of cases[6, 7, 8].

The Typical Case:

SUPC typically affects the term infant who is well at birth. If in the first few hours after birth, the infant suddenly collapses while being held in their mother/parent/carer(s) arms, a guarded outcome is indicated. SUPC can result in neonatal encephalopathy or death in some cases.

Aetiology[1]

The aetiology is still unclear. It is not known why SUPC occurs. No identifiable cause is found in 40-60% of fatal cases[4, 5, 6, 9, 10, 11]. Of the infants in whom no underlying condition was found, 15% died and 75% had post-asphyxial encephalopathy with neurological sequelae at one year[4].

In 40% of explained cases, an underlying, hitherto undiagnosed condition was identified including cardiac disease, congenital anomaly, genetic, intracranial haemorrhage, metabolic and endocrine disorders, persistent pulmonary hypertension and sepsis[2, 3, 7, 8, 9, 12]. Infants with underlying conditions where signs were not recognised and previously unknown pathophysiology are overrepresented in SUPC[2].

Timing of SUPC Events[6]

One third of reported SUPC events occur during the first 2 hours after birth, a further one third occur between 2 and 24 hours after birth and one third of cases occur between 24 hours and 7 days after birth. Of note, two thirds of SUPC events occur within the first 24 hours after birth. Based on published literature, the median age of SUPC is 70 minutes after birth for infants without an underlying pathology[4].

Two thirds of SUPC cases		1/3rd
1/3rd	1/3rd	
WITHIN **2 HOURS** AFTER BIRTH	BETWEEN **2-24 HOURS** AFTER BIRTH	BETWEEN **24 HOURS – 7 DAYS** AFTER BIRTH

Key situational and potential risk factors: (modifiable and non-modifiable) are consistently identified in the literature[2, 4, 13].These are outlined in the tables below to be considered in the development of risk reduction strategies.

It is important to pay attention to the non-modifiable risk factors, particularly to the at-risk mother as she may not be able to observe her infant effectively.

Increased vigilance is required to identify potentially modifiable risk factors and increase protective counter-measures.

Intrinsic risk factors are not always detected, therefore it is crucial that extrinsic factors such as heightened postnatal awareness, surveillance and vigilance are in place to reduce risk[5].

NON-MODIFIABLE (POTENTIAL) RISK FACTORS
Peri-Partum Medications: Medications that may affect the infant include General Anaesthetic, Opioids
Developmental Vulnerability[13]: In the first hours of life, the infant has diminished responsiveness to external stimuli due to physiological maladaptation in their extra-uterine transition[7]
Neonatal Resuscitation: Term infants who required resuscitation at birth
Primiparous mothers [2, 4, 6, 7, 13, 14]: Primigravid mothers implies less experience or awareness in recognising signs of compromise in their infant[5, 7, 14]
Mothers may experience reduced alertness and awareness[4, 14]: The HCP should be aware of the effect of medications when facilitating SSC. Medications that cause maternal drowsiness include Entenox[2] and recently prescribed peri-partum analgesia and sedation[2, 4, 7, 14].
High Maternal Body Mass Index (BMI)[15]
Mothers with underlying Medical Condition(s)[16]: Examples include mental health, intellectual disability, addiction
Long or complicated Labour and Birth[16]: Mother/Birth Partner/Caregiver exhaustion, extreme fatigue[2, 4, 5, 6, 7, 14, 16,] and sleep-deprivation as a result of prolonged labour[16].
Limited Maternal Mobility[2, 4]: The mother's observations of her infant[8] may be affected by pain, postoperative status or spinal anaesthesia
Prolonged Rupture of Membranes (PROM), Small for Gestational Age (SGA)[17]: Risk factors for SUPC include PROM and SGA

MODIFIABLE (POTENTIAL) RISK FACTORS

Supervision Post Birth:

Ongoing passive observations (unobtrusive, enhanced surveillance[6] yet effective and appropriate) are recommended to monitor the mother and infant dyad at high risk times especially in the first hour after birth (when the incidence of SUPC is highest).

It is advised that the mother and infant should not be left alone[6] or unsupervised for the first SSC/breastfeed (BF) especially primigravid mothers[2, 4, 5, 7, 13]. When mothers are left alone with their infant, they recognised signs of collapse in one-third of cases[4]. The presence of the mother's birth partner/caregiver in the same room is advised[5].

Monitor the mother's level of consciousness whilst safe SSC is occuring[1] particularly during the first hour after birth.

Ensure staff know how to set off the emergency bleep and commence neonatal resuscitation.

Position of the Infant:

Poor positioning of the infant can compromise/obstruct the infants Airway, Nose & Mouth[4, 14, 16.]

Avoid excessive infant neck flexion and assess the infant's position regularly whilst the infant is in the SSC position. In almost 40% of SUPC cases[7], the infant was found to be in the prone position on the mother's/caregiver's chest[4, 13, 14] so this position should be used only during supervised SSC[5].

Position of Mother[8]:

With a mother who birth's vaginally, it is recommended that the mother be in a in a semi-recumbent position (45°) so the baby is not lying fully prone[1] while providing SSC and breastfeeding[4, 13].

With a mother who birthed via caesarean section, she can be a supine position initially post birth for safe SSC to occur however only with direct HCP support[18] and supervision. The mother's and infant's position can be changed in the recovery room with the support of a HCP.

Mother/Caregiver Distractions[2, 13]:

Mothers/Caregiver's need to be informed of the links with increased mobile phone use and SUPC particularly during SSC [19].

Lack of Awareness[8]:

Mothers/Caregiver's should have access to information on the signs of SUPC. In most cases, SUPC is not identified by parent(s) but by the HCP[7]. Inform mothers/birth partners/caregivers about the SSC video[1]

Mothers may lack knowledge and experience in their infant's wellness so rarely recognise deterioration despite being present and awake[4, 14].Many parents who experienced SUPC thought their infant was asleep[12].

Dim Lighting[2]:

Sufficient lighting should be available for adequate visual observation of infant's **R**espirations, **P**erfusion, Colour & **P**osition[5].

Mother's undergoing a Perineal Suturing or in Lithotomy Position

Mother's undergoing a surgical procedure (such as perineal suturing) while having SSC should have adequate pain relief and the infant should be observed by another HCP[2] as if the mother is semi-recumbent, visualising the infant may be difficult in that position. Alternatively, the mother's birth partner/caregiver can provide SSC or the infant can be placed in their cot.

Babies should not be in skin-to-skin contact with their mothers when they are receiving Entonox or other analgesics that impact maternal consciousness[19].

Co-sleeping:

If the mother is sleepy/sleeping or has taken medication to make her sleepy or drowsy, the infant should be placed in their cot[5].

Pain:

While providing SSC, a mother should have adequate pain relief[2].

Elements of proper infant positioning during SSC allowing unobstructed breathing [5, 8, 19]

Check that the infants position is such that airway patency is maintained[2]

The prone position should only be accepted if the infants is lying chest to chest with the mother (not over a breast, between breasts, or over the abdomen)[5]

Head turned to one side[2] in a sniffing (nose facing up) position[19] above breasts, with airway open

The mother/parent can see their infants face[2]

Mouth is visible and uncovered[19]

Nose: nares are visible, not pressed against any maternal body parts[2] and not covered[19]

Neck is midline, straight and not overextended/bent

Chin is not on chest[2]

Shoulders and neck are straight and flat against the mother/parent

Shoulder and chest face the mother

Arms are bent up above the breasts

Legs are flexed[2] below the breasts

Practices Recognised to Increase Surveillance and Enhance Situational Awareness (especially in the first hour after birth) [2]

- If the mother/birth partner/caregiver decline good lighting, inform them of the rationale for same
- Peel off the blanket (covering infant's back) including but not limited to observing Respirations, Perfusion and Position to look at the whole infants body
- Observations are not continuous i.e. the HCP providing maternal and infant care may need to leave the room so mothers/caregivers/birth partners need to be informed of how to attract staff attention should they notice a change in the infants condition. These observations are the HCP's role[4] as opposed to the responsibility of the mother/birth partner/caregiver.

Ongoing assessment is for a minimum of one hour. Assessment is longer than one hour if the mother or baby has non-modifiable risk factors that could increase the risk of adverse outcomes[16].

The **R**espirations, **P**erfusion, **P**osition surveillance checklist outlined below is a passive, non-intrusive, observational aid proposed as a way to enhance swift, visual, intermittent and accurate assessment of an infant's physiological condition after birth[5] by HCP's.

The newborn infant is most at risk during the initial hours of extra-uterine life. This initial surge of Adenosine and Prostaglandin during birth and Catecholamine's after delivery has inhibitory effects on the immature brainstem cardio-respiratory control. This is followed by a period of reduced responsiveness to external stimuli. Prostaglandin levels are 20-fold higher and decline rapidly after the first week hence this hypothesis is implied to SUPC[6].

Surveillance Checklist: Respiration, **P**erfusion, and **P**osition[5]

	Normal	**Abnormal**	**Response to Abnormal**
RESPIRATORY **R**	Easy, No signs of grunting nasal flaring or intercostal recession No mouth/nose obstruction Chest movement	Apnoeic or Tachypnoeic Unusual breathing sounds/patterns/ absence of noise	Initiate Neonatal Resuscitation (NR) including intermittent positive pressure ventilation (IPPV)
		Increased work of breathing: grunting, nasal flaring, intercostal recession and tachypnea	Measure pre-ductal SpO2 to determine need for supplemental Oxygen
PERFUSION **P**	Assess entire body including limbs Note any subtle skin changes[2]	Pale, grey Dusky Cyanosis, blue	Measure pre-ductal SpO2 to determine need for supplemental Oxygen Initiate appropriate NR measures
POSITION **P**	Head to one side Neck midline Nose and mouth uncovered and visible Flexed Tone		Reposition head/neck Correct position of mother/parent Uncover nares/mouth

Pulse oximetry may not improve safety of the infant[20] and cannot replace observation and assessment of newborn infants to prevent SUPC[12].

All care is documented in the Health Care Record as per NMBI Recording Clinical Practice Guidance[21].

Targeted Education is key to heightening awareness for HCP's and Parents:

For Health Care Providers (HCP)	For Mothers/Birth Partners/Caregivers:
As **positioning** of the infant during SSC and BF, (especially the first BF) has been identified as a potential situation for risk, the NWIHP and the Rotunda Hospital Dublin developed an evidenced based educational video and poster on safe SSC practices.	Video Title: *Safe Skin to Skin with your Baby after Birth*[1]
Link to video: https://youtu.be/8QiWt8esxkE	Video Link: https://youtu.be/8QiWt8esxkE
The video and posters were created for service users however they are a useful resource for HCPs.	Provide education on how to maintain their infant's airway patency (positioning) and on how to check their infant is breathing properly and signs of well-being[1, 22].
All staff who come into contact with pregnant women and mothers need to attend the new National Infant Feeding Education Programme. As the HSE transitions to implement the new Infant Feeding Education Programme across all maternity and community services, the national Infant feeding/ breastfeeding e-learning units can be completed as a stand-alone exercise and again as a refresher in preparation for the breastfeeding skills training.	Staff share their knowledge at all stages of the perinatal continuum and reinforce awareness after birth in a manner so as not to cause unnecessary anxiety that would dissuade mothers from SSC. This includes rationale for frequent surveillance of their wellbeing and how to observe same during distraction-free SSC[19] particularly in the first hours of birth.
The first hour of life is a critical time period for the occurrence of SUPC, acknowledging that 66% of cases will occur at any time up to 24 hours after birth.	Empower mothers/birth partners/caregivers to raise any concerns they may have at any point, educate them on the signs that their infant is well, how to recognise signs of illness[2, 22] and when help is needed (important when they are feeling extremely fatigued) [16], advise them on how to call for help, if concerned[22]
Assess mother's level of consciousness [22], if the mother appears sedated from recent medications e.g. sedation causing drowsiness, caution the mother about risks associated with sedation and providing SSC but she may hold her infant if she feels sufficiently alert.	Reinforce that whenever the mother becomes drowsy or excessively tired during SSC or BF, the safest thing to do is encourage another caregiver who is alert to hold the infant or put the infant in their cot
If a mother has had a caesarean birth, staff to be aware of the need for increased vigilance if the infant is receiving SSC post birth in theatre and during transfer from theatre to postnatal ward. During transfer, the mother should be in a semi-upright position for SSC.	

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Appendix 5: AGREE II Checklist[23]

AGREE Reporting Checklist 2016

This checklist is intended to guide the reporting of Clinical Practice Guidelines.

CHECKLIST ITEM AND DESCRIPTION	REPORTING CRITERIA	Page #
DOMAIN 1: SCOPE AND PURPOSE		
1. OBJECTIVES *Report the overall objective(s) of the guideline. The expected health benefits from the guideline are to be specific to the clinical problem or health topic.*	☐ Health intent(s) (i.e., prevention, screening, diagnosis, treatment, etc.) ☐ Expected benefit(s) or outcome(s) ☐ Target(s) (e.g., patient population, society)	
2. QUESTIONS *Report the health question(s) covered by the guideline, particularly for the key recommendations.*	☐ Target population ☐ Intervention(s) or exposure(s) ☐ Comparisons (if appropriate) ☐ Outcome(s) ☐ Health care setting or context	
3. POPULATION *Describe the population (i.e., patients, public, etc.) to whom the guideline is meant to apply.*	☐ Target population, sex and age ☐ Clinical condition (if relevant) ☐ Severity/stage of disease (if relevant) ☐ Comorbidities (if relevant) ☐ Excluded populations (if relevant)	
DOMAIN 2: STAKEHOLDER INVOLVEMENT		
4. GROUP MEMBERSHIP *Report all individuals who were involved in the development process. This may include members of the steering group, the research team involved in selecting and reviewing/ rating the evidence and individuals involved in formulating the final recommendations.*	☐ Name of participant ☐ Discipline/content expertise (e.g., neurosurgeon, methodologist) ☐ Institution (e.g., St. Peter's hospital) ☐ Geographical location (e.g., Seattle, WA) ☐ A description of the member's role in the guideline development group	

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5. TARGET POPULATION PREFERENCES AND VIEWS *Report how the views and preferences of the target population were sought/considered and what the resulting outcomes were.*	☐ Statement of type of strategy used to capture patients'/publics' views and preferences (e.g., participation in the guideline development group, literature review of values and preferences) ☐ Methods by which preferences and views were sought (e.g., evidence from literature, surveys, focus groups) ☐ Outcomes/information gathered on patient/public information ☐ How the information gathered was used to inform the guideline development process and/or formation of the recommendations	
6. TARGET USERS *Report the target (or intended) users of the guideline.*	☐ The intended guideline audience (e.g. specialists, family physicians, patients, clinical or institutional leaders/administrators) ☐ How the guideline may be used by its target audience (e.g., to inform clinical decisions, to inform policy, to inform standards of care)	
DOMAIN 3: RIGOUR OF DEVELOPMENT		
7. SEARCH METHODS *Report details of the strategy used to search for evidence.*	☐ Named electronic database(s) or evidence source(s) where the search was performed (e.g., MEDLINE, EMBASE, PsychINFO, CINAHL) ☐ Time periods searched (e.g., January 1, 2004 to March 31, 2008) ☐ Search terms used (e.g., text words, indexing terms, subheadings) ☐ Full search strategy included (e.g., possibly located in appendix)	
8. EVIDENCE SELECTION CRITERIA *Report the criteria used to select (i.e., include and exclude) the evidence. Provide rationale, where appropriate.*	☐ Target population (patient, public, etc.) characteristics ☐ Study design ☐ Comparisons (if relevant) ☐ Outcomes ☐ Language (if relevant) ☐ Context (if relevant)	

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9. STRENGTHS & LIMITATIONS OF THE EVIDENCE *Describe the strengths and limitations of the evidence. Consider from the perspective of the individual studies and the body of evidence aggregated across all the studies. Tools exist that can facilitate the reporting of this concept.*	☐ Study design(s) included in body of evidence ☐ Study methodology limitations (sampling, blinding, allocation concealment, analytical methods) ☐ Appropriateness/relevance of primary and secondary outcomes considered ☐ Consistency of results across studies ☐ Direction of results across studies ☐ Magnitude of benefit versus magnitude of harm ☐ Applicability to practice context	
10. FORMULATION OF RECOMMENDATIONS *Describe the methods used to formulate the recommendations and how final decisions were reached. Specify any areas of disagreement and the methods used to resolve them.*	☐ Recommendation development process (e.g., steps used in modified Delphi technique, voting procedures that were considered) ☐ Outcomes of the recommendation development process (e.g., extent to which consensus was reached using modified Delphi technique, outcome of voting procedures) ☐ How the process influenced the recommendations (e.g., results of Delphi technique influence final recommendation, alignment with recommendations and the final vote)	
11. CONSIDERATION OF BENEFITS AND HARMS *Report the health benefits, side effects, and risks that were considered when formulating the recommendations.*	☐ Supporting data and report of benefits ☐ Supporting data and report of harms/side effects/risks ☐ Reporting of the balance/trade-off between benefits and harms/side effects/risks ☐ Recommendations reflect considerations of both benefits and harms/side effects/ risks	
12. LINK BETWEEN RECOMMENDATIONS AND EVIDENCE *Describe the explicit link between the recommendations and the evidence on which they are based.*	☐ How the guideline development group linked and used the evidence to inform recommendations ☐ Link between each recommendation and key evidence (text description and/or reference list) ☐ Link between recommendations and evidence summaries and/or evidence tables in the results section of the guideline	

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13. EXTERNAL REVIEW *Report the methodology used to conduct the external review.*	☐ Purpose and intent of the external review (e.g., to improve quality, gather feedback on draft recommendations, assess applicability and feasibility, disseminate evidence) ☐ Methods taken to undertake the external review (e.g., rating scale, open-ended questions) ☐ Description of the external reviewers (e.g., number, type of reviewers, affiliations) ☐ Outcomes/information gathered from the external review (e.g., summary of key findings) ☐ How the information gathered was used to inform the guideline development process and/or formation of the recommendations (e.g., guideline panel considered results of review in forming final recommendations)	
14. UPDATING PROCEDURE *Describe the procedure for updating the guideline.*	☐ A statement that the guideline will be updated ☐ Explicit time interval or explicit criteria to guide decisions about when an update will occur ☐ Methodology for the updating procedure	
DOMAIN 4: CLARITY OF PRESENTATION		
15. SPECIFIC AND UNAMBIGUOUS RECOMMENDATIONS *Describe which options are appropriate in which situations and in which population groups, as informed by the body of evidence.*	☐ A statement of the recommended action ☐ Intent or purpose of the recommended action (e.g., to improve quality of life, to decrease side effects) ☐ Relevant population (e.g., patients, public) ☐ Caveats or qualifying statements, if relevant (e.g., patients or conditions for whom the recommendations would not apply) ☐ If there is uncertainty about the best care option(s), the uncertainty should be stated in the guideline	
16. MANAGEMENT OPTIONS *Describe the different options for managing the condition or health issue.*	☐ Description of management options ☐ Population or clinical situation most appropriate to each option	

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17. IDENTIFIABLE KEY RECOMMENDATIONS *Present the key recommendations so that they are easy to identify.*	☐ Recommendations in a summarized box, typed in bold, underlined, or presented as flow charts or algorithms ☐ Specific recommendations grouped together in one section	
DOMAIN 5: APPLICABILITY		
18. FACILITATORS AND BARRIERS TO APPLICATION *Describe the facilitators and barriers to the guideline's application.*	☐ Types of facilitators and barriers that were considered ☐ Methods by which information regarding the facilitators and barriers to implementing recommendations were sought (e.g., feedback from key stakeholders, pilot testing of guidelines before widespread implementation) ☐ Information/description of the types of facilitators and barriers that emerged from the inquiry (e.g., practitioners have the skills to deliver the recommended care, sufficient equipment is not available to ensure all eligible members of the population receive mammography) ☐ How the information influenced the guideline development process and/or formation of the recommendations	
19. IMPLEMENTATION ADVICE/TOOLS *Provide advice and/or tools on how the recommendations can be applied in practice.*	☐ Additional materials to support the implementation of the guideline in practice. For example: • Guideline summary documents • Links to check lists, algorithms • Links to how-to manuals • Solutions linked to barrier analysis (see Item 18) • Tools to capitalize on guideline facilitators (see Item 18) • Outcome of pilot test and lessons learned	

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20. RESOURCE IMPLICATIONS *Describe any potential resource implications of applying the recommendations.*	☐ Types of cost information that were considered (e.g., economic evaluations, drug acquisition costs) ☐ Methods by which the cost information was sought (e.g., a health economist was part of the guideline development panel, use of health technology assessments for specific drugs, etc.) ☐ Information/description of the cost information that emerged from the inquiry (e.g., specific drug acquisition costs per treatment course) ☐ How the information gathered was used to inform the guideline development process and/or formation of the recommendations	
21. MONITORING/ AUDITING CRITERIA *Provide monitoring and/or auditing criteria to measure the application of guideline recommendations.*	☐ Criteria to assess guideline implementation or adherence to recommendations ☐ Criteria for assessing impact of implementing the recommendations ☐ Advice on the frequency and interval of measurement ☐ Operational definitions of how the criteria should be measured	
DOMAIN 6: EDITORIAL INDEPENDENCE		
22. FUNDING BODY *Report the funding body's influence on the content of the guideline.*	☐ The name of the funding body or source of funding (or explicit statement of no funding) ☐ A statement that the funding body did not influence the content of the guideline	
23. COMPETING INTERESTS *Provide an explicit statement that all group members have declared whether they have any competing interests.*	☐ Types of competing interests considered ☐ Methods by which potential competing interests were sought ☐ A description of the competing interests ☐ How the competing interests influenced the guideline process and development of recommendations	

From: Brouwers MC, Kerkvliet K, Spithoff K, on behalf of the AGREE Next Steps Consortium. The AGREE Reporting Checklist: a tool to improve reporting of clinical practice guidelines. BMJ 2016;352:i1152. doi: 10.1136/bmj.i1152.

For more information about the AGREE Reporting Checklist, please visit the AGREE Enterprise website at http://www.agreetrust.org

Appendix 6: **Grades of Recommendation**[24]

Grade of recommendation	Clarity of risk/ benefit	Quality of supporting evidence	Implications	Suggested Language
1A. Strong recommendation, high-quality evidence	Benefits clearly outweigh risk and burdens, or vice versa	Consistent evidence from well-performed randomized, controlled trials or overwhelming evidence of some other form. Further research is unlikely to change our confidence in the estimate of benefit and risk	Strong recommendations can apply to most patients in most circumstances without reservation. Clinicians should follow a strong recommendation unless a clear and compelling rationale for an alternative approach is present	We strongly recommend… We recommend that …should be performed/ administered… We recommend that …. is indicated/ beneficial/ effective…
1B. Strong recommendation, moderate-quality evidence	Benefits clearly outweigh risk and burdens, or vice versa	Evidence from randomized, controlled trials with important limitations (inconsistent results, methodologic flaws, indirect or imprecise), or very strong evidence of some other research design. Further research (if performed) is likely to have an impact on our confidence in the estimate of benefit and risk and may change the estimate	Strong recommendation and applies to most patients. Clinicians should follow a strong recommendation unless a clear and compelling rationale for an alternative approach is present	We recommend… We recommend that … should be performed/ administered… We recommend that … is (usually) indicated/ beneficial/ effective…

24 SMFM adopts GRADE (Grading of Recommendations Assessment, Development, and Evaluation) for clinical guidelines. Society for Maternal-Fetal Medicine (SMFM), Chauhan SP, Blackwell SC. Am J Obstet Gynecol. 2013 Sep;209(3):163-5. https://pubmed.ncbi.nlm.nih.gov/23978245/

Grade of recommendation	Clarity of risk/ benefit	Quality of supporting evidence	Implications	Suggested Language
1C. Strong recommendation, low-quality evidence	Benefits appear to outweigh risk and burdens, or vice versa	Evidence from observational studies, unsystematic clinical experience, or from randomized, controlled trials with serious flaws. Any estimate of effect is uncertain	Strong recommendation that applies to most patients. Some of the evidence base supporting the recommendation is, however, of low quality	We recommend… We recommend that … should be performed/ administered… We recommend that … Is (maybe) indicated/ beneficial/ effective…
2A. Weak recommendation, high-quality evidence	Benefits closely balanced with risks and burdens	Consistent evidence from well-performed randomized, controlled trials or overwhelming evidence of some other form. Further research is unlikely to change our confidence in the estimate of benefit and risk	Weak recommendation: best action may differ depending on circumstances or patients or societal values	We suggest… We suggest that… may/might be reasonable...
2B. Weak recommendation, moderate-quality evidence	Benefits closely balanced with risks and burdens, some uncertainty in the estimates of benefits, risks and burdens	Evidence from randomized, controlled trials with important limitations (inconsistent results, methodologic flaws, indirect or imprecise), or very strong evidence of some other research design. Further research (if performed) is likely to have an impact on our confidence in the estimate of benefit and risk and may change the estimate	Weak recommendation; alternative approaches likely to be better for some patients under some circumstances	We suggest… We suggest that … may/might be reasonable...

Grade of recommendation	Clarity of risk/ benefit	Quality of supporting evidence	Implications	Suggested Language
2C. Weak recommendation, low-quality evidence	Uncertainty in the estimates of benefits, risks, and burdens; benefits may be closely balanced with risks and burdens	Evidence from observational studies, unsystematic clinical experience, or from randomized, controlled trials with serious flaws. Any estimate of effect is uncertain	Very weak recommendation: other alternatives may be equally reasonable	We suggest … is an option We suggest that … may/might be reasonable.
Best practice	A recommendation that is sufficiently obvious that the desirable effects outweigh undesirable effects, despite the absence of direct evidence, such that the grading of evidence is unnecessary			We recommend… We recommend that … should be performed/ administered… We recommend that… Is usually) indicated/ beneficial/effective

Appendix 7: **NWIHP/IOG Clinical Advisor Group (CAG) (2024)**

Dr Cliona Murphy (Chair, 2023-). Consultant Obstetrician and Gynaecologist, Coombe Women and Infants University Hospital. Clinical Director, National Women and Infants Health Programme.

Dr Sam Coulter-Smith (2023-). Consultant Obstetrician and Gynaecologist, Rotunda Hospital. Chair, Institute of Obstetricians and Gynaecologists.

Dr Venita Broderick (2024-). Clinical Lead Gynaecology, National Women and Infants Health Programme.

Dr Brian Cleary (2023-). Chief Pharmacist, Rotunda Hospital. Medications Lead, Maternal and Newborn Clinical Management System Project.

Angela Dunne (2023-). Director of Midwifery, National Women and Infants Health Programme.

Prof Seán Daly (2023-). Master, Consultant Obstetrician and Gynaecologist, Rotunda Hospital.

Prof Maeve Eogan (2023-). Consultant Obstetrician and Gynaecologist, Rotunda Hospital. Clinical Lead, Sexual Assault Treatment Units, National Women and Infants Health Programme.

Prof Richard Greene (2023-). Consultant Obstetrician and Gynaecologist, Cork University Maternity Hospital. Clinical Director, National Perinatal Epidemiology Centre, University College Cork.

Prof John Higgins (2023-). Cork University Maternity Hospital, Consultant Obstetrician and Gynaecologist, Clinical Director, Ireland South Women and Infants Directorate.

Prof Shane Higgins (2023-). Master, Consultant Obstetrician and Gynaecologist, National Maternity Hospital.

Dr Mendinaro Imcha (2023-). Clinical Director, Consultant Obstetrician and Gynaecologist, University Maternity Hospital Limerick.

Prof John Murphy (2023-). Clinical Lead Neonatology, National Women and Infants Health Programme.

Dr Aoife Mullaly (2023-). Consultant Obstetrician and Gynaecologist, Coombe Women and Infants University Hospital. Clinical Lead, Termination of Pregnancy Services, National Women and Infants Health Programme.

Prof John Morrison (2023-). Consultant Obstetrician and Gynaecologist, University Hospital Galway. Clinical Director, Saolta Maternity Directorate.

Kilian McGrane (2023-). Director, National Women and Infants Health Programme.

Prof Keelin O'Donoghue (2023-). Consultant Obstetrician and Gynaecologist, Cork University Maternity Hospital. Clinical Lead, National Guidelines, National Women and Infants Health Programme.

Dr Suzanne O'Sullivan (2023-). Consultant Obstetrician and Gynaecologist, Cork University Maternity Hospital. Director of Education and Training, Obstetrics and Gynaecology, Institute of Obstetricians and Gynaecologists.

Prof Mike O'Connell (2023-). Master, Consultant Obstetrician and Gynaecologist, Coombe Women and Infants University Hospital.

Ms Davinia O'Donnell (2024-). General Manager | National Women and Infants Health Programme

Office of the Chief Clinical Officer, Health Service Executive

Dr Vicky O'Dwyer (2023-). Consultant Obstetrician and Director of Gynaecology, Rotunda Hospital.

Dr Mairead O'Riordan (2024-). Consultant Obstetrician and Gynaecologist, Cork University Maternity Hospital.

Ms Danielle Prenderville (2024-). Senior Executive Assistant – Master's Office.

Prof Nóirín Russell (2023-). Consultant Obstetrician and Gynaecologist, Cork University Maternity Hospital. Clinical Director, Cervical Check.

Dr Carmen Regan (April 2024). Clinical Lead Obstetrics, National Women and Infants Health Programme.

Dr Orla Shiel (2024-). Consultant Obstetrician and Gynaecologist, National Maternity Hospital.

Ms Clare Thompson (2023-). Consultant Gynaecological Oncologist, The Mater, Dublin.