National Standards for Reproductive Health Services in Afghanistan: Antenatal Care Services

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Transitional Islamic Government of Afghanistan:
Ministry of Health, Reproductive Health Task Force

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NATIONAL STANDARDS
FOR
REPRODUCTIVE HEALTH SERVICES

ANTENATAL CARE SERVICES

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ABBREVIATIONS

ABO	**A, B, and O blood types (A blood group system)**
AFGA	**Afghan Family Guidance Association**
AFSOG	**Afghan Society of Obstetrics and Gynecology**
AIDS	**Acquired Immuno-Deficiency Syndrome**
BHC	**Basic Health Center**
BPHS	**Basic Package of Health Services**
CDC	**Center for Disease Control and Prevention**
CHC	**Comprehensive Health Center**
CHW	**Community Health Worker**
DH	**District Hospital**
EDD	**Estimated Date of Delivery**
Hb	**Hemoglobin**
HIV	**Human Immuno-Deficiency Virus**
HP	**Health Post**
IMC	**International Medical Corps**
JICA	**Japan International Cooperation Agency**
LMP	**Last Menstrual Period**
MCH	**Mother and Child Health**
MICS	**Multiple Indicators Cluster Survey**
MOH	**Ministry Of Health**
MSH	**Management Sciences for Health**
RH	**Reproductive Health**
Rh	**Rhesus (A blood group system)**
RhoGAM	**Registered name for human anti-D immune globulin**
RHTF	**Reproductive Health Task Force**
RTI	**Reproductive Track Infection**
SCA	**Swedish Committee for Afghanistan**
STI	**Sexually Transmitted Infections**
UNFPA	**United Nations Population Fund**
UNICEF	**United Nations Children Fund**
USAID/REACH	**The United States Agency for International Development, Rapid Expansion of Afghanistan Community-based Health Care Project**
VDRL	**Venereal Disease Research Laboratory**
WHO	**World Health Organization**
WRH	**Women and Reproductive Health**

CONTENT

INTRODUCTION

The Transitional Islamic Government of Afghanistan attaches great importance to women's health and this is reflected in the Ministry of Health (MOH) document on its mission statement, values, and principles, which states that the MOH will "lay the foundations for equitable quality health care for the people in Afghanistan, especially mothers and children. Priority emphasis will be on provision of good quality care to mothers and children including essential obstetric care."

Based on this mission, the MOH is committed "to ensure access to a full range, affordable reproductive health services, especially maternal care and treatment of obstetric emergencies to reduce deaths and disabilities," as stated in the National Health Policy document. A Basic Package of Health Services (BPHS) has been defined to translate these policies into practice, under which a Maternal and Newborn Health Package with five components (antenatal care, delivery care, postpartum care, family planning, and care of the newborn) has been introduced.

Originated from these principles, MOH Reproductive Health Strategy has been developed through a consultative process with participation of all stakeholders. The Strategy document has set a strategic framework for reduction of maternal mortality in Afghanistan and three axes of focus have been suggested in that framework, including:

1. Improve the coverage, quality and utilization of emergency obstetric care
2. Improve the coverage of skilled attendance at birth
3. Ensure effective antenatal and post natal care through services and community-based interventions

To that end, MOH has initiated several programs and activities. As part of these efforts, Women and Reproductive Health Department of Ministry of Health, hosts a Reproductive Health Task Force (RHTF), consisted of main institutions involved in Afghanistan reproductive health scene, including WRH department of MOH, Kabul Medical Institute, Institute for Nursing and Allied Health, Afghan Society of Obstetrics and Gynecology (AFSOG), Afghan Family Guidance Association (AFGA), UNFPA, UNICEF, WHO, JICA, USAID/REACH, IMC, SCA. Under RHTF, seven working groups have been established to develop operational standards of specific topics, including family planning, antenatal care, postpartum care, birthing and emergency obstetric care, newborn care, monitoring and evaluation, and adolescent health.

Working group on antenatal and postpartum care, coordinated by WHO, was launched in April 2003 and started its activities by conducting a workshop. MOH/WHO national workshop was conducted from 14 to 16 April 2003 in Kabul to design maternal care protocols participated by representatives of MCH department of MOH, Kabul Medical Institute, Institute for Nursing and Allied Health, AFSOG, AFGA, Malalai Maternity Hospital, Rabia Balkhi Women's Hospital, 52 beds Khair Khana Hospital, UNICEF, UNFPA, WHO, JICA, and the NGOs IMC and SCA. The purpose of the workshop was to develop the national antenatal care (ANC) and postnatal care guidelines by:

- Standardizing the content of maternal care during antenatal and postpartum periods
- Determining the number, frequency and timing of visits during the antenatal and postpartum period
- Designing the maternal care records and mother's card

The followings are the outcome of the workshop, some of which has been incorporated in this document:

- Identified list of diseases and conditions that should be addressed in the ANC protocols
- Developed the natural history of each disease based on the available evidence
- The number, frequency and timing of ANC visits
- Integrated the designed care of each disease
- Designed the format of the ANC protocol (first draft)

First follow up meeting of the workshop was held on 27 April 2003. A group of participants, coordinated by WHO, was assigned to develop the antenatal care protocol. Since then the group was meeting every week to discuss and finalize the antenatal care protocols. A larger group including the participants from the workshop also met every two weeks.

This document is the draft product of working group and consists of 3 chapters.

- Chapter one includes some background information about maternal and child health, reproductive health, and Afghan health system.
- Chapter two describes the goals, objectives, and principles of antenatal care; defines the terms used in this document; and gives details of birth preparedness and emergency plan as the main component of antenatal care.
- Chapter three presents detail guidelines and protocols of antenatal care services according to the WHO standards adopted for Afghanistan health system.

At the end, the document provides some flowcharts for service provision, reference materials, lists of essential drugs and equipment needed for antenatal care services, and a table to define the role of each facility in provision of services.

CHAPTER 1 – BACKGROUND INFORMATION

Recent reviews and assessments of reproductive health situation in Afghanistan during 2002 have highlighted the unmet needs in this area. The national health resources assessment has shown that availability of basic reproductive health services is extremely limited – only 17% of the basic primary health facilities provide the basic RH package related to safe motherhood and family planning services. Regarding the availability of family planning methods, only 29 percent of the health facilities provide 3 methods. Nearly 40 percent of the basic facilities have no female health care provider.

The table below provides the available reproductive health indicators for Afghanistan, which highlight the enormous challenges the MOH is facing in terms of reproductive health in the country.

Indicator		Source
Maternal Mortality ratio (per 100,000 live births)	1600	CDC / UNICEF study 2002
Anemia in pregnant women in Eastern and South eastern region	55%-91%	MICS 2000
Basic primary health services facilities providing basic RH services	17%	National Health Resources Assessment HANDS / MSH 2002
Health facilities providing cesarean section and blood transfusion	17 (2%)	National Health Resources Assessment HANDS / MSH 2002
Health facilities providing three methods of contraception	19%	National Health Resources Assessment HANDS / MSH 2002
Coverage of Antenatal Care (%)	12%	WHO Afghanistan 1999
Births attended by trained personnel	15%	WHO Afghanistan 1999
Proportion of deliveries at home	90%	WHO Afghanistan 1999
Coverage of tetanus vaccination (% of pregnant women)	16%	WHO / UNICEF Afghanistan 2000
Total fertility rate (per woman)	609%	WHO Afghanistan 1999
Contraceptive prevalence (% of women 15-49)	2%	UNFPA 1972-73

Although 80% of all health facilities claim to provide some kind of antenatal care services, only 65% of those 80% reported to provide the basic set of antenatal care service defined by the Basic Package of Health Services. Furthermore, among the facilities, which claim to provide basic set of antenatal care service, only 62% of them have minimum set of equipment to perform antenatal care. At the end, 28% of total BPHS facilities reported to provide basic antenatal care service with female health worker and have minimum set of equipment. Only 32% of the 2923 surveyed facilities claim to provide some kind of antenatal care service.

Availability of tetanus toxoid vaccination for pregnant women is limited to 57% of BPHS facilities. While facilities are expected to provide iron supplement for pregnant women, only 23% of them claim to provide such service.

CHAPTER 2 – GOALS AND PRINCIPLES

Antenatal care (ANC) is the care of the woman during pregnancy. The primary aim of ANC is to promote and protect the health of women and their unborn babies during pregnancy so as to achieve at the end of a pregnancy a HEALTHY MOTHER and a HEALTHY BABY.

Goals

- To reduce the mortality and morbidity of women and children
- To improve the physical, mental, and social well being of women, children, and their families.

Objectives

- To ensure that the pregnant woman and her unborn child are in the best possible health prior to delivery
- To ensure that all pregnant women understand (i) the complications of pregnancies that may lead to death, (ii) the best approach to safe delivery, and (iii) the best way of bringing up their babies.

Principles and Scope of Services

Antenatal care provides an essential link between women and the health system and offers essential health care services in line with national policies, including:

- Counseling about the danger signs of pregnancy and delivery complications and where to seek care in case of emergency
- Counseling on birth preparedness, emergency readiness, and the development of a birth plan
- Providing advice on proper nutrition during pregnancy
- Detecting conditions that require additional care and providing appropriate treatment for those conditions
- Detecting complications that influence choice of birthing location
- Supplying Iron and Folate supplement
- Supplying low dose supplement of vitamin A
- In certain settings, providing treatment for conditions that affect women's pregnancies, such as malaria, tuberculosis, hookworm infection, iodine deficiency, and sexually transmitted infections, including HIV/AIDS
- Providing tetanus toxoid immunization
- Providing voluntary HIV testing and counseling
- Providing information about breastfeeding and contraceptives

Although pregnancy-related problems and complications can begin any time between visits to the facility, and inter-current diseases may occur throughout pregnancy, it is considered that asymptomatic disorders occurring between the scheduled visits will not cause harm until next visit. Such conditions, for example restricted fetal growth, will be diagnosed or suspected at the next regular visit and dealt with appropriately.

The pregnant woman should repeatedly be advised to seek care in case of unexpected symptoms and signs, and to the greatest extent possible, provided with 24-hour access to help and guidance, ideally from the facility that provides ANC care. If this meets with practical obstacles outside of the clinic's working hours, the patient should be told where to seek help and provided with contact addresses of other facilities, where appropriate. The husband, other family members, or friends should receive the same information.

Disseminating the benefits of ANC should be a community commitment; they can be promoted through word of mouth, leaflets, newspapers, and/or local radio. The community health worker (CHW) should provide information to the entire community regarding the benefits of ANC. Both male and female CHWs play a role, each playing an advocacy role to their specific audiences

Pregnant women should be encouraged to seek ANC as early as possible and be given an appointment without undue delay. For women who will receive antenatal care at the community level by CHWs, the CHW should visit the woman as early as possible to initiate care.

Antenatal care is an opportunity to promote dialogue with clients and nurture confidence, as well as to reinforce maternal health messages, particularly the importance of skilled birth attendant at the time of delivery, and other messages such as:

- Nutritional advice
- Personal hygiene
- Safer sex
- Importance of place of delivery and skilled birth attendant
- Birth preparedness and emergency readiness, including planning referral facility, transportation, and blood transfusion
- Newborn care, including breastfeeding and immunization
- Family planning for child spacing

Birth Preparedness and Emergency Readiness

Unfortunately, the complications of pregnancy pose substantial dangers to the health of women in Afghanistan. Prompt and appropriate treatment of these complications is an essential intervention for reducing maternal morbidity and mortality. Antenatal care provides an opportunity to assess and impact the current health of the mother and the unborn child. However, the majority of causes of maternal death and disability (eclampsia, ante- and post-partum hemorrhage, obstructed labor, puerperal infection) can occur during pregnancy, during delivery or in the post-partum. Thus a fundamental strategy of antenatal care should be geared toward preparing the pregnant woman for a safe birth. The antenatal visits offer an opportunity to partner with the woman, her family and her community in order to tackle timely obstetric complications that lead to death.

A strategy for doing this is the process of birth preparedness and emergency readiness. Each woman who presents for antenatal care should be supported to develop a birth plan, and women who don't present for ANC should develop a birth plan with the help of their

local community health worker. The development of a birth plan offers an opportunity for the provider to discuss the events surrounding birth and educate the woman and her family about decisions that should be made *prior* to the events of birth.

Note: Although this section focuses on what the provider, the woman, and her family can do to prepare for birth and possible complications, birth preparedness/complication readiness is actually a community-wide issue. In order for an individual birth plan to be effective in saving a woman's life, it must also have support—in the form of actions, resources, skills, and attitudes—from policy-makers, healthcare facilities, and individual community members.

On the first visit, the provider should introduce the concept of a birth plan. Ensure that the woman and her family understand that they should address each of the items well *before* the expected date of childbirth. Pictorial cards can be used to help with the process of developing a birth plan.
On return visits, the provider should review and update the birth plan.
By 32 weeks, finalize the birth plan. The woman and her family should have made all of the arrangements by now. If needed, provide additional assistance at this time to complete the plan.

Components of the Birth Plan

Skilled Provider	Assist the woman in making arrangements for a skilled provider to attend the birth; this person should be trained in supporting normal labor/childbirth and managing complications if they arise. Make sure the woman knows how to contact the skilled provider or healthcare facility at the appropriate time.
Place of Birth	Assist the woman in making arrangements for place of birth – whether at the district hospital or health center. Depending on her individual/health needs, you may need to recommend a specific level of healthcare facility as the place of birth, or simply support the woman in giving birth where she chooses.
Transportation/ Emergency Transportation	Make sure she knows the transportation systems and that she has made specific arrangements for: Transportation to the place of birth (if not the home), and Emergency transportation to an appropriate healthcare facility if danger signs arise.
Funds/ Emergency Funds	Ensure that she has personal savings or other funds that she can access when needed to pay for care during normal birth and emergency care. If relevant, discuss emergency funds that are available through the community and/or facility.

Decision-Making	Discuss how decisions are made in the woman's family (who usually makes decisions?), and decide: How decisions will be made when labor begins or if danger signs arise (who is the key decision-maker?); and Who else can make decisions if that person is not present?
Support	Assist the woman in deciding on/making arrangements for necessary support, including: Companion of her choice to stay with her during labor and childbirth, and accompany her during transport if needed; and Someone to care for her house and children during her absence
Blood Donor	Ensure that the woman has identified an appropriate blood donor and that this person will be available in case of emergency.
Items Needed for Clean and Safe Birth and the Newborn	Make sure the woman has gathered necessary items for a clean and safe birth. Discuss the importance of keeping items together for easy retrieval when needed. Items needed for the birth, for example: perineal pads/cloths, soap, clean bed cloths, placenta receptacle, clean razor blade, waterproof/plastic cover, cord ties Items needed for the newborn, for example: blankets, diapers, clothes, etc. Note: Items needed depend on the individual requirements of the intended place of birth, whether in a facility or in the home.
Danger Signs and Signs of Labor	Ensure that the woman knows the danger signs, which indicate a need to enact the emergency readiness plan: Vaginal bleeding Difficulty breathing High blood pressure Fever Prolonged labour (over 12 hours) Severe abdominal pain Severe headache/blurred vision Convulsions/loss of consciousness Also ensure that she knows the signs of labor, which indicate a need to contact the skilled provider and enact the birth preparedness plan: Regular, progressively painful contractions Lower back pain radiating from fundus Bloody show Rupture of membranes

CHAPTER 3 – GUIDELINES AND FLOWCHARTS

Frequency of attendance

All pregnant women should be strongly encouraged to have a minimum of four antenatal visits as follows:

- First visit – In the first trimester, preferably before 12 weeks of pregnancy.
- Second visit – Should be close to 26 weeks
- Third visit – In or around 32 weeks.
- Fourth visit – Between 36 and 38 weeks.

Pregnant women with complications should attend more frequently. The number of the visits required will depend on the nature of the problem.

The First visit

Ideally the first visit should occur in the first trimester, around or preferably before 12 weeks of pregnancy. Normally, this visit is expected to take 30-40 minutes.

However, regardless of the gestational age at first enrolment, all pregnant women coming to the clinic for ANC must be enrolled and examined according to the norms for the first visit.

Service providers (Physicians, midwives, and/or nurses) should perform the following tasks:

1- History taking

- *Personal and Social History:*

  Ask about:

  - Full name
  - Father's name
  - Husband's name
  - Age
  - Address
  - Age of Marriage
  - Habits: smoking/chewing tobacco and other addictions (frequency and quantity).

- *Medical History:*

  Ask about history of specific diseases and conditions, including: tuberculosis, cardiovascular diseases, hypertension, chronic renal disease, epilepsy, diabetes mellitus, RTIs/STIs/HIV-AIDS, malaria, hepatitis and other liver diseases, any allergies, other chronic diseases, surgeries, blood transfusion, current use of medicines (specify).

- *Obstetric History:*

  Ask about:

- Number and type of previous pregnancies (miscarriage, tubal pregnancy, pre-term delivery)
- Previous deliveries and any complication or procedure related to the previous deliveries (caesarian section and its indication, if known; forceps or vacuum extraction; manual/instrumental help in vaginal breech delivery; manual removal of the placenta)
- Date (month, year) and outcome of each event (live birth, still birth, abortion, ectopic, twins, hydatidiform mole, abnormal child, neonatal and infant death)
- Birth weight if known
- Sex of children
- Special maternal complications, events, and interventions in previous pregnancies (specify which pregnancies and specify symptoms and signs, such as hemorrhage, headache, fever, convulsion, and retention of placenta)
- History of present pregnancy: date of last menstrual period (LMP); certainty of dates (by regularity, accuracy of recall, and other relevant information)

2- Physical exam

Perform routine physical examination and particularly pay attention to the followings:

- Signs of severe anemia (pale complexion, fingernails, conjunctiva, oral mucosa, tip of tongue, and shortness of breath)
- Weight (kilograms) for setting a baseline for further monitoring of fetal growth
- Blood pressure for detecting hypertension
- Chest and heart auscultation for detecting underlying cardiovascular and respiratory diseases
- Abdominal exam for detecting abdominal masses
- Breast exam for inverted nipple
- External genitalia for checking vaginal discharge

3- Laboratory tests

Perform the following tests:

- Routine urine analysis: if protein, sugar, and/or bacteria positive, ask for further lab investigations
- VDRL
- Blood group typing (ABO and Rh), if feasible
- Hemoglobin (only if there are signs of severe anemia)

4- Assess for referral

Determine the expected date of delivery (EDD) based on LMP and other relevant information. Use the Naegele's rule to determine EDD, as commonly used in Afghanistan: (LMP + 7 days – 3 months + One Year). Note that some women will refer to the date of the first missed period when asked about LMP, which may lead to miscalculation of EDD by four weeks.

If the following conditions are diagnosed, refer for specialist consultation and continue according to his/her treatment protocol:

- Diabetes
- Heart disease
- Renal disease, including Bacteriuria
- Previous stillbirth
- Previous growth-restricted fetus
- Hospital admission for eclampsia or pre-eclampsia
- High blood pressure (more than 140/90 mm Hg)
- Epilepsy

If the following conditions are diagnosed, proceed as recommended:

- Primigravida: Give advice on complications and emergencies.
- Previous caesarean section: Stress hospital delivery.
- Signs of severe anemia and hemoglobin less than 70 g/l (<7g%): Increase iron dose or refer to District Hospital if shortness of breathe.
- Drug abuse: Refer to District Hospital.
- HIV positive: Refer to District Hospital.
- Family history of genetic disease: Refer to District Hospital.

5- Services

Implement the following interventions:

- Iron and Folate supplements: one tablet of Ferrous Sulfate + Folic Acid (60+400) one–two times per day. If Hb is less than 70 g/l (i.e. <7 g%), double the dose.
- Tetanus toxoid: first injection.
- In malaria endemic areas: Only give advice on prompt treatment seeking and use of insecticide treated nets.
- Treat pregnant malaria cases according to the national standards, i.e.:
  In first trimester, treat with Quinine oral 10mg/kg three times daily for 7 days
- If VDRL is positive: treat with Benzathine Benzyl Penicillin, single injection of 2.5 million units.
- In case of Rh incompatibility, arrange for RhoGAM injection during the third visit and 72 hours after delivery, if feasible.
- Refer high-risk cases, according to diagnosis made in “assess for referral” above.

6- Counseling

Generally, give advice to pregnant women on basic hygiene, nutrition, birth preparedness, and complication readiness. In particular:

- Initiate the birth plan with the woman.
- Give advice on whom to call or where to go in case of bleeding, abdominal pain, and any other emergency, or when in need of other advice. This should be confirmed in writing in the antenatal card.
- Give advice on safe sex. Emphasize the risk of acquiring or transmitting HIV or STIs without the use of condom.

- Advise women to stop the use of tobacco (both smoking and chewing), and other harmful substances.
- Advise the importance of immediate and exclusive breastfeeding of the expected child.
- Advise the woman to bring her partner (or a family member or friend) to later ANC visits so that they can be involved in the activities and can learn how to support the woman through her pregnancy
- Schedule appointment: second visit at (or close to) 26 weeks; state date and hour. Service provider should write these in the woman's antenatal card and in the clinic's appointment book.

7- Recording

Complete clinic record.
Complete antenatal card. Give a copy of ANC card to the client and advise her to bring it with her to all appointments she may have with any health services.

The second visit

The second visit should be scheduled close to week 26 and it is expected to take 20 minutes.

1- History taking

- *Personal and Social History:*
  Note any changes since first visit, particularly check-up on habits like smoking.

- *Medical History:*
  - Review relevant issues of medical history as recorded at first visit.
  - Check high-risk symptoms, such as blurred vision, fever, vaginal bleeding, abdominal pain, severe headache, weakness, vomiting, and shortness of breath.
  - Note inter-current diseases, injuries, or other conditions since first visit.
  - Note intake of medicines, other than iron and folate.
  - Check Iron intake compliance.
  - Note other medical consultations, hospitalization, or sick leave in present pregnancy.

- *Obstetric History:*

  - Review relevant issues of obstetric history as recorded at first visit.

- *Present Pregnancy:*

  - Record symptoms and events since first visit, for example pain, bleeding, vaginal discharge (amniotic fluid), and symptoms of severe anemia.

- Other specific symptoms or events.
- Ask about abnormal changes in body features or physical capacity (e.g. peripheral swelling, shortness of breath), as observed by the woman herself, by her partner, or other family members.
- Ask whether mother has felt fetal movements. Note the time of first recognition.

2- Physical exam

Perform routine physical examination and particularly pay attention to the followings:
- Blood pressure
- Weight
- Uterine height
- Fetal heart sound
- Generalized edema

3- Laboratory tests

Perform the following tests:
- Repeat Urine Analysis to detect bacteriuria. If still positive after being treated at the first visit, refer to the district hospital.
- Repeat urine test for proteinuria only if woman is nulliparous or if she has a history of hypertension, pre-eclampsia, or eclampsia in a previous pregnancy.
- Note that all women with hypertension in the present visit should have a urine test performed to detect for proteinuria.
- Blood test: repeat hemoglobin test only if at first visit (taken on medical indication) it was below 70 g/1 (<7g%) or signs of severe anemia are detected on examination.

4- Assess for referral

If the following conditions are diagnosed, refer to District Hospital and continue according to specialist's advice:
- Hemoglobin less than 70 g/l (<7g%)at first and present (second) visit
- Bleeding or spotting
- Evidence of pre-eclampsia, such as hypertension and/or proteinuria
- Suspicion of fetal growth restriction
- Uterus height is more than 3 centimeter different from gestational age

In case woman does not feel fetal movement, detect for fetal heart sound; if negative, refer to District Hospital.

5- Services

Implement the following interventions:
- Iron and Folate supplements: continue one tablet of Ferrous Sulfate + Folic Acid (60+400) one–two times per day.

- In malaria endemic areas: Only give advice on prompt treatment seeking and use of insecticide treated nets.
- Treat pregnant malaria cases according to the national standards, i.e.:
  In second and third trimester treat the same as uncomplicated cases:
  a. Confirmed Falciparum malaria: Sulphadoxine-Pyramethamine (SP) oral single dose 25 mg/kg (of sulpha component) plus Artesunate oral 4mg/kg both for 3 days
  b. Confirmed Vivax malaria: Chloroquine oral 25mg/kg over 3 days
  c. Clinically diagnosed malaria: SP oral single dose plus Chloroquine oral 3 days.
- Refer high-risk cases, according to diagnosis made in "assess for referral" above.

6 - Counseling

- Review birth plan. Discuss progress toward making preparations and difficulties in completing some of the elements of the birth plan.
- Repeat all the advice given at the first visit.
- Give advice on whom to call or where to go in case of bleeding, abdominal pain or any other emergency, or when in need of other advice. This should be confirmed in writing (e.g. on the antenatal card), as at first visit.
- Schedule appointment for third visit at (or close to) 32 weeks.

7- Recording

Complete clinic record.
Complete antenatal card. Give a copy of ANC card to the client and advise her to bring it with her to all appointments she may have with any health services.

The third visit

The third visit should take place in or around week 32 and is expected to take 20 minutes. If the second visit was missed, the third visit should also include all the activities of the second visit and the length should be extended as needed.

1- History Taking

- *Personal and Social History:*
  Note any changes or events since second visit, particularly check-up on habits like smoking.

- *Medical history:*
  - Review relevant issues of medical history as recorded at first and second visits.
  - Check high-risk symptoms, such as blurred vision, fever, and the like.
  - Note inter-current diseases, injuries, or other conditions since first visit.
  - Note intake of medicines, other than iron and folate.

- Check Iron intake compliance.
- Note other medical consultations, hospitalization, or sick leave in present pregnancy.

- *Obstetric history*
  - Review relevant issues of obstetric history as recorded at first and second visits.

- *Present Pregnancy*

  - Record symptoms and events since previous visit, for example pain, bleeding, vaginal discharge (amniotic fluid), and symptoms of severe anemia.
  - Record other specific symptoms or events.
  - Ask about abnormal changes in body features or physical capacity (e.g. peripheral swelling, shortness of breath), as observed by the woman herself, by her partner, or other family members.
  - Ask whether mother has felt fetal movements. Note the time of first recognition.
  - Review relevant issues of obstetric history as recorded at first visit and as checked at second.

2- Physical exam

Perform routine physical examination and particularly pay attention to the followings:
- Blood pressure
- Weight
- Uterine height
- Abdomen palpation for detection of multiple fetuses
- Generalized edema
- Fetal heart sound
- Breast exam, if not done earlier

3- Laboratory tests

Perform the following tests:
- Repeat urine test for proteinuria only if woman is nulliparous or if she has a history of hypertension, pre-eclampsia, or eclampsia in a previous pregnancy.
- Note that all women with hypertension in the present visit should have a urine test performed to detect for proteinuria.
- Blood test for hemoglobin, if still signs of anemia are detected on examination.

4- Assess for referral

Reassess risk based on evidence since the second visit and observations made at present visit.

If the following conditions are diagnosed, refer to District Hospital and continue according to specialist’s advice:

- Hemoglobin less than 70 g/l (<7g%) at first, second, and present visit
- Bleeding or spotting
- Evidence of pre-eclampsia, such as hypertension and/or proteinuria
- Suspicion of fetal growth retardation
- Suspicion of multi-fetal pregnancy
- Uterus height is more than 3 centimeter different from gestational age

5- Services

Implement the following interventions:

- Iron and Folate supplements: continue one tablet of Ferrous Sulfate + Folic Acid (60+400) one–two times per day.
- Tetanus toxoid: second injection.
- In malaria endemic areas: Only give advice on prompt treatment seeking and use of insecticide treated nets.
- In case of Rh incompatibility, arrange RhoGAM injection, if feasible.
- Treat pregnant malaria cases according to the national standards, i.e.:

  In second and third trimester treat the same as uncomplicated cases:

  a. Confirmed Falciparum malaria: Sulphadoxine-Pyramethamine (SP) oral single dose 25 mg/kg (of sulpha component) plus Artesunate oral 4mg/kg both for 3 days
  b. Confirmed Vivax malaria: Chloroquine oral 25mg/kg over 3 days
  c. Clinically diagnosed malaria: SP oral single dose plus Chloroquine oral 3 days.

6- Counseling

- Review birth plan. Discuss progress toward making preparations and difficulties in completing some of the elements of the birth plan.
- Repeat all the advice given at the first and second visits.
- Give advice on measures to be taken in case of (threatened) delivery.
- Reconfirm written information on whom to call or where to go in case of bleeding, abdominal pain or any other emergency, or when in need of other advice.
- Give advice on plans to ensure transport is available in case of need during delivery.
- Provide recommendations on lactation, contraception and the importance of the postpartum visit.
- Schedule appointment for fourth visit at (or close to) 38 weeks.

7 – Recording

Complete clinic record.
Complete antenatal card. Give a copy of ANC card to the client and advise her to bring it with her to all appointments she may have with any health services.

The fourth visit

The fourth visit should be the final visit of the basic component and should take place between weeks 36 and 38 and is expected to take 20 minutes.

1- History Taking

- *Personal and Social History:*

  Note any changes or events since second visit, particularly check-up on habits like smoking.

- *Medical history:*
  - Review relevant issues of medical history as recorded at first and second visits.
  - Check high-risk symptoms, such as blurred vision, fever, and the like.
  - Note inter-current diseases, injuries, or other conditions since first visit.
  - Note intake of medicines, other than iron and folate.
  - Check Iron intake compliance.
  - Note other medical consultations, hospitalization, or sick leave in present pregnancy.

- *Obstetric history*
  - Review relevant issues of obstetric history as recorded at first and second visits.
  - Do final review of obstetric history relevant to any previous delivery complications.

- *Present Pregnancy*
  - Record symptoms and events since previous visit, for example contractions (preterm labour), pain, bleeding, and vaginal discharge (amniotic fluid)
  - Record other specific symptoms or events.
  - Ask about abnormal changes in body features or physical capacity (e.g. peripheral swelling, shortness of breath), as observed by the woman herself, by her partner, or other family members.
  - Ask whether mother has felt fetal movements. Note the time of first recognition.

2- Physical exam

Perform routine physical examination and particularly pay attention to the followings:
- Blood pressure.
- Uterine height
- Abdomen palpation for detection of multiple fetuses
- Fetal lie, presentation (head, breech, transverse)
- Generalized edema
- Fetal heart sound

3- Laboratory test

Perform the following tests:

- Repeat urine test for proteinuria only if woman is nulliparous or if she has a history of hypertension, pre-eclampsia, or eclampsia in a previous pregnancy.

4- Assess for referral

Reassess risk based on evidence since the second visit and observations made at present visit.

If the following conditions are diagnosed, refer to District Hospital and continue according to specialist's advice:

- Hemoglobin less than 70 g/l (<7g%)at first, second, and present visit
- Bleeding or spotting
- Evidence of pre-eclampsia, such as hypertension and/or proteinuria
- Suspicion of fetal growth retardation
- Suspicion of multi-fetal pregnancy
- Uterus height is more than 3 centimeter different from gestational age
- Suspicion of breech presentation

5- Services

Implement the following interventions:

- Iron and Folate supplements: continue one tablet of Ferrous Sulfate + Folic Acid (60+400) one–two times per day.
- In malaria endemic areas: Only give advice on prompt treatment seeking and use of insecticide treated nets.
- Treat pregnant malaria cases according to the national standards, i.e.:

  In second and third trimester treat the same as uncomplicated cases:

  d. Confirmed Falciparum malaria: Sulphadoxine-Pyramethamine (SP) oral single dose 25 mg/kg (of sulpha component) plus Artesunate oral 4mg/kg both for 3 days
  e. Confirmed Vivax malaria: Chloroquine oral 25mg/kg over 3 days
  f. Clinically diagnosed malaria: SP oral single dose plus Chloroquine oral 3 days.

6- Counseling

- Review and finalize birth plan. Discuss progress toward making preparations and difficulties in completing some of the elements of the birth plan.
- Repeat all the advice given at previous visits.
- Give advice on measures to be taken in case of the initiation of labour or leakage of amniotic fluid.
- Reconfirm written information on whom to call or where to go (place of delivery) in case of labour or any other need.

- Give advice on plans to ensure transport is available in case of need during delivery.
- Give advice on breast-feeding.
- Provide recommendations on lactation, contraception and the importance of the postpartum visit.
- Advice her that if not delivered by end of week 41 (state date and write it in the ANC card), she should go to hospital for check-up.
- Schedule appointment for postpartum visit. Provide recommendations on lactation and contraception.

7- Recording

Complete clinic record.
Complete antenatal card. Give a copy of ANC card to the client and advise her to bring it with her to all appointments she may have with any health services.

Late enrolment and missed visits

It is very likely that a good number of women will not initiate ANC early enough in pregnancy. These women, particularly those starting after 32 weeks of gestation, should have in their first visit all activities recommended for the previous visit(s), as well as those which correspond to the present visit. It is expected, therefore, that a late first visit will take more time than a regular first visit. Attendance on the part of the patient is a critical element of the antenatal care package; as well, providers and facilities must make it easy, pleasant and useful for a woman to attend ANC visits. A formal system should be organized by facilities to determine the reason or reasons for missed appointments. The patient should be traced and another visit arranged, when appropriate. A visit after a missed appointment should include all the activities of the missed visit(s), as well as those that correspond to the present visit.

Flowcharts

Final draft 29 June 2003

First half of pregnancy

(CONCEPTION TO 20 WEEKS)

Check for danger signs & symptoms

Shock
Acute abdominal pain
Bleeding

convulsion
coma
unconsciousness

yes

Classification of signs & symptoms	*Probable diagnosis*	*intervention*
Low BP, High PR, Sweat, coldness of limb, rigid and tender abdomen, bleeding +++	Abortion, ectopic pregnancy,	**Manage the patient according to emergency protocol Refer the patient as necessary**
High BP, oedema ++, convulsion +, coma+, acetone odor on breathing, severe vomiting	essential hypertension, cerebral malaria, meningitis, diabetes mellitus, epilepsy	**Mange the patient according to emergency protocol refer the patient as necessary**

no

Check the number of visit

New case

yes

intervention

History taking, vital signs, physical examination, weight, height, fetal asessment, laboratory tests, TT immunization, Counselling and health education
filling the mother's file
classification of the signs and symptoms of mother in below boxes and continue the care based on the algorithm

no

General assessment

Ask and listen:

Bleeding, pain in abdomen, severe vomiting, severe headache, blurred vision, fetal movement, fatigue, shortness of breath, dysurea, polyurea, poludypsia, thirst, vaginal discharge, fever, chills and rigors, cough, chest pain

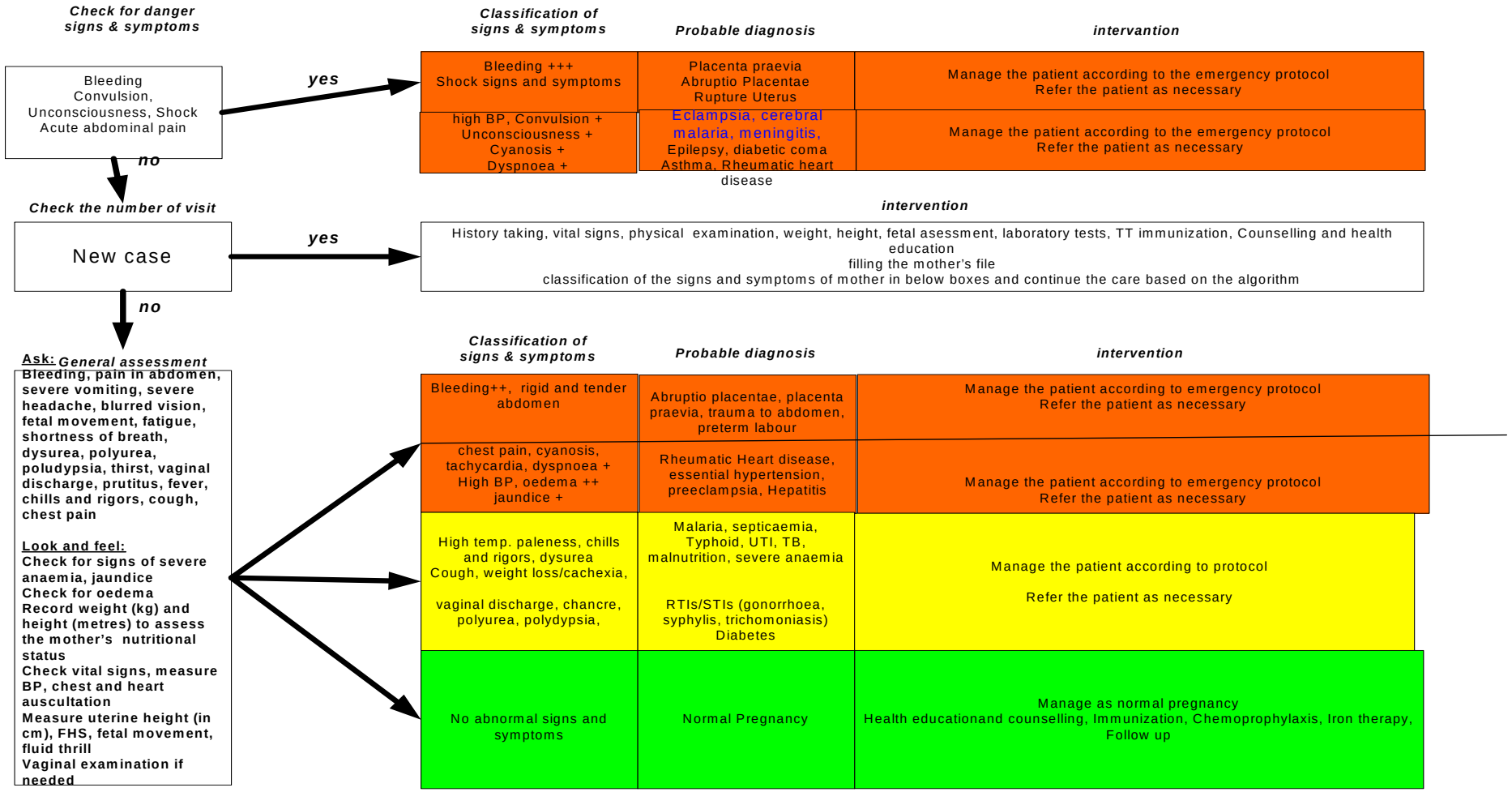
Look and feel:

Check for signs of severe anaemia
Check for oedema
Record weight (kg) and height (metres) to assess the mother's nutritional status
Check vital signs, measure BP, chest and heart auscultation
Measure uterine height (in cm)
Vaginal exam if needed

Classification of signs & symptoms	*Probable diagnosis*	*intervention*
Bleeding++, rigid and tender abdomen	Abortion, ectopic pregnancy	Manage the patient according to emergency protocol Refer the patient as necessary
chest pain, cyanosis, tachycardia, low BP, dyspnoea + High BP, oedema ++	Rheumatic heart disease, essential hypertension,	Manage the patient according to emergency protocol Refer the patient as necessary
High temp,, paleness, chills and rigors +, dysurea +	Malaria, UTI, Severe Anaemia	Manage the patient according to protocol
cough +, weight loss/ cachexia +, dyspnoea	TB, malnutrition,	Laboratory test, HE and counselling Manage the patient according to protocol
vaginal discharge +, chancre Polyurea +, Polydypsia +,	RTI/STI (Gonorrhea, trichomoniasis, syphilis) diabetes	Manage the patient according to protocol
Amenorrhoea + No abnormal signs and symptoms	Normal pregnancy	Manage as normal pregnancy Health education and counselling, Immunization, Chemoprophylaxis, Iron therapy, Follow up

Second half of pregnancy

(21 WEEKS TO DELIVERY)



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ANNEXES

Annex 1 – Essential Drug List for Antenatal Care[*]

Analgesics (1, 2, 3, & 4)
Acetylsalicylic acid (tablet)
Paracetamol (tablet)

Antianaemia drugs (1, 2, 3, & 4)
Ferrous salt + folic acid (tablet)

Antibacterials/anti-infectives (3 & 4)
Procaine benzylpenicillin (injection)
Clotrimazole (pessary)
Metronidazole (tablet)
Sulfamethoxazole + trimethoprim (tablet)

Anticonvulsant (3 & 4)
Magnesium Sulfate
Diazepam

Antimalarials (3 & 4)
Chloroquine (tablet)
Quinine (tablet)
Sulfadoxine + pyrimethamine (tablet)

Antihypertensive and other related drugs (3 & 4)
Hydralazine (injection)
Methyldopa (tablet)
Propranolol (tablet)

Vaccines (1, 2, 3, & 4)
Tetanus vaccine (injection)

Intravenous Fluid (1, 2, 3, & 4)
Glucose with sodium chloride
Compound solution of sodium lactate (injectable solution)

Antiseptics (1, 2, 3, & 4)
Chlorhexidine (solution)
Polyvidone iodine (solution)

Human anti-D immune globulin (RhoGAM) (3 & 4)

[*] 1 = needed at HP 2 = needed at BHC 3 = needed at CHC 4 = needed at DH

Annex 2 – Equipment List for Antenatal Care*

At the Center
Sphygmomanometer (aneroid) (1, 2, 3, & 4)
Stethoscope (binaural) (1, 2, 3, & 4)
Fetal stethoscope (1, 2, 3, & 4)
Clinical oral thermometer (dual Celsius/Fahrenheit scale) (1, 2, 3, & 4)
Syringes, needles, and cannulas (1, 2, 3, & 4)
Weighting scale (1, 2, 3, & 4)
Surgical gloves (1, 2, 3, & 4)

At the Laboratory (3 & 4)
- *Preparation and staining of thin blood films*
Microscope (binocular)
Immersion oil
Clean glass slides and cover slides
Glass rods
Sink or staining tank
Measuring cylinder (50 ml)
Wash bottle containing buffered water
Interval timer clock
Rack for drying slides
Leishman stain, methanol

- *Total and differential leucocyte count*
Counting chamber (Neubauer)
Pipette (0.05 ml)
Pipette (graduated, 1.0 ml)
Türk diluting solution
Tally counter, differential if possible
Estimation of hemoglobin
Haemoglobinometer
- *Detection of glucose in urine*
Indicator papers and tablets or, if not available,
Benedict solution
Pipette
Pyrex test tubes
Test-tube holder
Beaker 50 ml & 150 ml
Spirit lamp
- *Detection of protein in urine*
Indicator papers and tablets or, if not available,
Test-tubes
Pipette (5 ml)
Sulfosalicyclic acid (300 g/l aqueous solution)

* 1 = needed at HP 2 = needed at BHC 3 = needed at CHC 4 = needed at DH

Annex 3 – Role of each facility as defined by BPHS in provision of certain ANC tasks and dealing with specific conditions during the pregnancy

Tasks/Conditions	HP	BHC	CHC	DH
ANC Tasks				
Personal and Social History	Yes	Yes	Yes	Yes
Medical History	Yes	Yes	Yes	Yes
Obstetric History	Yes	Yes	Yes	Yes
Physical exam	Partial	Yes	Yes	Yes
Laboratory tests	No	No	Yes	Yes
Counseling	Yes	Yes	Yes	Yes
Birth Planning	Yes	Yes	Yes	Yes
Completing clinic record	Yes	Yes	Yes	Yes
Completing ANC card (two copies)	Yes	Yes	Yes	Yes
Specific Conditions				
Family history of genetic diseases	Refer	Refer	Refer	Yes
Diabetes	Refer	Refer	Consult-Manage	Yes
History of heart disease	Refer	Refer	Consult-Manage	Yes
History of asthma, TB, thyroid diseases, MS, lupus, and any other significant diseases	Refer	Refer	Consult-Manage	Yes
History of renal disease, including bacteriuria	Refer	Refer	Consult-Manage	Yes
History of infertility	Refer	Refer	Consult-Manage	Yes
History of previous stillbirth, abnormal fetus, and low-birth weight	Refer	Refer	Consult-Manage	Yes
History of multi-fetal pregnancy	Refer	Refer	Consult-Manage	Yes
History of Rh incompatibility	Refer	Refer	Consult-Manage	Yes
History of previous growth-restricted fetus	Refer	Refer	Consult-Manage	Yes
History of previous caesarian section or any delivery complications	Refer	Refer	Consult-Manage	Yes
History of previous hospital admission for eclampsia or pre-eclampsia	Refer	Refer	Consult-Manage	Yes

Age less than 18 or more than 35	Consult-Manage	Consult-Manage	Yes	Yes
New pregnancy less than 3 years from the previous one	Consult-Manage	Consult-Manage	Yes	Yes
Primigravida	Consult-Manage	Consult-Manage	Yes	Yes
Blood pressure higher than 140/90 mmHg	Refer	Refer	Consult-Manage	Yes
Uterus height more than 3 centimeter different from gestational age	Refer	Refer	Consult-Manage	Yes
Unconsciousness	Emergency referral	Emergency referral	Emergency referral	Yes
Convulsion	Emergency referral	Emergency referral	Emergency referral	Yes
Spotting	Refer	Refer	Consult-Manage	Yes
Vaginal bleeding	Emergency referral (1)	Emergency referral (1)	Emergency referral (1)	Yes
Signs of severe anemia and hemoglobin less than 70 g/l (<7g%)	Refer	Refer	Consult-Manage	Yes
Signs of mild to moderate anemia and hemoglobin 70-110 g/l (7-11 g%)	Refer	Consult-Manage	Yes	Yes
Signs of drug abuse	Refer	Refer	Refer	Yes
HIV positive patient	Refer	Refer	Refer	Yes
Abdominal pain/contractions	Refer	Refer	Consult-Manage	Yes
Fever	Refer	Consult-Manage	Consult-Manage	Yes
Rupture of amniotic membrane before week 38 or after week 38 without other signs and symptoms indicating start of delivery	Emergency referral	Emergency referral	Emergency referral	Yes
Rupture of amniotic membrane after week 38 with other signs and symptoms indicating start of delivery	Yes	Yes	Yes	Yes
Shortness of breath without any other signs and symptoms	Yes	Yes	Yes	Yes
Shortness of breath with any other signs and symptoms	Refer	Refer	Consult-Manage	Yes
Bacteriuria	Refer	Refer	Consult-Manage	Yes
Abnormal fetal heart sound/ fetal movement	Refer	Refer	Refer	Yes
Suspicion of fetal growth restriction	Refer	Refer	Consult-Manage	Yes
Suspicion of multi-fetal pregnancy	Refer	Refer	Consult-Manage	Yes
Morning vomiting with or without diarrhea, without any other signs and symptoms	Yes	Yes	Yes	Yes

Morning vomiting with any other sign and symptom	Refer	Refer	Consult-Manage	Yes
Evidence of pre-eclampsia	Refer	Refer	Consult-Manage	Yes
Lower extremities edema without any other sign and symptoms	Yes	Yes	Yes	Yes
Lower extremities edema with any other sign and symptoms	Refer	Refer	Consult-Manage	Yes
Inappropriate weight gaining with other signs and symptoms of pre-eclampsia	Refer	Refer	Consult-Manage	Yes
Inappropriate weight gaining without other signs and symptoms of pre-eclampsia	Yes	Yes	Yes	Yes
Suspicion of breech presentation	Refer	Refer	Consult-Manage	Yes
Delayed delivery	Refer	Refer	Consult-Manage	Yes
Provision of Iron and Folate supplements	Yes	Yes	Yes	Yes
Injection of Tetanus toxoid	Yes	Yes	Yes	Yes
Advising on prompt treatment seeking and use of insecticide treated nets in malaria endemic areas	Yes	Yes	Yes	Yes
Treatment of malaria cases	No	No	Yes	Yes
Treatment of VDRL positive cases	No	No	Yes	Yes
Injection of RhoGAM	No	No	Yes	Yes
Counseling	Yes	Yes	Yes	Yes
Completing clinic record	Yes	Yes	Yes	Yes
Completing ANC card (two copies)	Yes	Yes	Yes	Yes

(1) Except those cases that are around EDD, have uterine contractions and stable vital signs, and vaginal bleeding is not significant. These indicate bloody show and start of delivery.