Intrapartum Care
in
South Africa

Updated Guideline

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A. INTRODUCTION TO THE NEW INTRAPARTUM CARE GUIDELINE

1. BACKGROUND

For decades, women in labour are being monitored and managed using the partogram. The partogram as we know it is based on studies done between the 1950s and 1970s by Professor Emmanuel Friedman. He was a pioneer: before his work, little was known about the progression of labour. He examined the labour patterns in women in the United States and described a sigmoidal curve, with a slower progress in early labour and an accelerated, linear progress of labour later on. This has given birth to the "1 centimetre (cm) per hour" rule as we know it.[1]

In an attempt to align all labouring women to the norm of 1cm/hour, O'Driscoll and colleagues developed the 'active management of labour' on the basis of large observational studies.[2] Active management included early amniotomy and early oxytocin infusion. Philpott and Castle proposed an alert line as a reference of normal progression of labour cervical dilatation for African primigravida, which is still used today.[3]

In view of the increased number of interventions during labour such as augmentation and caesarean section there has been a renewed interest in the natural progression of labour.

One question could be posed: in an attempt to align all women to the same norm are we not causing harm?

Zhang and his group have published a series of papers on the natural progression of labour and reassessment of the labour curve. One of the conclusions was that labour may not naturally accelerate before a dilatation of 6cm, which means that interventions before 6cm to accelerate labour may be unnecessary.[4-5]

As a result of these new findings, the World Health Organization (WHO) group has done a large amount of work on the progression of labour.

One of the first published papers was a systematic review on the cervical dilatation patterns in low-risk labouring women (both nulliparous and parous) with normal perinatal outcomes.[6] The results showed a markedly more rapid progress of labour from 6cm onwards (in both nulliparous and parous women). However, the 95th centile of labour progression, even in advanced labour, is slower than 1cm/hour in some women. These findings led to the conclusion that the 1cm/hour per hour rule may be unrealistically fast for some healthy women who will still give birth to a healthy baby vaginally.

As part of the Better Outcomes in Labour Difficulties (BOLD) project led by WHO, many papers have recently been published supporting the above-mentioned findings. The BOLD project was a prospective, multi-centre cohort study done in Nigeria and Uganda, which aimed to develop a new labour monitoring-to-action tool. In one paper, the labour progression of women with a spontaneous onset of labour and subsequent vaginal birth with normal perinatal outcome was examined. The results showed that, irrespective of parity, the slowest-yet-normal rate to progress can be slower than the 1cm/hour norm. They concluded that interventions to accelerate labour, especially before 5cm, should be avoided.[7]

In another paper, they described the predictive value of the cervical dilatation for adverse birth outcomes. They included all women with a spontaneous onset of labour and collected data on the labour progression and interventions done and measured severe birth outcomes. They found that 2.2% of the 9995 women included in the study had severe adverse birth outcomes. Of all women included in the study, only 51% did not cross the alert line. Of the women with adverse birth outcomes where 2 or more vaginal examinations were done (194 in total), 84 women (43.3%) had not crossed the alert line, and only 19.6% had crossed the action line. Overall, cervical dilatation had a poor performance as a predictor of severe birth outcomes. The main conclusion drawn from this study was that the validity of the partogram with the alert and action lines should be re-evaluated.[8]

Early 2018, WHO published the new recommendations on Intrapartum Care for a Positive Childbirth Experience largely based on the findings mentioned above.[9] Fifty-six recommendations in total were composed: 4 on the care throughout labour and childbirth, 28 on the first stage of labour, 8 on the second stage of labour, 6 on the third stage of labour, 5 on the care of the newborn and 5 on the care of the woman after birth.

Some major changes are recommended on the first stage of labour:

- The latent phase of labour is characterized by a slower progression of labour up to a dilatation of 5cm (instead of 4cm as previously used), active phase of labour is characterized by a more rapid dilatation of the cervix from 5cm until full dilation.
- Standard duration of active phase of labour has not been established and can vary widely between women. However, the duration usually does not extend beyond 12 hours for a nulliparous woman and 10 hours for a multiparous woman.
- In women with a spontaneous onset of labour, the dilatation rate threshold of 1cm/hour is inaccurate to identify women at risk of severe birth outcomes and is therefore not recommended for this purpose.

- A dilatation rate of 1cm/hour may be unrealistically fast for some women so a slower dilatation rate alone should not be a routine indication for intervention.
- Labour may not naturally accelerate before a dilatation of 5cm, therefore any intervention to accelerate labour before 5cm is not indicated if the maternal and fetal condition are reassuring.

2. SOUTH AFRICAN INTRAPARTUM CARE GUIDELINE

South Africa has been a pioneer in developing tools and guidelines in managing labour starting with Professor Philpott's partogram in 1970. Researchers and clinicians from South Africa were also involved in the development of the BOLD studies and new WHO intrapartum care recommendations.

In 2005, the SAMRC Maternal and Infant Health Care Strategies Unit published a book "Intrapartum Care in South Africa" which contained a comprehensive IPC guideline, based on the then current relevant research. These guidelines were incorporated into the "Guidelines for Maternity Care in South Africa", published by the National Department of Health in 2007.

A decision was made to review the book "Intrapartum Care in South Africa" based on the new evidence available and the publication of the new WHO recommendations. Even though the new recommendations are evidence based, there are some major changes to the current obstetric practice, which will have implications for implementation. Without careful and extensive review of feasibility for our South African setting, some recommendations could lead to harm. Some changes may be perceived as drastic, especially in view of the current practice and the available labour monitoring tool, the partogram.

A long process of consultation preceded the final guideline; this process is described below:

- In August 2017 our SAMRC team received the new WHO recommendations. Based on these we composed an initial draft IPC guideline.
- This guideline (as well as the new WHO recommendations and the evidence) was presented to a group of delegates at a first 2-day workshop in October 2017. The group consisted of representatives of all university departments of Obstetrics & Gynaecology, the Society of Midwives of South Africa, Rural doctors of South Africa, District Clinical Specialists and the National Department of Health.

- All comments from the first workshop were collated and the IPC guideline draft was updated.
- The next version was presented at the Conference on Priorities in Perinatal Care in March 2018, during a workshop with about 80 delegates and representatives from the World Health Organization.
- Small adaptations were made to the draft guideline. A meeting was held in August 2018 where the guideline was presented to all stakeholders: National Department of Health, Society of Midwives of South Africa, SA College of Obstetrics and Gynaecology, SA College of Family Medicine, National Committee on Confidential Enquiries into Maternal Deaths, National Perinatal Morbidity and Mortality Committee, South African Society of Obstetricians and Gynaecologists, and District Clinical Specialist Teams.
- After this, the final document consisting of recommendations was composed.

Two aspects stand out in this updated IPC guideline:

1. Focus on respectful, supportive, woman-centred care:
   This is a part that has always been neglected in favour of the "medical" aspects of labour. However, as previously shown in the CLEVER project in Tshwane District and as recommended by the WHO, supportive care is a vital and crucial part of maternity care that improves maternal and neonatal outcome.[10]
2. Changes in the monitoring of labour:
   Duration of latent phase: 24 hours instead of 8 hours.
   Start of active phase of labour at 5cm.
   Partogram: 1cm/hour alert line, 2-hour refer line.

Concurrently with the development of the updated IPC guideline, the partogram was updated to an "interim partogram" to allow for implementation of the intrapartum care guideline. This interim partogram has been included in the updated South African Maternity Case Record. The changes include:

- Latent phase of labour with 12 2-hour blocks to allow for 24-hour monitoring during the latent phase.
- Active phase of labour with an alert line that starts at 5cm, a 2-hour refer line.

3. SOUTH AFRICAN DATA

The new WHO recommendations for intrapartum care (IPC) discourage interventions during labour solely based on progress of cervical dilatation. One of the questions raised could be the following: will a longer duration of labour lead to increased intrapartum asphyxia (IPA)?

To answer this question, we looked at the South African data from October 2013 until December 2016 in the Perinatal Problem Identification Program database (PPIP database – unpublished). We looked at the following perinatal deaths: stillbirths who were alive on admission, stillbirths where the admission status was unknown and early neonatal deaths. Macerated stillbirths and stillbirths who were dead on admission were excluded from this analysis. Of the above-mentioned group of perinatal deaths, 39.6% were due to intrapartum asphyxia (IPA). Of these IPA deaths, healthcare worker associated avoidable factors were reported in 67.9%. The major avoidable factor identified is a problem with fetal monitoring: mostly babies who are being monitored during labour, but fetal distress is not timely detected. Poor progress of labour without timely intervention (the partogram was used correctly but misinterpreted) only constituted 3% of all healthcare worker related avoidable factors in IPA.

These South African data show that prolonged labour as defined by the alert and action lines on the partogram only contributes minimally to perinatal deaths due to intrapartum asphyxia. This supports the findings from the BOLD study that cervical dilatation alone is a poor predictor of adverse neonatal outcome.

4. RESPECTFUL MATERNITY CARE

Over the centuries, women in South Africa have used traditional birth attendants during labour. This attendant was a member of the community and shared the beliefs and customs of the family she was attending. Traditional birth attendants added value to the communities and brought with them beneficial customs such as health education, diagnosing the pregnancy, encouraging accompanying persons during labour, assisting with the birth and supporting breast feeding.[11] *Ubuntu* in the South African domain brings core humanistic attributes and values such as shared humanity, caring and respect and dignity and communalism.[12]

Worldwide, and in South Africa, many birthing women do not receive intrapartum care with empathy and endure disrespectful and abusive care, seldom voicing their complaints after these events.[13-18] The World Health Organization (WHO) acknowledged that, while women experience disrespect and abuse throughout pregnancy, birthing women are more vulnerable and they are subjected to neglect, verbal harassment and even physical abuse during labour.[15,16] The consequence of not addressing disrespect and neglect during labour is reflected in the high maternal mortality and morbidity in obstetric units in South Africa.[17] Unacceptable care practices are also highlighted in the South African media from time to time. One example is the marked increase in medical negligence and litigation cases recorded by the Department of Health in Gauteng Province.[18] Most of the cases emanate from substandard care procedures during labour, resulting in birth asphyxia and permanent brain damage.[19]

Respectful care was broadly defined to include the following domains described by Bowser and Hill[20] and Bohren et al[21]:

- Appropriate and equal attention to all patients (no discrimination based on specific patient attributes, short waiting times, no neglect, ignoring or abandonment of patients)
- Consented care
- Good communication (friendly behaviour, no rudeness)
- Gentle empathic care with emotional support (no physical or verbal abuse, no shouting, not hurting patients)

WHO has composed 4 recommendations on “care throughout labour and birth”. These recommendations entail supportive care, respectful care or what one could (wrongfully) interpret as “non-medical” care. This type of care might have been neglected and pushed to the background in favour of “medical care” and focus on interventions. However, the 4 recommendations are the first of the 56 recommendations and could be the most important ones.

1. Respectful maternity care
2. Effective communication
3. Companionship during labour and childbirth
4. Continuity of care

A qualitative review published in 2018 summarizes what women want from their labour and childbirth process: a positive childbirth experience.[22] The conclusion has been summarized in the Methods of the WHO recommendations and is quoted below:

"Women want a positive childbirth experience that fulfils or exceeds their prior personal and sociocultural beliefs and expectations. This includes giving birth to a healthy baby in a clinically and psychologically safe environment with continuity of practical and emotional support from birth companion(s) and kind, technically competent clinical staff. Most women want a physiological labour and birth, and to have a sense of personal achievement and control through involvement in decision-making, even when medical interventions are needed or wanted."

As part of the BOLD study, a qualitative study was performed in Nigerian and Ugandan women.[23] The aim of the study was to define what women see as good quality of care. In general, 5 big topics came forward: effective communication, respect and dignity, emotional support, competent and motivated human resources and essential physical resources. Several examples were quoted by the labouring women about the respectful AND disrespectful care they received while being admitted for childbirth and may sound familiar to any birth attendant who reads the paper. However, the women also mention the strained resources in some settings: staff shortages, shortage of beds…

To enable implementation of respectful, supportive care throughout labour, health systems need strengthening and healthcare workers need an attitudinal change.

When looking at South African data, Oosthuizen et al implemented the CLEVER package at 5 Midwife Obstetric Units (MOU's) in Tshwane district and compared these to 5 control MOUs.[24-26] The CLEVER package is an intervention package to provide respectful and high-quality maternity care. CLEVER is an acronym for Clinical care, Labour ward management, Eliminate barriers, Verify care, EOST (Emergency Obstetric Simulation Training) running on autopilot and Respectful care. Baseline data collection was done through questionnaires in women who have given birth in all 10 facilities. Demographics were collected, as well as data on different aspects of mothers' experiences: communication, labour experience, clinical care, satisfaction with treatment and perceptions of experience. Results show that even though 55.2% of women were very satisfied with the treatment they received in labour ward, only 47.4% of women admitted to being treated with respect and

55.9% of women said the midwives were nice during delivery. Below is what women cited as things that need to improve according to their experience:

- **Verbal abuse:** being shouted at; degrading language; *‘Stop swearing at us’*
- **Physical abuse:** harshness and violence during delivery; slapped; *’PV done to hurt me’*
- **Withholding of care:** no attention given when shouted repeatedly for help; delivered on the floor or alone (and this not being documented in files)
- **Non-consented care:** *’I found the midwife’s fingers inside me’*
- **Discrimination:** *’We want equal treatment: we are also human’*
- **Humane treatment:** *‘Give us something for pain’*
- **Health system’s impact:** *‘Get enough staff’*; *’Cleaners were rude’*

After implementation of the CLEVER package in the 5 intervention MOU’s, the results drastically improved: 73.7% of women were very satisfied with the treatment they received in labour ward, with 75.6% of women reporting to being treated with respect and 92% of women saying the midwives were nice during delivery.

Furthermore, after implementation the CLEVER package in the intervention MOU’s, there was a significant decrease in the number of in-facility stillbirths and babies with meconium aspiration between the intervention MOU’s and control MOU’s.

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B. COMPREHENSIVE INTRAPARTUM CARE GUIDELINE

The question to be answered is: “How do we best manage a pregnant woman classified as low-risk in labour?”

All women presenting in (suspected) labour must be fully evaluated.

Full evaluation includes:

- *History taking, including examination of the antenatal card (risk factors identified during antenatal care)*
- *Full clinical examination including urine testing and haemoglobin assessment.*

Two questions should be addressed:

1. *What is the risk classification of this woman?*
   Each woman must be risk classified to determine the level at which she should be managed.

2. *Is she in labour?*
   The clinician must make the diagnosis of labour and not only rely on the woman’s history.
   The differential diagnosis includes:
   - *Labour*
   - *Urinary tract infection*
   - *Amniotic fluid infection*
   - *Early abruptio placentae*
   - *False labour*
   - *Gastro-enteritis*

1. IMPLEMENTATION OF RESPECTFUL, SUPPORTIVE, WOMAN-CENTRED CARE

When implementing respectful, supportive and woman-centred care, all the following point should be implemented:

- **Companionship**:
  - Every woman should have a companion of her choice throughout labour. Continuous support during labour is likely to improve maternal and neonatal outcomes, without any negative effects.
  - This person could be the woman's sister, mother, spouse, doula…
- **Respect privacy**:
  - Create and respect privacy for the woman in labour (at any point during labour and delivery, and especially during history taking, examinations, delivery…)
- **Respect dignity:**
  - No discrimination based on age (teenagers, advanced maternal age, multiparity, race or nationality…)
  - No withholding of care (when a woman shouts for help)
  - No physical abuse (e.g. slapped during delivery, aggressive vaginal examinations)
- **Attention to the need of pain relief**
  - Breathing techniques
  - Mobilisation
  - Support from the companion
  - Need for analgesia
- **Communication**:
  - All healthcare workers are to introduce themselves to the woman
  - Address the woman by her name
  - No shouting (no verbal abuse)
- **Allow mobilisation, adopt a comfortable position (any position but supine)**
  - Squatting, hands-and-knees position, wedged-supine, left lateral
  - Allow mobilisation
  - Respect cultural practice (e.g. squatting during labour)
- **Allow intake of oral fluids (and food if not in second stage)**
- **Hygiene**:
  - Allow the woman to bath if facilities are present

- **Consent:**
    - Explain EVERY procedure to be done (vaginal examination, AROM, assisted delivery…)
    - Obtain verbal consent after assessing if the woman understands the procedure as well as the indication for the procedure
    - Participatory decision making

Respectful care requires self-reflection and an attitudinal change of health care workers with positive role models.

2. FETAL MONITORING DURING LABOUR

CTG for a low-risk woman is NOT indicated.

Intermittent auscultation should be performed:

- The use of a handheld Doppler ultrasound (doptone) is best. A Pinard stethoscope can be used if doptone is not available. The doptone is preferred as the woman, her companion and the midwife can hear the fetal heart and be re-assured
- On admission, determine the **baseline** fetal heartrate
- Perform **intermittent doptone**
  - Immediately AFTER a contraction
  - For the duration of 1 minute
    - When labour is doubtful and during the latent phase of labour: 2-hourly
    - Active phase of labour: every 30 minutes
    - Second stage of labour: every 5 minutes or after every second contraction (whichever comes first)

Fetal distress if:

- Change in baseline fetal heartrate
- Decelerations after the contraction
- ACTIONS to be taken immediately:
  - Summon help
  - Assess the woman completely (contractions, position,…)
  - CTG
  - Intrapartum resuscitation
  - Transfer

Continuous CTG is advised for women at high risk of complications during labour. Risk factors include:

- Abnormal maternal vitals
- Suspected sepsis or chorio-amnionitis
- Previous caesarean section
- Multiple pregnancy
- Hypertension
- Vaginal bleeding

- Meconium stained liquor
- Oxytocin use
- Fetal distress on intermittent auscultation
- Suspected intra-uterine growth restriction

Women requiring continuous CTG should only be managed in facilities with 24/7 caesarean delivery facilities.

3. DIAGNOSIS OF LABOUR

Criteria to diagnose labour:

Regular painful contractions WITH

- Cervical changes, OR
- Rupture Of Membranes, OR
- Show

As per WHO recommendations:

- Latent phase of labour: less than 5cm dilated (might be retrospective diagnosis)
- Active phase of labour: **starting at 5cm**

4. MANAGEMENT OF SUSPECTED LABOUR (when the diagnosis of labour is not confirmed)

If the diagnosis of labour is uncertain, the woman should be observed for 6 hours.

Observations to be done:

<table>
<tr><th colspan="3">Observations when labour is suspected</th></tr>
<tr><td>Foetus</td><td>Fetal heartrate</td><td>2-hourly</td></tr>
<tr><td rowspan="5">Mother</td><td>Maternal heartrate</td><td>2-hourly</td></tr>
<tr><td>Blood pressure</td><td rowspan="3">6-hourly</td></tr>
<tr><td>Respiratory rate</td></tr>
<tr><td>Temperature</td></tr>
<tr><td>Urine</td><td>When passed</td></tr>
<tr><td rowspan="2">Labour</td><td>Contractions (frequency & duration)</td><td>2-hourly</td></tr>
<tr><td>Vaginal examination & head above brim
- Dilatation
- Cervical length
- Membranes</td><td>6-hourly</td></tr>
</table>

The **vaginal examination** can be repeated after 4 hours if NO contractions are palpated on the 2-hourly assessment.

The woman can be **discharged home** (or to a maternity waiting home) if:

- The maternal and fetal condition are both reassuring
- There is no increase in contractions / irregular contractions or contractions have ceased completely
- No ruptured membranes (ROM)
- No cervical changes since admission and no further descent of the fetal head
- Warning signs have been explained: increased pain, ROM, vaginal bleeding, reduced fetal movement – counsel the mother and verify she has understood.

Provide the woman with a follow-up date and sign off the assessment.

A **new chart** was added to the updated Maternity Case Record (MCR – page 24) to document observations for women in whom labour is doubtful. Clinical notes (such as main complaint) need to be made on the pages in the MCR for women who are not in labour (page 17-23).

The chart consists of:

- Identification and clinical information (name, age, gravidity/parity, gestational age, presentation, risk factors and the facility where the woman is seen).
- Clinical assessment on admission:
  - Mother's vitals: blood pressure, pulse, temperature, urine
  - Fetal movements felt?
  - Emergency signs present (pv bleeding, seizures)?
  - Contractions on palpation: duration & frequency
  - Maternal emotional state (coping?)
  - FHR: intermittent auscultation, to be assessed for 1 minute after the contraction (decelerations, to assess baseline between contractions)
  - Vaginal examination: start with head above brim, dilatation, cervical length and state of the membranes
- Checklist:
  - Reassuring maternal condition
  - Reassuring fetal condition
  - To be signed off by healthcare worker (name & signature)

5. MANAGEMENT OF THE LATENT PHASE OF LABOUR

The duration of latent phase of labour (LPL) has been extended to **24 hours** (after the diagnosis of labour has been made, up to and including 4cm).

Observations to be done:

<table>
<tr><th colspan="3">Observations in latent phase of labour</th></tr>
<tr><td>Foetus</td><td>Fetal heartrate</td><td>2-hourly</td></tr>
<tr><td rowspan="5">Mother</td><td>Maternal heartrate</td><td>2-hourly</td></tr>
<tr><td>Blood pressure</td><td rowspan="3">6-hourly</td></tr>
<tr><td>Respiratory rate</td></tr>
<tr><td>Temperature</td></tr>
<tr><td>Urine</td><td>When passed</td></tr>
<tr><td rowspan="2">Labour</td><td>Contractions (frequency & duration)</td><td>2-hourly</td></tr>
<tr><td>Vaginal examination & head above brim
- Dilatation
- Cervical length
- Membranes & liquor</td><td>6-hourly</td></tr>
</table>

The **interim partogram** in the MCR has been updated to accommodate observations for a longer latent phase of labour: 12 blocks of 2 hours = 24 hours in total. All observations need to be recorded on the partogram and signed off by the healthcare worker.

When should the vaginal examination be repeated earlier than the 6-hourly interval?

- If the frequency, intensity and/or duration of the contractions changes
- If the healthcare worker has subjective impression that the woman is in active phase of labour (APL)
- If there is a need for opiate analgesia
- If the woman has an urge to bear down
- If the fetal and/or maternal condition is non-reassuring

NOTE: Rupture Of Membranes (ROM) is not a reason to repeat a vaginal examination earlier, speculum examination is preferred. The fetal heartrate (FHR) should be checked after ROM.

When should the woman be referred (from MOU to hospital) or the doctor be called (in hospital)?

- If the maternal and/or fetal condition is non-reassuring
- If ROM >12 hours AND still in latent phase
- If the liquor is meconium stained (MSL) AND the woman is in the latent phase (all MSL: thick and thin)
- If 5cm dilatation is not reached after 12 hours: Midwife Obstetric Units (MOU's) have to refer a woman in LPL to the hospital if 5cm has not been reached after **12 hours**.

6. MANAGEMENT OF THE ACTIVE PHASE OF LABOUR

The active phase of labour starts when a cervical dilatation of **5cm or more** has been reached.

Observations to be done:

<table>
<tr><th colspan="3">Observations in active phase of labour</th></tr>
<tr><td>Foetus</td><td>Fetal heartrate</td><td>Every 30 minutes</td></tr>
<tr><td rowspan="5">Mother</td><td>Maternal heartrate</td><td>Every 30 minutes</td></tr>
<tr><td>Blood pressure</td><td rowspan="3">4-hourly</td></tr>
<tr><td>Respiratory rate</td></tr>
<tr><td>Temperature</td></tr>
<tr><td>Urine</td><td>When passed</td></tr>
<tr><td rowspan="2">Labour</td><td>Contractions (frequency & duration)</td><td>2-hourly</td></tr>
<tr><td>Vaginal examination & head above brim
- Dilatation
- Cervical length
- Membranes</td><td>4-hourly till 8 cm
then 2 hourly</td></tr>
</table>

Changes on the interim partogram:

- Active phase of labour starts at 5cm
- Alert line starts at 5cm

All observations need to be recorded on the partogram and signed off by the healthcare worker.

When should the vaginal examination be repeated earlier than the 4 or 2-hourly interval?

- If the maternal and/or fetal condition is non-reassuring
- If the woman has an urge to bear down

When should the woman be referred (from MOU to hospital) or the doctor be called (in hospital)?

- If the maternal and/or fetal condition is non-reassuring
- If there is meconium stained liquor AND delivery is NOT imminent
- If there is poor progress of labour. **Poor progress** is defined as follows:

  - For MOU: if the 2-hour refer line is crossed
  - If there is no progress on the next vaginal examination
    - Refer to a hospital with 24/7 caesarean delivery facilities if the woman is at an MOU or district hospital were no 24/7 caesarean deliveries are present
    - Review by doctor at hospital with 24/7 caesarean delivery facilities to exclude poor contractions and cephalo-pelvic disproportion (CPD)
  - If there are signs of cephalo-pelvic disproportion (CPD) i.e. 2+ or 3+ sagittal moulding, or severe generalised caput
  - If the woman has poor contractions

NOTE: NO REFERRAL for ROM > 12 hours in a woman in active phase of labour with good progress and reassuring fetal condition

7. MANAGEMENT OF THE SECOND STAGE OF LABOUR (when the woman is actively pushing)

If full cervical dilatation has been diagnosed, but the woman has no urge to bear down and is not actively pushing, allow 1 hour for the head to descend. However, rule out cephalo-pelvic disproportion (CPD) and confirm reassuring fetal condition (every 30 minutes). During this time continue the observations as during the active phase of labour.

Observations to be done:

Observations in the second stage of labour		
Foetus	Fetal heartrate	*Every 5 minutes or after every second contraction (whichever comes first)*
Mother	Maternal heartrate	*Every 5 minutes*
	Blood pressure	*At the onset of the second stage*
	Respiratory rate	
	Temperature	
	Urine	*When passed*

Position during active pushing is the WOMAN'S CHOICE:

- Upright
- Squatting
- Kneeling
- Semi-Fowler's position
- Wedged supine (anything but supine)

A woman in the second stage with a low risk for complications can continue to take oral fluids during the second stage.

Duration of active pushing:

- In an institution without caesarean delivery (CD) facilities and without healthcare workers present skilled in performing assisted vaginal delivery (AVD)
  - Para 0: 45 min of pushing before referral
  - Para >0: 30 min of pushing before referral
  - In case of maternal or fetal compromise, immediate intervention is required; then the time limits above do not apply.
  - Descent of fetal head needs to be assessed every 15 minutes (by palpating head above brim).
- In an institution with CD facilities
  - Para 0: 2 hours (but call senior/doctor after 45 minutes)
  - Para >0: 1 hour (but call senior/doctor after 30 minutes)
  - In case of maternal or fetal compromise, immediate intervention is required; then the time limits above do not apply.
  - Descent of fetal head needs to be assessed every 15 minutes (by palpating head above brim).

Episiotomy:

- Selective episiotomy (only when indicated, not routinely)
- Explain the procedure to the woman BEFORE starting
- Infiltrate the perineum with lignocaine 1% solution (maximum of 20ml to be infiltrated into perineum)
- Cut the preferred mediolateral episiotomy

When should the woman be referred (from MOU to hospital) or the doctor be called (in hospital)?

- If the woman has no urge to bear down after being fully dilated for 1 hour
- If there is fetal distress & the woman is not eligible for assisted vaginal delivery (AVD, see below)
- If there is poor progress during the second stage (prolonged second stage) & the woman is not eligible for AVD
- If there are signs of CPD (3+ sagittal moulding)
- If there is no descent of the fetal head after 15 minutes of effective pushing

Recommendations for assisted vaginal delivery (AVD)

- Was verbal consent obtained?
- Is a skilled healthcare worker present?
- What is the indication for the AVD?
    - Prolonged second stage
    - Abnormal fetal heartrate
- Are all the prerequisites met?
    - Is the bladder empty?
    - Is the cervix fully dilated
    - Have the membranes ruptured?
    - Is the fetal head in an occiput presentation AND are you certain of the position?
- Do you have functional equipment?
- Did you provide local analgesia?
- Descent of the fetal head
    - Head above brim 0/5 for midwives at MOU
    - For institution with CD facilities? :
        - Head above brim 0/5 or 1/5 for vacuum
        - Head above brim 0/5 for forceps
- **Refer the woman if the above criteria are not met:**
    - Position of the fetal head is unknown
    - Healthcare worker is not skilled in performing AVD (advanced midwives should be able to perform a vacuum delivery at primary healthcare level)
    - Head above brim >= 1/5

8. INTERVENTIONS FOR PROLONGED FIRST STAGE OF LABOUR

I. Refer the woman (MOU to hospital with CD facilities 24/7)

II. Caesarean section (in case of fetal distress or clear signs of CPD)

III. Augmentation through Artificial Rupture Of Membranes (AROM), with or without oxytocin

   a. Should be done in a hospital, without signs of CPD and normal fetal heartrate.
   b. A doctor must be present for multiparous woman.
   c. AROM first, reassess the need for further augmentation after 1 hour (by assessing the woman's contractions).
   d. Continuous fetal monitoring (CTG) is indicated.
   e. The contractions need to be assessed every 30 minutes before increasing oxytocin rate.
   f. Stop or decrease oxytocin in case of:
      i. Hyperstimulation (excessive uterine action): if > 5 contractions / 10 minutes, lasting longer than 50 seconds
      ii. Fetal distress

- AROM for HIV positive women is allowed if the viral load (VL) is supressed (lower than detectable limit) during last 12 weeks before delivery
  - If the VL is supressed, there is still an increased risk of mother-to-child transmission, but the route of choice is vaginal delivery
  - If the VL is not done or unknown, treat the woman as if the VL is not supressed: no AROM
- AROM should not be done routinely (if there's good progress of labour)!
- Obtain the woman's consent: was the procedure explained to the woman?

9. INTERVENTIONS FOR PROLONGED SECOND STAGE OF LABOUR

- Exclude CPD!
- If a nulliparous woman has no urge to bear down after 1 hour: consider oxytocin infusion
- Oxytocin for multiparous woman during second stage must be on doctor's advice
- Perform an assisted vaginal delivery (see second stage of labour)

10.INTRAPARTUM RESUSCITATION

- Start intrapartum resuscitation in case of fetal distress
- Ask the woman to lie on the left lateral side, stop oxytocin, tocolyse (with what? – salbutamol or nifedipine if salbutamol not available), IV fluids
- Amnio-infusion (for repetitive early or variable decelerations)
    - To be done at an institution with fetal heart monitoring facilities (CTG)
    - How:
        - Connect intrauterine pressure catheter or infant feeding tube or Nelaton catheter via an infusion set to 1 litre normal saline
        - Insert the catheter transcervically posterior to the fetal occiput into the amniotic cavity
        - Ensure the catheter is in the amniotic cavity by allowing backflow
        - Infuse saline at 10-15ml per minute for 1 hour, then 3ml per minute for the rest of labour
        - If a large volume of liquor is lost, increase the rate again for 30-60 minutes
- No oxygen administration to a stable mother with fetal distress. Oxygen should only be administered to an unstable mother (e.g. shock, respiratory compromise…).

11.MANAGEMENT OF THE THIRD STAGE OF LABOUR

- Mother and baby should be skin to skin!
- **Active management of the third stage of labour** is recommended as this reduces the risk of postpartum haemorrhage (PPH) by 66% (expectant management is an option as this is the woman's choice).
- Delayed cord clamping (for 1 to 3 minutes) is recommended unless the neonate requires resuscitation after birth.
    - Uterotonic to be given after birth of the baby: 10 IU oxytocin IMI after vaginal delivery.
    - Controlled cord traction is recommended in a setting where a skilled birth attendant is present.
    - Sustained massaging of the uterus is not recommended.
- Use of the early warning chart (EWC) is recommended & included in the MCR:
    - Check the woman's blood pressure, pulse and pads every 15 minutes for the first hour after delivery.
    - Every 30 minutes for second hour after delivery.
- Additional uterotonics can be given to a woman at risk of postpartum haemorrhage (PPH):
    - Oxytocin infusion (20 IU in 1000mLs)
    - Syntometrine or ergometrine (if the woman is not hypertensive and does not have a cardiac condition)

12.CEPHALO-PELVIC DISPROPORTION (CPD)

Cephalo-pelvic disproportion (CPD) occurs when the fetal head is too big for the mother's pelvis, leading to obstructed labour. CPD is a clinical diagnosis that requires skill from the healthcare worker, as diagnosing the position of the fetal head correctly is vital to assessing CPD.

Moulding of the fetal head (overlapping of the different fetal skull bones) occurs physiologically during labour to help fit the baby's head through the mother's pelvis. There are 2 types of moulding:

- Occipito-parietal moulding: the parietal bone moves over the occipital bone of the fetal skull. This type of moulding may be normal, especially in advanced labour.
- Sagittal moulding: occurs when both parietal bones overlap.
    - 1+ sagittal moulding: parietal bones are touching but not overlapping
    - 2+ sagittal moulding: parietal bones are overlapping but can easily be reduced
    - 3+ sagittal moulding: parietal bones have overlapped and cannot be reduced. This severe sagittal moulding should be interpreted as a sign of CPD. Sagittal moulding 3+ has been described as the most diagnostic of CPD.

Severe generalized caput succedaneum (especially at low cervical dilatation) has also been associated with CPD.

13.PRE-DISCHARGE CHECKLIST

A **checklist** was included in the MCR (page 54) to ascertain a reassuring maternal and neonatal condition before discharge (earliest 6 hours after normal vaginal delivery).

- MOTHER
  - Presence of dangers signs (heavy bleeding, severe abdominal pain, unexplained pain in legs or chest, visual disturbances or severe headache, breathing difficulty, fever or chills and vomiting)
  - Heavy bleeding
  - Abnormal vital signs (blood pressure, pulse, temperature or respiratory rate)
  - Unable to urinate
  - Altered mental state
  - Support person present at home? Safe home?
- NEONATE
  - Presence of danger signs (tachypnoea, severe chest-in drawing, fever, hypothermia, yellow hand palms or foot soles, convulsions, no movement, feeding poorly)
  - Not breastfeeding well
  - No stools or urine passed
  - Warning signs explained

The discharge summary needs to be completed for both mother and baby before they can be discharged from the facility.

Different forms of **contraception** need to be discussed with the mother, and the contraceptive of her choice needs to be provided.

NOTE:

The new 2018 WHO guidelines for intrapartum care recommend observation and care in the birthing facility for at least 24 hours after delivery. Due to the lack in capacity of South African birthing facilities, women can be discharged 6 hours after an uncomplicated vaginal delivery. However, if any abnormality is recorded during or after delivery (such as tachycardia, fever, hyper- or hypotension, PPH or neonatal problems), the woman requires further observation and/or treatment at the facility (or referral) and she cannot be discharged 6 hours after delivery.

14.References

Fetal monitoring

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CPD

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