ADDENDUM FOR THE NATIONAL POLICY GUIDELINES AND SERVICE STANDARDS FOR SEXUAL AND REPRODUCTIVE HEALTH RIGHTS, THIRD EDITION, 2012

Over the last decade, much progress has been made in line with new scientific evidence in the course of malaria; in particular: Malaria Case Management - including Malaria in Pregnancy. This document therefore, is an addendum with Malaria in Pregnancy updates (parallel with the current WHO recommendations) for the National Policy Guidelines and Service Standards for Sexual and Reproductive Health Right, Third Edition, 2012:

Page 40: Table: GOAL ORIENTED ANTENATAL CARE PROTOCOL:
- Second row-second column reading: First Trimester (0-16 weeks) to read as follows: First Trimester (0-13 weeks)
- Third row-third column reading: Second Trimester (16-28 weeks) to read as follows: Second Trimester (13-28 weeks)
- Third row-last column, 4th bullet to read as follows: IPTp doses (3 tablets) one month apart (scheduled according to her ante-natal visits).
- Forth row-last column, 3rd bullet to read as follows: IPTp doses (3 tablets) one month apart (scheduled according to her ante-natal visits).
- Fifth row-last column to be merged with forth row-last column (above and below 36 weeks) since the actions are the same and the new WHO policy recommends to give SP up-to the time of delivery without safety concerns.

Page 41; under section 4.5.1: Basic services to be offered during ante-natal; below the table: GOAL ORIENTED ANTENATAL CARE PROTOCOL, (before section 4.5.2: Information given during ante-natal); add the following information for more details on services to be offered for Malaria in Pregnancy:

Three main interventions recommended to prevent Malaria in Pregnancy include:
1. The promotion of use and distribution of Long-Lasting Insecticidal Nets (LLINs) to pregnant women.
2. Intermittent Preventive Treatment of Malaria in Pregnancy with Sulphadoxine-Pyrimethamine (IPT-SP)
3. Prompt diagnosis and effective treatment of malaria cases and maternal anaemia.
1. PROMOTION OF USE AND DISTRIBUTION OF LLINs TO PREGNANT WOMEN
   • Providers should give one LLIN to a pregnant woman during her first ante-natal visit (or later if she has not yet received one) and then mark her card accordingly.
   • Providers should advise pregnant women to sleep under LLINs as early as possible in pregnancy and continue to remind them on the use during their scheduled ante-natal visits.

2. INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN PREGNANCY WITH SULPHADOXINE-PYRIMETHAMINE (IPT-SP)
   • SP (3 tablets) should be given as Directly Observed Treatment as early as possible from the 2nd trimester (13th week) at each scheduled visit up-to the time of delivery (40 weeks). More than 2 doses are recommended to provide continuous preventive effects.
   • Each SP dose should be given at least 1 month apart.
   • The last IPTp with SP can be administered late (after 36 weeks) in the 3rd trimester of gestation without safety concerns. It is also safe to be given on an empty stomach.
   • Folic acid at daily dose equal or above 5 mg should not be given together with SP, as this counteracts its efficacy as an antimalarial. WHO recommends a daily Folic Acid dose of 0.4 mg.
   • SP is contraindicated in HIV-women receiving Co-trimoxazole prophylaxis
   • Pregnant women who are known to have hypersensitivity to sulfonamides should not receive SP for IPT.

3. PROMPT DIAGNOSIS AND EFFECTIVE TREATMENT OF MALARIA CASES AND MATERNAL ANAEMIA

3.1 Diagnosis of Malaria
   Any pregnant woman who has a history or is presenting with fever (or any other symptom suggestive of malaria) should be tested for malaria (by mRDT or microscopy) to confirm the diagnosis.

3.2 Treatment of Uncomplicated Malaria in Pregnancy
   3.2.1 First Trimester
   Pregnant women in the first trimester with uncomplicated malaria should be treated with Quinine tablets (plus clindamycin - if available/affordable) for seven days\(^1\).

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\(^1\) Guidelines for the Treatment of Malaria, Second Edition, WHO 2010
Quinine Strength: 300mg (salt)
Quinine Dosage: 10mg/kg 8 hourly (do not exceed a maximum dose of 600mg) for seven days.

Clindamycin Strength: Capsules containing 75mg, 150mg and 300mg of Clindamycin base as hydrochloride.
Clindamycin Dosage: 10mg/kg 12 hourly for seven days.

3.2.2 Second and Third Trimester
During the second and third trimester of pregnancy Artemether/Lumefunntrine should be used for the treatment of uncomplicated malaria.

Strength: Fixed formulation - Artemether 20mg and Lumefunntrine 120mg.
Dosage: 6 Doses (of 4 tablets) as follows: The 1st dose to be given by DOT, the 2nd dose to be given strictly after 8 hours, the 3rd dose to be given 16 hours after the 2nd dose (24 hours from the 1st dose) and then the rest of the dose should be given 12 hourly.

3.3 Treatment of Severe Malaria in Pregnancy (same in all trimesters)
Parenteral anti-malaria agents should be given to pregnant women with severe malaria at any stage of pregnancy in full doses without delay.

Artesunate is the medicine of choice, if not available Artemether is preferable to Quinine because Quinine is associated with a 50% risk of hypoglycaemia.

Give injectable anti-malarials for the treatment of severe malaria for a minimum of 24 hours, even if the patient can tolerate oral medication earlier than 24 hours, and thereafter, complete treatment by giving a complete course of Artemether-Lumefantrine. Initiate the first dose of Artemether/Lumefunntrine 8 hours after the last injection.

Treatment of Severe Malaria with Injectable Artesunate
(Refer to ‘Management of Malaria Cases’ manual for details on treatment of severe malaria with injectable Artemether and Quinine)

Available Formulations: 30mg, 60mg and 120mg of Artesunate for injection

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\(^2\) Guidelines for the Treatment of Malaria, Second Edition, WHO 2010
\(^3\) A PRACTICAL HANDBOOK, MANAGEMENT OF SEVERE MALARIA, Third Edition, WHO 2012
Artesunate Injection Package by Strength:

<table>
<thead>
<tr>
<th>Strength</th>
<th>30 mg</th>
<th>60 mg</th>
<th>120 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Artesunate for injection</strong></td>
<td>1 vial of 30 mg</td>
<td>1 vial of 60 mg</td>
<td>1 vial of 120 mg</td>
</tr>
<tr>
<td><strong>Sodium bicarbonate 5%</strong></td>
<td>1 ampoule of 0.5 ml</td>
<td>1 ampoule of 1 ml</td>
<td>1 ampoule of 2.5 ml</td>
</tr>
<tr>
<td><strong>Sodium chloride</strong></td>
<td>1 ampoule of 2.5 ml</td>
<td>1 ampoule of 5 ml</td>
<td>1 ampoule of 10 ml</td>
</tr>
</tbody>
</table>

Preparation: Injectable Artesunate has 2-steps dilutions:

**Administration and dosage (60 mg strength)**

**Step 1:** The powder for injection should be diluted with 1ml of 5% sodium bicarbonate and shaken vigorously two to three minutes till the solution becomes clear.

**Step 2:** For I.V. add 5 ml (for I.M. add 2ml) of normal saline or 5% of glucose and mix again.

- To obtain Artesunate concentration of 10mg/ml (Intravenous Infusion):
  Add 5 ml of 5% dextrose or normal saline. Administer slowly 3-4 minutes.

- To obtain Artesunate concentration of 20 mg/ml (Deep Intra-muscular Injection).
  Add 2 ml of 5% dextrose or normal saline to obtain a

**Dosage:** Artesunate for injection should be administered in a dose of 2.4 mg/kg body weight IV or IM given on admission (time = 0 hour), then at 12 hours and 24 hours.

**Continuation of Treatment:**
If the patient can tolerate oral medication after 24 hours provide a full treatment course of ALu. Initiate the first dose of Artemether/Lumefantrine 8 hours after the last injection.

Strong advice should be given by the health care provider to the pregnant women to use her LLINs and to immediately come back in case of malaria symptoms for proper diagnosis and treatment.

3.4 Iron and Folic Acid Supplementation for Prevention and Treatment of Anaemia

3.4.1: Prevention of Anaemia in Pregnancy
For pregnant women, the recommended dose of iron and folic acid supplementation is 30-60mg of elemental iron (equivalent to 150-300mg FeSO4) plus 0.4mg of folic acid daily⁴.

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3.4.2: Treatment of Mild to Moderate Anaemia in Pregnancy
If a woman is diagnosed with mild-moderate anaemia, it is recommended to give her 120mg elemental iron daily (equivalent to 600mg FeSO4) - given in two separate doses, i.e., 60mg in the morning and 60mg in the evening; and 0.4mg folic acid supplementation until her haemoglobin concentration rises to normal. She can then switch to the standard antenatal dose (and health education should be provided) to prevent recurrence of anaemia, i.e. 30-60mg of elemental iron plus 0.4mg of folic acid, daily5.

3.4.3: Treatment of Severe Anaemia in Pregnancy
Severe anaemia has to be aggressively treated before the woman goes into labour; during labour a patient may go into cardiac failure.

General Principles:
- Treat the cause if determined.
- Obtain blood for grouping and Cross-matching, then give blood transfusion (packed cells); transfuse SLOWLY one unit over 6 hours (only one unit can be transfused in 24hours).
- Follow up the patient until Hb reaches 11 g/dl

Note: In late weeks of pregnancy and/or in the presence of clinical signs (even if Hb is above recommended level for blood transfusion): Obtain Blood Grouping and Cross-Matching - give blood transfusion and monitor vital signs.

In Lower Health Facilities:
If Not in Labour:
- Prop up the patient or put the patient in a sitting position.
- Administer intravenous (IV) Frusemide (lasix) 80 mg stat, if the woman has signs of heart failure (elevated jugular venous pressure, basal crepitations and enlarged, tender liver).
- Insert an indwelling urethral catheter.
- Give oxygen 4-6 liters per minute and keep the patient in well ventilated room.
- REFER to hospital immediately in a propped-up position with an escorting nurse. Note: Do not give IV fluids.

If in Labour:
- Manage as above; plus:
- Conduct delivery at the facility while the patient is in semi-sitting position
- Assist second stage by vacuum extraction.
- Do active management of third stage of labour by:

1. Giving intramuscular oxytocin 10 iu within one minute of birth of the baby. (do not administer Ergometrine or Misoprostol)
2. Applying controlled cord traction while applying counter traction on the uterus.
3. Uterine massage following delivery of placenta and palpation and or massage of uterus every 15 minutes for 2 hours.
   - Give another dose of intravenous Frusemide 80 mg.
   - Monitor vital signs (blood pressure, pulse rate, temperature and respiratory rate) every half an hour while arranging for referral.
   - REFER the patient with an escorting nurse to hospital 24 hours after delivery. 
     Note: Do not give IV fluids.

In Higher Health Facilities:

If Not in Labour:
- Prop up the patient or put the patient in a sitting position
- Administer intravenous (IV) Frusemide (lasix) 80 mg stat, if the woman has signs of heart failure.
- Obtain blood for haemoglobin, grouping and cross-matching
- Insert an indwelling urethral catheter
- Transfuse packed cells SLOWLY one unit over 6 hours
  - Note: Only one unit can be transfused in 24 hours; administer Frusemide 80 mg intravenous stat 30 minutes before the transfusion
- Give oxygen 4-6 liters per minute and keep the patient in well ventilated room
- Investigate and treat the underlying cause of anaemia.
- Provide health education for prevention of anaemia.

If in Labour:
- Nurse patient in a propped-up position
- Obtain blood for Hb, grouping and cross-matching.
  - Note: Do not give blood transfusion while in labour.
- Insert an indwelling urethral catheter
- Administer IV frusemide 80 mg stat
- Give oxygen 4-6 liters per minute and keep the patient in well ventilated room
- Conduct delivery while the patient is in semi-sitting position
- Encourage the woman to refrain from bearing down with contractions
- Assist second stage by vacuum extraction.
- Do active management of third stage of labour by:
  1. Giving intramuscular oxytocin 10 iu within one minute of birth of the baby. (Do not administer Ergometrine or Misoprostol).
  2. Applying controlled cord traction while applying counter traction on the uterus.
3. Uterine massage following delivery of placenta and palpation and or massage of uterus every 15 minutes for 2 hours.

- Give another dose of intravenous Frusemide 80 mg.
- Monitor vital signs (blood pressure, pulse rate, temperature and respiratory rate) every half an hour
  - Monitor input/output.
  - Monitor closely for signs of heart failure during post-partum period.
  - Investigate and treat the underlying cause of anaemia.
- Give iron and folic acid supplementation for treatment of anaemia (120mg elemental iron daily (equivalent to 600mg FeSO4) - given in two separate doses, i.e., 60mg in the morning and 60mg in the evening; and 0.4mg folic acid) and re-assess the condition monthly until the Hb reaches normal level 11mg/dl. She can then switch to the standard antenatal dose to prevent recurrence of anaemia, i.e. 30-60mg of elemental iron plus 0.4mg of folic acid, daily.
- Provide health education for prevention of anaemia.

Page 41: Under section 4.5.2: Information given during ante-natal should include: Bullet number 6 to read as follows:

- Malaria Prevention: Advise pregnant women to sleep under LLINs as early as possible in pregnancy and continue to remind them on the use during their scheduled ante-natal visits.

Page 41: Under section 4.5.2: Information given during ante-natal should include: Add another bullet to read as follows:

- Health Education should be provided to prevent anaemia.

Page 42: Under subheading: Post-natal care and family planning: Add a new bullet:

- Importance of using LLINs for prevention of malaria (both the mother and the baby)

Page 42: Under section 4.5.3: Minimum frequency and timing of antenatal care visits: Change the ANC visit schedule as follows (so that the woman gets SP as early as possible in the second trimester as advised by WHO):

- First visit early 1-12 weeks
- Second visit 13<28weeks
- Third visit between 28<36
- Forth visit after 36 weeks