SOUTH AFRICAN ADULT HOSPITAL HEALTHCARE LEVEL ESSENTIAL MEDICINES LIST
CHAPTER 6: OBSTETRICS
NEMLC RECOMMENDATIONS FOR MEDICINE AMENDMENTS (2020-4)

Medicine amendment recommendations, with supporting evidence and rationale are listed below.
Kindly review the medicine amendments in the context of the respective standard treatment guideline (STG).

SECTION A: NEW STANDARD TREATMENT GUIDELINE

SECTION	CONDITION	MEDICINE MANAGEMENT	MEDICINE ADDED
6.5	Coronavirus disease-19 (COVID-19) in pregnancy	Yes	Oxygen
			Corticosteroids *(therapeutic class)*
			Dexamethasone, parenteral *(example of corticosteroids therapeutic class)*
			Prednisone, oral *(if concerned with in-utero steroid exposure)*
			Hydrocortisone, parenteral *(if concerned with in-utero steroid exposure)*
			Corticosteroid, oral/IV *(cross referral to infections chapter)*
			Paracetamol, oral *(Dose range amended and maximum dose reiterated and aligned to AHL Chapter 25: Pain)*
	- *thromboprophylaxis*		LMWH *(cross referral to section 2.8: Venous thrombo-embolism)*
			Unfractionated heparin *(cross referral to section 2.8: Venous thrombo-embolism)*

6.5 CORONAVIRUS DISEASE-19 (COVID-19) IN PREGNANCY

The following STG was developed, aligned with the Royal College of Obstetricians and Gynaecologists clinical guidelines[1], which were assessed independently by two Committee members using the AGREE II tool[2]. The assessors generally agreed that the guideline could be used with adaptation for the South African setting, noting that this is a living guideline, which is updated as new evidence emerges. Thus, the guideline recommendations should strengthen as more robust evidence becomes available. The recommendations need re-evaluation as the guidelines are updated. However, the ethical challenges of studies performed amongst pregnant women was duly acknowledged.

ANTENATAL CARE:

» Antenatal care is an essential service and should not be scaled down during lockdown periods.
» Screening and testing criteria for SARS-CoV-2 infection during pregnancy is the same as for the general population.
» Vaccination against Covid-19 and influenza is safe at all gestations of pregnancy and during COVID-19 pandemic it is important that pregnant women take up the COVID-19 and influenza vaccine to reduce their risk of contracting either. (See PHC STGs and EML, Section 13.7: Other vaccines).
» The clinical course and outcome of COVID-19 is not different in pregnancy and most pregnant women who are infected with SARS-CoV-2 will experience only mild or moderate symptoms.
» Up to 75% of infected women in pregnancy may be asymptomatic, and appropriate PPE must be used for all deliveries, regardless of the status of the mother. All pregnant women attending hospital, including women in labour, should wear masks.
» Maternal COVID-19 is associated with an approximately three times greater risk of preterm birth and women should be counselled on warning signs of
spontaneous preterm labour.
» Risk factors for more severe disease or admission to
hospital with COVID-19 include:
- Obesity (pre-pregnancy BMI >30 kg/m^2).
- Co-morbidity, such as pre-existing diabetes (see section 6.2: Diabetes mellitus in pregnancy) and chronic hypertension (see section 6.6: Chronic hypertension).
- Age >35 years
» SARS-CoV-2 infection is not associated with an increase in the incidence of congenital abnormalities.

THROMBOPROPHYLAXIS:

All pregnant women admitted with confirmed or suspected COVID-19 should be offered prophylactic LMWH or unfractionated heparin for 10 days, unless birth is expected within 12 hours. See section 2.8: Venous thrombo-embolism.

[1] Royal College of Obstetricians & Gynaecologists. Coronavirus (COVID-19) Infection in Pregnancy Guidelines, 7 March 2022 https://www.rcog.org.uk/guidance/coronavirus-covid-19-pregnancy-and-women-s-health/vaccination/
[2] Brouwers MC, Kho ME, Browman GP, et al; AGREE Next Steps Consortium. AGREE II: advancing guideline development, reporting and evaluation in health care. CMAJ. 2010 Dec 14;182(18):E839-42. https://pubmed.ncbi.nlm.nih.gov/20603348/

DELIVERY:
» COVID-19 infection is not an indication for delivery, unless delivery is required as part of maternal resuscitation to improve maternal oxygenation.
» When a woman with COVID-19 presents with spontaneous preterm labour, suppression of labour (to delay delivery in order to administer antenatal corticosteroids) should not be done.
» All women with confirmed or suspected SARS-CoV-2 infection must preferably deliver in a dedicated COVID-19 hospital or ward.

MEDICINE TREATMENT
Observe oxygen saturation measurement hourly.
- Oxygen, if saturation is <94%.

Symptomatic relief of headache:
- ~~Paracetamol, oral, 1 g 4–6 hourly when required.~~
- Paracetamol, oral, 500 mg–1 g, 4–6 hourly as required (to a maximum of 4 g in 24 hours).
  - Maximum dose: 15 mg/kg/dose.

Note: Avoid morphine analgesia if patient is respiratory compromised.

In pregnant patients who require supplemental oxygen:
» Corticosteroids crosses the placenta and may have long-term deleterious effects on the child.

If corticosteroids are also needed to accelerate fetal lung maturity: See section 6.12: Preterm labour (PTL) and preterm prelabour rupture of membranes (PPROM).

If corticosteroids are not needed for fetal lung maturity:
- Corticosteroids, e.g.:
- Dexamethasone, IV, 6 mg daily for up to 10 days, or until discharge.

If there is a concern over in-utero steroid exposure, use alternative therapy (with less placental transfer):
- Prednisone, oral 40 mg daily, for up to 10 days, or until discharge.
  OR
  Hydrocortisone, IV, 80 mg 12 hourly for up to 10 days, or until discharge.

Anaesthetic:
- Spinal anaesthesia is the anaesthetic of choice in the absence of contra-indications. See section 12.7: Anaesthesia, spinal (intrathecal). The patient should wear a surgical facemask for the duration of the perioperative period.

POSTPARTUM:
» Infection with SARS-CoV-2 is not a contra-indication to breast feeding.
» There is no contra-indication to the use of post-partum contraception (See PHC STGs and EML, Chapter 7: Family planning).

Level of Evidence: Guidelines

Pain:
Nitrous oxide: *not added*
There is much controversy on the potential danger of nitrous oxide in an aerosol generating device. No consensus could be reached amongst the Cochrane review group[3].

NEMLC MEETING OF 9 DECEMBER 2021:
Aerolisation with nitrous oxide for pain was raised as a concern in pregnant women with COVID-19.
Recommendation: NEMLC recommended that nitrous oxide not be used in this clinical setting.

Level of Evidence: Expert opinion

The following statement was also added to the STG text:

Note: Avoid morphine analgesia if patient is respiratory compromised.

In pregnant patients who require supplemental oxygen:
Corticosteroids: *added as a therapeutic class*

[3] Devane D, Kellie F, Finucane E, Hanrahan V, Papageorghiou AT. COVID-19 Review of National Clinical Practice Guidelines for Key Questions Relating to the Care of Pregnant Women and Their Babies, 10 April 2020.
https://pregnancy.cochrane.org/sites/pregnancy.cochrane.org/files/public/uploads/covid_pcg_powerpoint_results_final_0.pdf

Dexamethasone, parenteral: *added as an example of corticosteroids therapeutic class*
Prednisone, oral: *added if concerned with in-utero steroid exposure*
Hydrocortisone, parenteral: *added if concerned with in-utero steroid exposure*

The NEMLC-accepted narrative aligned with the infections chapter,[4]amended specifically for the obstetrics setting.
Level of Evidence: II Moderate certainty evidence[5, 6]

SECTION B: MEDICINE AMENDMENTS:

SECTION	MEDICINE/MANAGEMENT	ADDED/DELETED/AMENDED/ NOT ADDED/ RETAINED
6.1 Anaemia in pregnancy *- prophylaxis*	Ferrous sulfate, oral	Directions for use added for poor tolerance with daily iron
	Ferrous fumarate, oral	Directions for use added for poor tolerance with daily iron
	Therapeutic response	Criteria not amended
6.2 Diabetes mellitus in pregnancy	Criteria for screening for gestational diabetes mellitus	Amended
	Treatment protocol	Amended
	Insulin	Dose amended
6.4 Hypertensive disorders in pregnancy	Long-acting calcium channel blockers, oral	Added as a therapeutic class
	Amlodipine, oral	Retained as an example of class in the STG
	Nifedipine, oral	Not added to the STG, but added to the therapeutic interchange database
6.4.3 Chronic hypertension	Doppler screening	Added
6.6 HIV in pregnancy	Tenofovir + lamivudine + dolutegravir, oral	Indication expanded from ≥6 weeks gestation to ALL women
6.10 Hyperemesis gravidarum	Promethazine, oral/IM/IV	Added as first line option
	Metoclopramide, oral/IV	Amended to second line option
6.11.1 Preterm labour (PTL) and preterm prelabour rupture of membranes (PPROM)	Ampicillin, IV	Added
	Amoxicillin, oral	Amended
	Metronidazole, oral	Deleted
	Azithromycin, oral	Added
	Clindamycin, IV	Added
	Clindamycin, oral	Added
	Indomethacin, oral	Dose not amended
6.13 Labour induction	Dinoprostone, oral/gel	Directions for use not amended
6.14 Labour pain, severe	Morphine, IM	Retained
	Pethidine, IM	Deleted
	Postpartum and post-episiotomy pain: Paracetamol, oral	Retained *(Dose range amended and maximum dose reiterated and aligned to AHL Chapter 25: Pain)*
6.17 Postpartum haemorrhage	Tranexamic acid, parenteral	Directions for use amended
6.18 The Rhesus negative woman	Rh-antibody testing	Not amended

The content of the Adult Hospital Level obstetrics chapter has been aligned to the PHC obstetrics and gynaecology chapter, wherever appropriate.

6.1 ANAEMIA IN PREGNANCY

Prophylaxis

Ferrous sulfate, oral: *directions for use added for poor tolerance with daily iron*
Ferrous fumarate, oral: *directions for use added for poor tolerance with daily iron*

[4] Minutes of the NEMLC meeting of 3 December 2020
[5] National Department of Health: Affordable Medicines, EDP-NEMLC COVID-19. Rapid review: Corticosteroids for COVID-19: evidence review of the clinical benefit and harm, 24 October 2020. https://www.knowledgehub.org.za/content/standard-treatment-guidelines-and-essential-medicines-list
[6] WHO Rapid Evidence Appraisal for COVID-19 Therapies (REACT) Working Group, Sterne JAC, Murthy S, Diaz JV et al. Association Between Administration of Systemic Corticosteroids and Mortality Among Critically Ill Patients With COVID-19: A Meta-analysis. JAMA. 2020 Sep 2;324(13):1–13. https://pubmed.ncbi.nlm.nih.gov/32876694/

Dosing of iron was aligned with the PHC STGs and EML, noting that Cochrane review[7] of daily iron supplementation during pregnancy reviewed studies using daily doses of 9 mg to 900 mg of elemental iron; whilst intermittent dosing may be a feasible option for those who cannot tolerate daily iron (e.g. epigastric pain, nausea, vomiting and constipation). **Level of Evidence: Low to low certainty evidence**[8]

Therapeutic response: *criteria not amended*
The guidance in the STG is aligned with the UK Guidelines on the Management of Iron Deficiency in Pregnancy[9] that cites the British National Formulary[10], that states, *"Therapeutic response: The haemoglobin concentration should rise by about 100–200 mg/100mL (1–2 g/litre) per day or 2 g/100mL (20 g/litre) over 3–4 weeks. When the haemoglobin is in the normal range, treatment should be continued for a further 3 months to replenish the iron stores".*

6.2 DIABETES MELLITUS IN PREGNANCY

Criteria for screening for gestational diabetes mellitus: *amended*
The following was amended to align with the NICE Guidelines:

The following women should be screened for GDM, between 24 and 28 weeks of gestation:
» ……..
» Previous baby with birthweight ~~>4 kg~~ 4.5 kg.
» Polyhydramnios in index pregnancy.
» Glycosuria (≥1+ glucose in urine on 2 or more occasions).
……

Treatment protocol: *amended*
The STG text was amended to align with the step-wise treatment protocol as recommended in the NICE 2020 Guidelines[11] (i.e. lifestyle modification, then add metformin, then add insulin). The statement in the STG text, "the mainstay of therapy for gestational diabetes is insulin" was also deleted.

Insulin: *dose amended*
NICE Guidelines[12] mentions that the majority of studies have reported a total insulin dose ranging from 0.7 to 2 units per kg (present pregnant weight). In the first trimester, the total daily insulin requirement is 0.7 units/kg/day, in the second trimester it is 0.8 units/kg/day, and in the third trimester it is 0.9-1.0 units/kg/day. In a morbidly obese woman, the initial doses of insulin may need to be increased to 1.5-2.0 units/kg to overcome the combined insulin resistance (IR) of pregnancy and obesity. Furthermore, initiation at a lower dose of insulin for step-up treatment from metformin monotherapy is recommended.
Level of Evidence: III Guidelines

The STG text was amended from:

Preferred insulin regimen
- Insulin, short-acting with all 3 meals to maintain the postprandial levels.

AND
- Insulin, intermediate-acting at bedtime (with a bedtime snack) to maintain preprandial levels. Insulin dosing:
  - o Total daily dose: 0.5 units/kg/day.
  - o One third of the total dose: intermediate acting insulin at bedtime.
  - o The remaining two thirds divided into three equal doses are given before each meal (breakfast, lunch and supper). Adjust insulin dosage daily according to blood glucose profiles, until control is adequate.

[7] Peña-Rosas, Juan Pablo, Luz Maria De-Regil, Maria N. Garcia-Casal, and Therese Dowswell. Daily Oral Iron Supplementation during Pregnancy. Cochrane Database of Systematic Reviews, no. 7 (2015). https://doi.org/10.1002/14651858.CD004736.pub5.
[8] Peña-Rosas JP, De-Regil LM, Gomez Malave H, Flores-Urrutia MC, Dowswell T. Intermittent oral iron supplementation during pregnancy. Cochrane Database Syst Rev. 2015 Oct 19;(10):CD009997. https://www.ncbi.nlm.nih.gov/pubmed/26482110
[9] Pavord S, Daru J, Prasannan N, Robinson S, Stanworth S, Girling J; BSH Committee. UK guidelines on the management of iron deficiency in pregnancy. Br J Haematol. 2020 Mar;188(6):819-830. https://pubmed.ncbi.nlm.nih.gov/31578718/
[10] Joint Formulary Committee. British National Formulary. 80. London: BMJ Group and Pharmaceutical Press; 2020.
[11] NICE. Guideline: Diabetes in pregnancy: management from preconception to the postnatal period, 16 December 2020. https://www.nice.org.uk/guidance/ng3
[12] NICE. Guideline: Diabetes in pregnancy: management from preconception to the postnatal period, 16 December 2020. https://www.nice.org.uk/guidance/ng3

Where the above recommended regimen is not feasible Twice-daily regimen with biphasic insulin

- Insulin, biphasic.
  - o Daily dose: 0.5 units/kg/day, two thirds, 30 minutes before breakfast and one third 30 minutes before supper. o Titrate to achieve target blood glucose as above.

To:

Preferred insulin regimen

- Insulin, short-acting with all 3 meals to maintain the 2-hour postprandial glucose levels <6.4 mmol/L.

AND

- Insulin, intermediate-acting at bedtime (with a bedtime snack) to maintain the fasting (morning) preprandial glucose levels <5.3 mmol/L.

Insulin dosing (in addition to metformin):

- Total daily dose: SC, 0.1 units/kg/day.
- One third of the total dose: intermediate acting insulin at bedtime.
- The remaining two thirds divided into three equal doses: short-acting insulin given before each meal (breakfast, lunch and supper).
- Adjust insulin dosage daily according to blood glucose profiles, until control is adequate.

Where the above recommended regimen is not feasible

Twice-daily regimen with biphasic insulin.

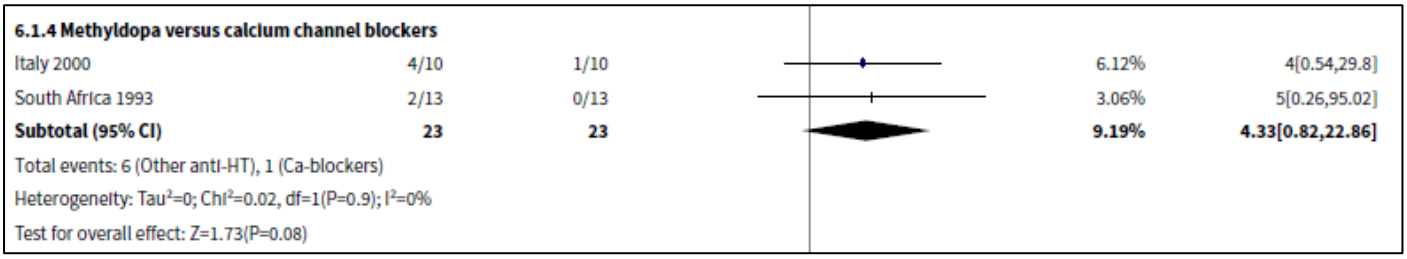
- Insulin, biphasic.
  - Daily dose: SC, 0.5 units/kg/day, two thirds, 30 minutes before breakfast and one third 30 minutes before supper.
  - Titrate to achieve target capillary (fingerprick) glucose as above.

6.4 HYPERTENSIVE DISORDERS IN PREGNANCY

Long acting calcium channel blockers, oral: *added as a therapeutic class*
Amlodipine, oral: *retained as an example of class in the STG*
Nifedipine, oral: *not added to the STG, but added to the therapeutic interchange database*

Evidence:

International Society for the Study of Hypertension in Pregnancy (ISSHP)[13] and South African Guideline on Hypertension in Pregnancy[14] recommends nifedipine as a second line drug (methyldopa/labetalol considered first line); whist authors of a Cochrane review[15] concluded that there is insufficient evidence to recommend any specific antihypertensive agent over another. A sub analysis in this review showed that calcium channel blockers appear to be more effective than methyldopa in avoiding an episode of severe hypertension (RR 4.33, 95%CI 0.82 to 22.86) – however, this was a pooled analysis of 2 small RCTs:



Forest plot of Analysis comparing methyldopa vs calcium channel blocker for the outcome: Severe hypertension (Albalos et al, 2018)

Level of Evidence: Low certainty evidence

Price comparison:

The current tender price for amlodipine compared to the SEP of generic nifedipine.

[13] Magee LA, Brown MA, Hall DR, Gupte S, Hennessy A, Ananth Karumanchi S et al. The Hypertensive Disorders of Pregnancy: The 2021 International Society for the Study of Hypertension in Pregnancy Classification, Diagnosis & Management Recommendations for International Practice, Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health (2021). https://doi.org/10.1016/j.preghy.2021.09.008

[14] Moodley J, Soma-Pillay P, Buchmann E, Pattinson RC. Hypertensive disorders in pregnancy: 2019 National guideline. S Afr Med J. 2019 Sep 13;109(9):12723. https://pubmed.ncbi.nlm.nih.gov/31635598/

[15] Abalos E, Duley L, Steyn DW, Gialdini C. Antihypertensive drug therapy for mild to moderate hypertension during pregnancy. Cochrane Database Syst Rev. 2018 Oct 1;10(10):CD002252. https://pubmed.ncbi.nlm.nih.gov/30277556/

Medicine	Tender price[16]	SEP[17] (100%)	SEP (60%)
Calcium channel blockers – low dose			
Amlodipine 5 mg daily, 28 tabs	R3.78	-	-
Nifedipine 30mg daily, 30 tabs	-	R3.60	R2.16
Calcium channel blockers – standard dose			
Amlodipine 10 mg daily, 28 tabs	R5.23	-	-
Nifedipine 60mg daily, 30 tabs	-	R5.16	R3.10

Recommendation: Nifedipine be added as a therapeutic alternative to amlodipine on the therapeutic interchange database, to encourage therapeutic tendering (low and standard dose) – refer to table above.

6.4.3 CHRONIC HYPERTENSION

Doppler screening: *added*

ISSHP recommends that, "*Doppler ultrasound of the umbilical artery may reduce perinatal death and obstetric intervention in high-risk pregnancies, but the evidence is not definitive; it is important to note that near or at term, a normal umbilical artery Doppler does not exclude fetal compromise".* [18]

Level of Evidence: III Guidelines

6.6 HIV IN PREGNANCY

Aligned with the PHC STGs and EML – section 6.8: HIV in pregnancy and NEMLC approved HIV chapters including alignment to NDOH program guidelines.

Tenofovir + lamivudine + dolutegravir, oral: *indication expanded from ≥6 weeks gestation to ALL women*

Refer to the medicine review: Dolutegravir in pregnancy, June 2021, below:

NDoH_PHC-Adult Medicine review_DT

Recommendation: The PHC/Adult Hospital Level Committee recommends that dolutegravir should be part of the preferred first line ART regimen for all adults and adolescents living with HIV, including pregnant women and women of child-bearing potential (WOCP). The existing contra-indication in pregnancy should be removed from the STG.

Rationale: The risk of neural tube defects in infants exposed to dolutegravir in early pregnancy that was first identified in the Tsepamo observational study in Botswana has diminished over time, with the accumulation of further data. The risk difference between dolutegravir and efavirenz is no longer significant.

Dolutegravir (especially when combined with tenofovir alafenamide) is associated with more weight gain during pregnancy than efavirenz, but the difference is unlikely to be clinically relevant.

Randomised controlled trials have shown non-inferiority in terms of maternal viral suppression rates at 48 weeks. Dolutegravir causes more rapid viral suppression than efavirenz, resulting in increased viral suppression rates by time of delivery in randomised controlled trials of ART initiation in the second and third trimester of pregnancy. This has not yet translated into a demonstrable difference in mother-to-child transmission risk, but event rates are very low with both regimens.

A standardised regimen for all adults and adolescents living with HIV is likely to be easier for nurses to provide.

Based on those findings and observations, the PHC/Adult Hospital Level Committee feel that the potential long-term benefits to pregnant women and WOCP, as well as potential short-term benefits to their infants, outweigh the risks.

Level of Evidence: Moderate certainty of evidence

Review indicator: New evidence of harms

[16] Contract circular HP09-2021SD (Accessed November 2021) – weighted average prices

[17] SEP database, 26 November 2021 – cheapest generic price

[18] Magee LA, Brown MA, Hall DR, Gupte S, Hennessy A, Ananth Karumanchi S et al. The Hypertensive Disorders of Pregnancy: The 2021 International Society for the Study of Hypertension in Pregnancy Classification, Diagnosis & Management Recommendations for International Practice, Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health (2021). https://doi.org/10.1016/j.preghy.2021.09.008

NEMLC MEETING OF 24 JUNE 2021:
NEMLC Recommendation: The NEMLC accepted the recommendation as proposed by the PHC/Adult Hospital Level Committee, which would support the universal test-and-treat (UTT) strategy of the National HIV Programme.
It was also duly noted that the South African Health Products Regulatory Authority were currently reviewing the label of dolutegravir products registered on the South African market.

6.10 HYPEREMESIS GRAVIDARUM

Promethazine, oral/IM/IV: *added as first line option*
Metoclopramide, oral/IV: *amended to second line option*

The Royal College of Obstetricians and Gynaecologists (RCOG) states that "*Metoclopramide is safe and effective, but because of the risk of extrapyramidal effects it should be used as second-line therapy",* the STG was amended accordingly.

The Royal College of Obstetricians and Gynaecologists provides guidance [19]as follows:

First line
- Cyclizine 50 mg PO, IM or IV 8 hourly
- Prochlorperazine 5–10 mg 6–8 hourly PO; 12.5 mg 8 hourly IM/IV; 25 mg PR daily
- Promethazine 12.5–25 mg 4–8 hourly PO, IM, IV or PR
- Chlorpromazine 10–25 mg 4–6 hourly PO, IV or IM; or 50–100 mg 6–8 hourly PR

Second line
- Metoclopramide 5–10 mg 8 hourly PO, IV or IM (maximum 5 days' duration)
- Domperidone 10 mg 8 hourly PO; 30–60 mg 8 hourly PR
- Ondansetron 4–8 mg 6–8 hourly PO; 8 mg over 15 minutes 12 hourly IV

Third line
- Corticosteroids: hydrocortisone 100 mg twice daily IV and once clinical improvement occurs, convert to prednisolone 40–50 mg daily PO, with the dose gradually tapered until the lowest maintenance dose that controls the symptoms is reached

The STG was amended as follows, aligned with RCOG Guidelines, and amended from:

- ~~Pyridoxine, oral, 25 mg 8 hourly.~~

~~**AND**~~

- ~~Metoclopramide, oral/IV, 10–20 mg 6 hourly as needed.~~

~~**AND**~~

- ~~Vitamin B complex, IV, 10 mL.~~

To:

- Pyridoxine, oral, 25 mg 8 hourly.

AND

- Vitamin B complex, IV, 10 mL.

AND

- Promethazine, oral/IM/IV 25 mg 8 hourly as needed.

If no/poor response:
ADD
- Metoclopramide, oral/IV, 10–20 mg 6 hourly as needed.

Level of Evidence: III Guidelines

6.11.1 PRETERM LABOUR (PTL) AND PRETERM PRELABOUR RUPTURE OF MEMBRANES (PPROM)

Antibiotic therapy
Ampicillin, IV: *added*
Amoxicillin, oral: *amended*
Metronidazole, oral: *deleted*

[19] The Royal College of Obstetricians and Gynaecologists. The Management of Nausea and Vomiting of Pregnancy and Hyperemesis Gravidarum (Green-top Guideline No. 69), 22 June 2016. https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg69/

Azithromycin, oral: *added*
Clindamycin, IV: *added*
Clindamycin, oral: *added*

Aligned with Centers for Disease Control and Prevention (CDC) guidelines, noting that ampicillin, IV, clincamycin, IV and clindamycin, oral are included on the Adult Hospital Level EML.

NEMLC REPORT OF PHC OBSTETRICS AND GYNAECOLOGY CHAPTER, 2022-3 REVIEW:

Antibiotics for PPROM reduces maternal and neonatal complications – a Cochrane review[20] showed that any antibiotic vs placebo results in:

- *Less chorioamnionitis - any antibiotic vs placebo, RR 0.57; 95% CI 0.37 to 0.86.*
- *Less preterm birth - any antibiotics vs plaebo; delivery within 7 days after admission RR 0.8; 95% CI 0.71 to 0.9.*
- *Less neonatal infection - any antibiotic vs placebo; neonatal infection RR 0.68; 95% CI 0.53 to 0.87.*

However, women with PPROM have a high risk of group B streptococcal (GBS) infection. The recommended antibiotic for intrapartum GBS prophylaxis is penicillin .[21] Broad spectrum antibiotics are recommended to prolong latency (due to the colonization with vaginal and rectal organisms). [22]

Of note is that the Cochrane review[25] included 22 RCTs, of which only one RCT (from 1997) used metronidazole. From the available evidence, the Cochrane review recommends that erythromycin appears to be a better choice. When different regimens of azithromycin or erythromycin were compared, there was no difference in latency to delivery, incidence of chorioamnionitis, or neonatal outcomes. There also appears to be no additional benefit for an extended course of azithromycin beyond the single-day dosing.[23]

Level of Evidence: III Guidelines

Indomethacin, oral: *dose not amended*

Network meta-analysis ranked prostaglandin inhibitor as the most efficacious tocolytic – compared to placebo, prostaglandin inhibitors shown to be more effective in delaying delivery by 48 hours: OR 5.94, 95% CI 2.14 to 12.34. The dose of indomethacin for labor inhibition is 50 to 100 mg loading dose (may be given orally or per rectum), followed by 25 mg orally every four to six hours up to 48 hours). However, due to its side effect profile, administered in women <32 weeks' gestation with normal renal function and normal amniotic fluid volume.

Level of Evidence: II Moderate certainty evidence[24]

6.13 LABOUR INDUCTION

Dinoprostone, oral/gel: *directions for use not amended*

The package insert for dinoprostone ora/gel[25] as well as the NICE Guidelines[26] cautions against the use of dinoprostone and misoprostol to induce labour, after previous caesarean birth.

Cochrane review[27] concludes that "RCT evidence on methods of induction of labour for women with a prior caesarean section is inadequate, and studies are underpowered to detect clinically relevant differences for many outcomes. High-quality, adequately-powered RCTs would be the best approach to determine the optimal method for induction of labour in women with a prior caesarean birth. However, such trials are unlikely to be undertaken due to the very large numbers needed to investigate the risk of infrequent but serious adverse outcomes (e.g. uterine rupture). Observational studies (cohort studies), including different methods of cervical ripening, may be the best alternative".

[20] Kenyon S, Boulvain M, Neilson JP. Antibiotics for preterm rupture of membranes. Cochrane Database Syst Rev. 2013 Dec 2;(12):CD001058. https://pubmed.ncbi.nlm.nih.gov/24297389/

[21] Verani JR, McGee L, Schrag SJ; Division of Bacterial Diseases, National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention (CDC). Prevention of perinatal group B streptococcal disease--revised guidelines from CDC, 2010. MMWR Recomm Rep. 2010 Nov 19;59(RR-10):1-36. https://pubmed.ncbi.nlm.nih.gov/21088663/

[22] ACOG. Prelabor Rupture of Membranes: ACOG Practice Bulletin, Number 217. Obstet Gynecol. 2020 Mar;135(3):e80-e97. https://pubmed.ncbi.nlm.nih.gov/32080050/

[23] Navathe R, Schoen CN, Heidari P, Bachilova S, Ward A, Tepper J et al. Azithromycin vs erythromycin for the management of preterm premature rupture of membranes. Am J Obstet Gynecol. 2019 Aug;221(2):144.e1-144.e8. https://pubmed.ncbi.nlm.nih.gov/30904320/

[24] Haas DM, Caldwell DM, Kirkpatrick P, McIntosh JJ, Welton NJ. Tocolytic therapy for preterm delivery: systematic review and network meta-analysis. BMJ. 2012 Oct 9;345:e6226. https://pubmed.ncbi.nlm.nih.gov/23048010/

[25] Pfizer: Prandin E_2 vaginal gel package insert.

[26] NICE. Guideline: Inducing labour, 4 November 2021. https://www.nice.org.uk/guidance/NG207

[27] West HM, Jozwiak M, Dodd JM. Methods of term labour induction for women with a previous caesarean section. Cochrane Database Syst Rev. 2017 Jun 9;6(6):CD009792. https://pubmed.ncbi.nlm.nih.gov/28599068/

Observational studies in the second trimester suggests that dinoprostone (prostaglandin E_2) is safe[28].

6.14 LABOUR PAIN SEVERE

Morphine, IM: *retained*
Pethidine, IM: *deleted*

Aligned with the PHC STGs and EML, 2020 edition

NEMLC REPORT OF PHC OBSTETRICS AND GYNAECOLOGY CHAPTER, 2016-2018 REVIEW:
Analgesia:
Recommendation: *Morphine, IM replaces pethidine, IM as analgesia during first stage of labour with cervical dilatation < 10 cm.*
Rationale: Regulation 31 replaces regulation 47 of the Medicines and related substances Act 101 of 1965 i.e. access to pethidine is replaced by access to access to schedule 5 and 6 medicines in order to provide intrapartum care. ***In addition, there are safety concerns regarding pethidine's active metabolite, normeperidine that is potentially neurotoxic.***
Level of Evidence: Regulations[29], Guidelines[30]

Postpartum and post-episiotomy pain

Paracetamol: *retained (Dose range amended and maximum dose reiterated and aligned to AHL Chapter 25: Pain)*

6.17 POSTPARTUM HAEMORRHAGE

Tranexamic acid, parenteral: *directions for use amended*
The treatment protocol with tranexamic acid for the management of PPH was corrected.

The WOMAN trial states, "*Our results suggest that if tranexamic acid is used in the treatment of post-partum haemorrhage it should be* ***given soon after the onset of post-partum haemorrhage alongside uterotonics****. First, our findings show that a significant proportion of mothers die within hours of post-partum haemorrhage onset. In such circumstances, waiting to see if uterotonics fail to stop the bleeding could put some mothers' lives at risk. We found no evidence of adverse effects with tranexamic acid and it has also been shown to be safe and effective in trauma and surgery. Second, our data suggest that early administration is most effective*".

The STG was amended from:

~~• If uterus remains atonic (palpable above the umbilicus):~~
~~**ADD**~~
- ~~Ergometrine, IM, 0.5 mg.~~

~~**OR**~~
- ~~Oxytocin, IM, 5 units.~~

AND
- ~~Ergometrine, IM, 0.5 mg.~~
  - ~~Avoid ergometrine in women with hypertension or cardiac disease, except in severe cases where the benefit is considered to outweigh the risk (discuss with a specialist).~~
  - ~~Repeat ergometrine 0.5 mg IM after 15 minutes if no response~~

~~If still no response after 15 minutes:~~
- ~~Tranexamic acid 1 g, IV, slowly over 10 minutes.~~
  - ~~Repeat after 30 minutes if there is ongoing vaginal bleeding.~~

To:

If uterus remains atonic (palpable above the umbilicus) after the oxytocin infusion has started:
- Ergometrine, IM, 0.5 mg.

or

[28] Andrikopoulou M, Lavery JA, Ananth CV, Vintzileos AM. Cervical ripening agents in the second trimester of pregnancy in women with a scarred uterus: a systematic review and metaanalysis of observational studies. Am J Obstet Gynecol. 2016 Aug;215(2):177-94. https://pubmed.ncbi.nlm.nih.gov/27018469/
[29] Regulation 31 of the Medicines and related substances Act 101 of 1965.
[30] SAMF, 2022

a combination of Oxytocin, IM, 5 units and Ergometrine, IM, 0.5 mg.
- Avoid ergometrine in women with hypertension or cardiac disease, except in severe cases where the benefit is considered to outweigh the risk (discuss with a specialist).
- Repeat ergometrine 0.5 mg IM after 15 minutes if no response.

AND

- Tranexamic acid 1 g, IV, slowly over 10 minutes.
  - Repeat after 30 minutes if there is ongoing vaginal bleeding.

6.18 THE RHESUS NEGATIVE WOMAN

Rh-antibody testing: *not amended*
The STG recommended testing at booking', 28 and 34 weeks' gestation; whilst National Health Laboratory Services (NHLS) recommends testing at "20, 26 and 32 weeks".
NEMLC forwarded a letter to NHLS requesting alignment of the timing of the Rh-antibody testing.

MATERNAL MENTAL HEALTH
Similar to guidance in the PHC STGs and EML, the Adult Hospital Level **mental health chapter** contains appropriate content relating to maternal mental health, as required. Of note is that the PHC STGs and EML describes syndromic management; whilst the Adult Hospital Level STGs and EML guides on management following specific diagnosis as per the relevant ICD10 codes.

SECTION C: FURTHER CHANGES AFTER INITIAL PUBLICATION OF CHAPTER

SECTION	MEDICINE/MANAGEMENT	ADDED/DELETED/AMENDED/ NOT ADDED/ RETAINED
6.4.1 Preeclampsia	Calcium, oral	Retained with an amendment showing only the elemental calcium requirement i.e. not the calcium carbonate salt dose
6.6 HIV in pregnancy	VL requirement for switching pregnant woman from a TDF+FTC+EFV regimen to a TDF+3TC+DTG	Deleted
6.7 Syphilis	Penicillin desensitization	Clarified
6.8 Hepatitis B in Pregnancy	Prophylaxis for pregnant women who are HBsAG/HBeAG positive and HIV negative: TDF, oral	Added

6.4.1 PREECLAMPSIA

Calcium, oral: *Retained with an amendment showing only the elemental calcium requirement i.e. not the calcium carbonate salt dose*

A provincial query was received by NDOH requesting clarity on the STG dose for calcium which was regarded as ambiguous as it contained both the calcium carbonate salt dose & elemental calcium dose. It was also raised that the that calcium doses are not standardized in the PHC (Obstetrics & Gynecology) AHL (Obstetrics) & AHL (Nephrology) chapters. Going forward, NEMLC has recommended that the STG recommendation should only contain the elemental calcium requirement as this is the actual calcium content contained in the tablet (i.e. the calcium carbonate salt dose, should not be included in the STG). Additionally, the recommended elemental calcium dose is now in line with how the peadiatric Hospital STG is currently phrased.

The STG was updated as follows :

At confirmation of pregnancy

- Calcium, oral.
  - For high-risk patients: ~~Calcium carbonate, oral, 500 mg 12 hourly (equivalent to 1 g elemental calcium daily)~~ Calcium (elemental), oral, 1 gram daily.
  - Although the benefit is greatest in high-risk women, consider use of this agent in all pregnant women.
  - When using iron together with calcium supplementation, ensure that iron and calcium are taken at least 4 hours apart from one another.

6.6 HIV IN PREGNANCY

In April 2024, guidance indicating that switching pregnant woman from a TDF+FTC+EFV regimen to a TDF+3TC+DTG regimen requires a VL <50 copies/mL in the last 6 months was deleted from the STG in line with the 2023 NDOH Antiretroviral Therapy Clinical Guidelines[31]. Active psychiatric illness guidance regarding contraindication of EFV was removed as it applied when EFV was the treatment of choice; however now that DTG is the treatment of choice, patients on EFV would be switched to DTG. Additionally, clarification is provided regarding serum creatinine being a more sensitive measure of renal impairment in pregnancy rather than calculated creatinine clearance.

LOE: Guidelines

The STG was updated as follows:

MEDICINE TREATMENT

» Patients should receive ART at the first antenatal visit, whether newly diagnosed or known to be living with HIV but not on ART.
» Tenofovir should not be used in pregnant women with a ~~calculated creatinine clearance <60 mL/minute or~~ a serum creatinine ≥85 micromol/L (~~the latter is~~ a more sensitive measure of renal impairment in pregnancy than calculated creatinine clearance).
» Pregnant women may be initiated on/switched to a dolutegravir-containing regimen.
~~» Switching between TEE and TLD regimens requires a VL <50 copies/mL in the last 6 months. See section 10.1: Antiretroviral therapy~~
» Initiate antenatal supplementation (see PHC STGs and EML, section 6.4.1: Antenatal supplements), noting that calcium and DTG should not be taken together on an empty stomach, but can be taken together with food.

1st ANC visit	
Pregnant women not on ART, with normal renal function, **without** TB.	• TDF, oral, 300 mg daily. **AND** • 3TC, oral, 300 mg daily. **AND** • DTG, oral, 50 mg daily. Provided as a fixed dose combination (FDC).
Pregnant women not on ART, with normal renal function, **with** TB. (DTG requires boosting with TB treatment)	• TDF, oral, 300 mg daily. **AND** • 3TC, oral, 300 mg daily. **AND** • DTG, oral, 50 mg daily. Provided as a fixed dose combination (FDC). **WITH** DTG, oral 50 mg 12 hours later.
Pregnant woman on TDF + FTC + EFV	Switch to TDF+3TC+DTG~~:~~ **~~» Switch only if VL is <50 copies/mL in the last 6 months~~**
Pregnant woman already on ART with a VL between 50-1000 copies/ml	See section 10.1: Antiretroviral Therapy
2nd ANC visit (1 week later)	
Creatinine ≤85 micromol/L	Continue ART as a FDC
Creatinine >85 micromol/L (TDF is contraindicated)	~~Stop FDC: TDF+FTC/3TC+EFV/DTG~~ Replace TDF with ABC as part of a FDC: • ABC, oral, 600 mg daily **AND** • 3TC, oral, 300 mg daily. **AND**

[31] South African National Department of Health. 2023 Antiretroviral Therapy Clinical Guidelines for the Management of HIV in Adults, Pregnancy and Breastfeeding, Adolescents, Children, Infants and Neonates. April 2023. Accessible at https://knowledgehub.health.gov.za/system/files/elibdownloads/2023-07/National%20ART%20Clinical%20Guideline%20AR%204.5%2020230713%20Version%204%20WEB.pdf

	• DTG, oral, 50 mg daily.
~~Active psychiatric illness~~ ~~(EFV may be contraindicated; consult an HIV specialist and/or psychiatrist, if required)~~ ~~O98.7 + (Z21/B24 + 099.3 +F-ICD10 code)~~	~~Replace EFV with DTG~~ ~~If DTG not suitable:~~ ~~Replace EFV with LPV/r, oral, 400/100 mg 12 hourly~~

6.7 SYPHILIS

A potential safety issue was raised, after the initial publication of the chapter in the 2020-3 review cycle, for oral penicillin desensitisation procedure for penicillin allergic pregnant women with syphilis, as the oral desensitization table did not include explicit instruction on the preparation of the oral penicillin doses and route of administration to be used. Additionally, below the table the original instruction to administer 1gram IV was not clear as it was raised that readers could interpret that 1g of the ORAL phenoxymethylpenicillin formulation listed in the table, above the note, should be given intravenously which could result in a potentially catastrophic error. It was also raised that none of the IV formulations of penicillin are generally measured in grams and this may add to the confusion about what the 1g is referring to.

Therefore, the oral penicillin desensitisation table in the syphilis STG was clarified as follows:

- Perform only in an ICU setting or in a setting where recognition and management of anaphylaxis can be assured..
- The desensitization protocol was introduced in a heading as an oral penicillin desensitization protocol.
- Explicit instruction provided to prepare a stock solution of oral phenoxymethylpenicillin 250mg/ 5mL.
- The amounts to be administered for steps 1 to 14 explicitly stated for oral route of administration.
- The note below the table was clarified to read that after the final step of oral penicillin desensitisation (i.e. after step 14) and an observation period of 30 minutes, the desired dose of intramuscular penicillin should be administered. Intravenous was revised to intramuscular as benzathine benzylpenicillin (depot formulation), for the management of syphilis is administered via the intramuscular route of administration.
- In keeping with evidence that if less than 5 half-lives have elapsed between repeat doses no repeat desensitisation is required[32]; a further note is elaborated below the table that repeat desensitisation is not required for subsequent doses of the same treatment course (e.g., to complete 3 doses of benzathine benzylpenicillin for late latent syphilis or syphilis of unknown duration). However, as a pragmatic way forward for safety it is reiterated in this hospital level chapter that second and third doses must be administered in a hospital setting to ensure adequate experience in management/resuscitation of anaphylaxis.

  The corresponding section in the "How to Use These Guidelines" for oral and parenteral penicillin desensitisation, referred to in the obstetrics chapter, has also been updated to provide specific instruction on preparation, route and for the parenteral table cumulative dose.

  Level of Evidence: Guidelines & **Expert Opinion and (IV)**

  The STG was updated from:

Severe penicillin allergy (Z88.0)
For penicillin sensitive pregnant women: penicillin desensitisation.
(See page xxxi for detailed information).

A: Reconstitute phenoxymethylpenicillin 250mg/ 5mL		
Step	**Medicine mg/mL**	**Amount to administer (mL)**
Strictly every 15 minutes	**B**: To make 0.5 mg/mL solution Dilute 0.5 mL of reconstituted phenoxymethylpenicillin solution in 49.5 mL water.	
1	0.5 mg/mL solution (1000 units/mL)	0.1 mL
2		0.2 mL
3		0.4 mL
4		0.8 mL

[32] Macy E, Romano A, Khan D. Practical Management of Antibiotic Hypersensitivity in 2017. J Allergy Clin Immunol Pract. 2017 May-Jun;5(3):577-586. doi: 10.1016/j.jaip.2017.02.014. Epub 2017 Mar 29. PMID: 28365277.

5		1.6 mL
6		3.2 mL
7		6.4 mL
	C: To make 5 mg/mL solution Dilute 1 mL of reconstituted phenoxymethylpenicillin solution in 9 mL water.	
8	5 mg/mL solution (10000 units/mL)	1.2 mL
9		2.4 mL
10		4.8 mL
	D: Reconstituted phenoxymethylpenicillin 250 mg/5 mL = 50 mg/mL	
11	50 mg/mL (80000 units/mL)	1.0 mL
12		2.0 mL
13		4.0 mL
14		8.0 mL

After step 14, observe for 30 minutes, then 1.0 g IV; Interval between doses: 15 minutes.

To

Severe penicillin allergy (Z88.0)
For penicillin sensitive pregnant women: penicillin desensitisation.
Perform only in an ICU setting or in a setting where recognition and management of anaphylaxis can be assured.
See "How to Use These Guidelines" for detailed information.

Oral penicillin desensitisation protocol

A: Prepare stock solution of oral phenoxymethylpenicillin 250mg/ 5mL and dilutions for steps 1-7 and 8-10 B: Administer increasing doses of penicillin strictly at 15 minutes intervals		
Step	**Medicine mg/mL**	**Amount to administer (mL)**
To make 0.5 mg/mL solution: Add 0.5 mL of stock phenoxymethylpenicillin solution to 49.5 mL water (total volume 50mL)		
1	0.5 mg/mL solution (1000 units/mL)	0.1 mL orally
2		0.2 mL orally
3		0.4 mL orally
4		0.8 mL orally
5		1.6 mL orally
6		3.2 mL orally
7		6.4 mL orally
To make 5 mg/mL solution: Dilute 1 mL of stock phenoxymethylpenicillin solution with 9 mL water (total volume 10mL)		
8	5 mg/mL solution (10000 units/mL)	1.2 mL orally
9		2.4 mL orally
10		4.8 mL orally
Stock phenoxymethylpenicillin 250 mg/5 mL = 50 mg/mL		
11	50 mg/mL (80000 units/mL)	1.0 mL orally
12		2.0 mL orally
13		4.0 mL orally
14		8.0 mL orally

After step 14, observe for 30 minutes, then administer desired dose of intramuscular penicillin.

Note:

- Repeat desensitisation is not required for subsequent doses of the same treatment course (e.g., to complete 3 dos benzathine benzylpenicillin for late latent syphilis or syphilis of unknown duration).
- However, second and third doses must be administered in a hospital setting.

6.8 HEPATITIS B IN PREGNANCY

Tenofovir disoproxil fumarate, oral: *Added as prophylaxis for pregnant women who are HBsAG/HBeAG positive and HIV negative*

In line with the WHO Guidelines for prevention of mother-to-child transmission of hepatitis B virus[33,34,35] on the 27th June 2024 the Committee accepted and recommended:

- Tenofovir monotherapy for the prevention of vertical transmission of Hepatitis B in HIV Negative pregnant women with chronic active Hepatitis B infection who are HBeAG positive.
- Maternal TDF prophylaxis be pragmatically offered to all HBsAg positive pregnant woman even if the HBeAg or viral load result is unavailable.
- Consider TAF for people (including pregnant women) with impaired kidney function (eGFR 15-50mL/min) and/or osteoporosis noting that TAF is not recommended if eGFR is <15 ml/min).[36]

Level of Evidence: IV Guidelines *(Strong recommendation, moderate-certainty evidence)*

As per the maternity care guideline[37] regarding chronic kidney disease:

- Women with known renal disease should be referred to a specialist to evaluate for the presence and severity of renal impairment, proteinuria and/or hypertension.
- Women with hypertension and proteinuria prior to 20 weeks gestation should be referred for tertiary care for further work-up.
- Pregnancy is contra-indicated in women with stage 4-5 chronic kidney disease. (Glomerular filtration rate < 30 mL/minute and serum creatinine > 250 umol/L)

Referral criteria in the STG has been updated including renal dysfunction where it is noted that TDF is contraindicated in renal impairment and Tenofovir alafenamide (TAF) should be prescribed in place of TDF.

The STG was updated as follows:

From:

Prevention of perinatal transmission

» Caesarean delivery is reserved for obstetric indications only.
» Babies born to mothers with acute hepatitis B infection at the time of delivery or to mothers who are HBsAg-positive or HBeAg-positive, see Primary Health Care STGs and EML, section 6.6.5: Hepatitis B exposed infant.

REFERRAL

» Cirrhosis.
» Liver failure.
» Renal dysfunction (eGFR <60 mL/minute).
» Treatment failure.
» Refer all infected babies to a specialist paediatrician for further management.

To:

Prevention of perinatal transmission

» Caesarean delivery is reserved for obstetric indications only.
» Delivery should take place in a facility that can offer Hepatitis B vaccination to the baby at birth.
» Administration of ARVs active against HBV from 28 weeks of pregnancy will further reduce risk of vertical transmission.

Pregnant women who are HBsAg/ HBeAg positive and HIV negative

» All HIV negative pregnant women are eligible for HIV Pre-exposure prophylaxis (PrEP) (see PHC STGs and EML, section 11.11: Pre-exposure prophylaxis (PrEP)). TDF, which is included in the oral PrEP regimen, has anti-HBV activity, and will reduce the risk of vertical transmission of HBV.
» Women who are HIV negative and HBsAg positive who decline PrEP must be counselled that TDF will reduce risk of vertical transmission of Hepatitis B to the baby, particularly if HBeAg is positive or HBV viral load is high.
» TDF 300 mg daily should be administered from 28 weeks of pregnancy until birth to women with a high hepatitis viral load (≥200 000 IU/mL), or positive HBeAg, or where HBeAg/viral load result is unavailable at 28 weeks.

[33] Guidelines for the prevention, diagnosis, care and treatment for people with chronic hepatitis B infection. Geneva: World Health Organization; 2024. Available at: https://www.who.int/publications/i/item/9789240090903, Accessed 2 June 2024).
[34] Prevention of mother-to-child transmission of hepatitis B virus: guidelines on antiviral prophylaxis in pregnancy.
Geneva: World Health Organization; 2020. Available at (https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/hepatitis/prevention/mother-to-child-transmission-of-hepatitis-b, accessed 2 June 2024
[35] National Department of Health: Affordable Medicines, EDP- PHC and Adult Hospital level. Medicine Review: Use of antivirals in the third trimester of pregnancy, in HIV Negative women with chronic active Hepatitis B infection who are HBeAG positive, to prevent vertical transmission of Hepatitis B, May 2024. http://www.health.gov.za/.
[36] TAF – eGFR 15-50: NDoH Evidence Summary: Use of TAF for adults with HIV. V4_14 March 2024.
[37] NDOH. National Maternity Care Guidelines. Updated 2024

» For care of babies born to: (1) mothers with acute hepatitis B infection at the time of delivery, (2) mothers who are HBsAg-positive, or (3) mothers who are HBeAg-positive, see Primary Health Care STGs and EML, section 6.6.5: Hepatitis B exposed infant.
» Obtain infectious disease specialist or internal medicine physician opinion before stopping TDF as there is a risk for postpartum hepatitis flare.
» Consider continued treatment for HBV after delivery where indicated (see section 1.2.4.2 Hepatitis B, chronic (non-HIV coinfection)).

For Pregnant women who are HBsAg/ HBeAg positive and HIV negative

- TDF, oral, 300 mg daily (from 28 weeks of pregnancy until birth).

REFERRAL
» Cirrhosis.
» Liver failure.
» Renal dysfunction (TDF is contraindicated in renal impairment. Tenofovir alafenamide (TAF) should be prescribed in place of TDF).
» Refer all infected babies to a specialist paediatrician for further management.