Support Tool for Improving Quality of Antenatal Care

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Introduction and Background

This document outlines evidence-based, high-impact ANC interventions and quality of care measures (e.g., input, process, and outcome indicators) for use by policymakers and program managers working to improve quality of antenatal care for pregnant women in low-resource settings. Interested stakeholders may include policymakers, regional/district public health managers, health care workers, facility managers, members of maternal and newborn health technical working groups, implementing partners, and others.

World Health Organization 2016 ANC Recommendations

In 2016 the World Health Organization (WHO) published WHO Recommendations on Antenatal Care for a Positive Pregnancy Experience. These updated recommendations promote respectful, individualized, woman-centered care at every contact between ANC client and provider. They aim to ensure that each ANC contact delivers effective evidence-based interventions, provides women with relevant and timely information, and offers psychosocial and emotional support by health care workers with good clinical and interpersonal skills working in a well-functioning health system. The recommendations include universal and context-specific interventions within five categories: 1) routine antenatal nutrition; 2) maternal and fetal assessment; 3) preventive measures; 4) interventions for the management of common physiologic symptoms in pregnancy; and 5) health system interventions to improve the utilization and quality of ANC. Some WHO 2016 ANC context-specific recommendations may not be relevant for individual countries, depending on the country context and epidemiology (e.g., intermittent preventive treatment during pregnancy [IPTp]). One of the health system–level recommendations is to increase the total number of ANC contacts during a woman's pregnancy from a minimum of four to a minimum of eight.

The Maternal Child Survival Program ANC Resources

The Maternal and Child Survival Program (MCSP) supports ANC programming in multiple countries and assists Ministries of Health with updating national policy, strategies, and clinical guidelines in light of new global recommendations. In collaboration with WHO and other partners, MCSP has produced a number of new ANC resources, which are housed on its website. These include a series of briefs that highlight nutrition in pregnancy, malaria in pregnancy, ANC family planning counseling, and other important aspects of health care in pregnancy. Two joint WHO/MCSP briefs summarize the WHO 2016 ANC recommendations and the ultrasound-specific recommendations, and outline related implementation considerations.

Rationale for this Document

MCSP developed this tool in response to a request from country counterparts for a succinct but comprehensive summary of high-impact ANC interventions and related quality of care measures that country program managers can adapt and use to design, implement, and monitor program interventions to improve quality of antenatal care.

The WHO 2016 ANC recommendations address selected elements of routine ANC; however, they do not address **all** elements of routine ANC and they do not address the diagnosis and management of complications in pregnancy. The WHO manual on Managing Complications in Pregnancy and Childbirth manual (2nd edition, 2017 supported by MCSP) complements the 2016 WHO ANC recommendations with guidelines for the early detection, diagnosis and management of complications in pregnant women Given the growing burden of noncommunicable diseases and indirect causes of maternal mortality, ANC provides an important entry point for prevention, screening, early detection, and management of chronic and gestational conditions such as diabetes and hypertension and their associated modifiable risk factors (e.g., obesity).

In the era of the United Nations Millennium Development Goals, ANC indicators primarily measured utilization of ANC or ANC "contacts" (e.g., proportion of women with four ANC visits) rather than the content (quality) of ANC. Maternal and newborn health program implementers need guidance on meaningful ANC quality of care (content) measures, including women's experience of antenatal care, that they can adapt to monitor and guide effective woman-centered programming in their country context.

The WHO is developing a monitoring framework for ANC based on its 2016 WHO Recommendations for a positive pregnancy experience. The draft WHO ANC monitoring framework includes a small number of contact (utilization), content (quality) and experience of care ANC measures calculated via population-based household surveys and/or routine health management information systems. Mirroring the 2016 WHO ANC recommendations, the WHO ANC indicators are classified as core or "context-specific." Once finalized, all relevant measures from the draft WHO ANC monitoring framework will be incorporated into this document.

Organization of the Tool: Interventions and Indicators

This tool focuses on:

- **High-impact, evidence-based ANC interventions** for routine antenatal care and for early detection and management of complications in pregnant women, important for programs seeking to improve quality of ANC; and
- A flexible **menu of ANC quality of care measures** (input, process, and outcome) that managers and ANC providers can monitor as part of program interventions to improve quality of ANC

The tool consists of five tables listing high-impact ANC interventions and quality of care measures categorized by ANC contact and gestational age. Not all interventions listed in this document have a corresponding quality measure. Users are encouraged to develop additional measures as needed for their context and areas of focus.

The majority of indicators in this document are quality of care "process" measures (e.g. % of pregnant women with blood pressure check) since much of pregnancy care involves routine interventions. A smaller number of quality health "outcome" measures are included for women being treated for a complication (e.g. % of women being treated for chronic or gestational HTN with BP controlled < 140/90 mm Hg)

Table 1 presents a high-level overview of ANC interventions and indicators (from Tables 2–4), categorized by relevance for each pregnancy trimester.

Tables 2–4 provide more detail on high-impact ANC interventions and associated quality of care process and outcome measures, organized by ANC contact and stage of pregnancy:

- First ANC contact (ideally in first trimester) (Table 2)
- Follow-up ANC contacts in first and second trimesters (Table 3)
- All ANC contacts in the third trimester (Table 4)

Tables 2-4 group interventions into four "buckets" based on the typical flow of a high-quality ANC contact:

1. Assessment: history, review of symptoms, physical exam, laboratory screening, and/or diagnostics (if laboratory capacity is available)
2. Prevention and treatment clinical interventions
3. Counseling for behavioral and other woman-led interventions tailored to gestational age
4. Detection, stabilization, and referral for complications (if present)

Some WHO 2016 ANC recommendations may or may not be relevant for individual countries, depending on the country context and local burden of disease (e.g., intermittent preventive treatment during pregnancy [IPTp]).

Table 5 summarizes essential inputs (e.g., commodities, medicines, laboratory testing) for the provision of high-quality ANC, from which ANC input measures can be derived for monitoring by QI teams.

The intervention and measures tables are based on the following global references, primarily derived from WHO's Integrated Management of Pregnancy and Childbirth (IMPAC) series:

- WHO Recommendations on Antenatal Care for a Positive Pregnancy Experience (WHO 2016)
- Managing Complications in Pregnancy and Childbirth (MCPC), Second edition (WHO 2017)
- Pregnancy, Childbirth, Postpartum and Newborn Care: A Guide for Essential Practice (WHO 2015)
- Global Reference List of 100 Core Health Indicators (WHO 2018)
- The National Institute for Health and Care Excellence (NICE) guidelines

Table 1. Key Antenatal Care Interventions and Processes and Associated Quality of Care Measures, by Trimester of Pregnancy

Quality of care measures in blue font and marked with a diamond (◆) are considered most important and/or feasible to monitor as part of quality improvement programs in low-resource settings. Country users are encouraged to adapt and/or develop new measures as needed for their context.

Intervention Areas	Quality of Care Measures		Trimester		
	Process Measures	Outcome Measures	1st	2nd	3rd
Assessment: History, review of symptoms, physical exam, laboratory testing					
Estimate gestational age (GA)	Proportion of women with GA recorded at each contact Proportion of women initiating antenatal care (ANC) in first trimester ◆	X	X	X	X

Intervention Areas	Quality of Care Measures		Trimester		
	Process Measures	Outcome Measures	1st	2nd	3rd
Measure blood pressure (BP); diagnose, classify, and manage hypertension (HTN)	Proportion of women with BP recorded ◆ Proportion of women with elevated BP with appropriately classified Hypertensive disorder (chronic, gestational, pre-eclampsia) ◆ Proportion of women with elevated BP treated appropriately (counseling; appropriate antihypertensive treatment, if indicated) ◆ Proportion of women with elevated BP referred (if primary-level facility)	Proportion of women with chronic or gestational HTN with BP controlled (< 140/90 mm Hg) ◆	X	X	X
Assess uterine size	Proportion of women with uterine size documented			X	X
Assess for multiple pregnancy, fetal lie	Proportion of women in third trimester with fetal lie documented				X
Determine fetal heart rate (FHR)	Proportion of women with presence or absence of FHR documented		X		
	Proportion of women with FHR documented			X	X
Assess for anemia (prevention and treatment)	Proportion of women prescribed or given iron and folic acid (IFA) Proportion of women tested for anemia (hemoglobin or hematocrit) Proportion of women diagnosed with anemia who were appropriately treated	Proportion of women diagnosed with anemia in first trimester with normal hematocrit by third trimester	X		X
Test for infections: Syphilis	Proportion of women tested for syphilis Proportion of women with positive syphilis result who were appropriately treated	Proportion of women treated for syphilis with documented normalization of rapid plasma reagin (RPR) titer in the third trimester	X		X

Intervention Areas	Quality of Care Measures		Trimester		
	Process Measures	Outcome Measures	1st	2nd	3rd
Test for infections: HIV	Proportion of women who were tested for HIV during pregnancy or who already knew they were HIV-positive		X		
	In areas with a generalized HIV epidemic, proportion of women with HIV-negative results at first ANC visit who received HIV testing and counseling services				X
	Proportion of women with positive HIV test or known HIV diagnosis on documented antiretroviral treatment		X	X	X
Test for infections: Tuberculosis (TB)	Proportion of women tested for TB		X	X	X
	Proportion of women with positive TB result who were appropriately treated				
Test for infections: Other sexually transmitted infections (STIs)	Proportion of women diagnosed with STIs who were treated or managed appropriately (per country guidelines) (e.g., gonorrhea, chlamydia, herpes simplex virus)		X	X	X
Interventions by gestational age: Universal and context-specific					
Preventive interventions: Universal • Administer tetanus toxoid (TT) • Prescribe/provide IFA	Proportion of women who received TT (if indicated)		X		
	Proportion of women who received TT-2			X	X
	Proportion of women prescribed/provided IFA tablets		X	X	X
Preventive interventions: Context-specific Administer or provide: • Mebendazole (de-worming) • Intermittent preventive treatment	Proportion of women with pregnancy > 13 weeks' gestation who received first dose of IPTp		X		
	Proportion of women with IPTp-3 (or proportion of women with IPTp-2, IPTp-3, and IPTp-4, per country protocol)			X	X

Intervention Areas	Quality of Care Measures		Trimester		
	Process Measures	Outcome Measures	1st	2nd	3rd
of malaria during pregnancy (IPTp) • Long-lasting insecticide-treated net LLIN for malaria prevention • Calcium supplementation (pre-eclampsia prevention)	Proportion of women who reported sleeping under LLIN on the previous night			X	X
Counseling according to gestational age					
Review birth plan and complication preparedness	Proportion of women with documented birth plan (e.g., place of birth, transport, etc.)		X	X	X
Counsel according to gestational age: nutrition and food hygiene; danger signs; water and sanitation; activity and rest; managing common physiological symptoms; no use of alcohol, tobacco, or drugs; no use of medications unless prescribed at health center or hospital (includes labor signs in third trimester)	Proportion of women who received nutrition counseling		X	X	X
	Proportion of women counseled on danger signs and care seeking		X	X	X
Provide emotional and psychological support: family support	Proportion of women with depression symptoms who were screened for depression using validated screening tool (e.g., Patient Health Questionnaire, PHQ-9) Proportion of women diagnosed with depression who were linked to mental health care		X	X	X
Review postpartum danger signs, breastfeeding, mother and infant well-being	Proportion of women who received counseling on breastfeeding				X
	Proportion of women who received counseling on postnatal danger signs for [woman] [newborn]				X
Review routine contact schedule and follow-up, including number and sequence of contacts	Proportion of women counseled on ANC contact schedule/follow-up		X	X	X
Counsel on family planning and postpartum follow-up care	Proportion of women who received postpartum family planning counseling			X	X

Intervention Areas	Quality of Care Measures		Trimester		
	Process Measures	Outcome Measures	1st	2nd	3rd
	Proportion of counseled pregnant women with a postpartum FP method of choice documented			X	X
Counsel woman to return for ANC in the event that she does not give birth within two weeks of her due date	Proportion of women counseled to follow up if labor did not start by their due date				X
Detection, stabilization, and referral for complications during antenatal care					
Classify pregnancy (normal, high-risk, acute problem) and referral if indicated	Proportion of pregnant women assessed for acute or chronic conditions or risk factors, with assessment documented		X	X	X
	Proportion of women with signs of premature labor (< 37 weeks' gestation) referred to higher-level facility with capacity to care for preterm infants ◆			X	X
	Proportion of women with identified acute problem or high-risk pregnancy referred for specialty consultation (if indicated based on facility capacity to manage)		X	X	X

Tables 2–4. High-Impact Interventions and Quality of Care Indicators Categorized by Trimester of Pregnancy

Quality of care measures in blue font and marked with a diamond (◆) are considered most relevant and/or feasible to monitor as part of quality improvement efforts in low-resource settings. Country users are encouraged to adapt proposed measures and develop new measures as needed.

Table 2. First Antenatal Care Contact (Optimally in First Trimester): Priority Interventions and Potential Quality Measures

Priority Interventions	Quality of Care Measures
Assessment: History, review of symptoms, physical exam, laboratory testing	
Check for danger signs and address immediately if present Review medical history to identify risk factors or problems: obstetrical, medical/surgical, menstrual, psychosocial, family, sexual, pregnancy complaints Review any positive symptoms: abdominal/pelvic pain, vaginal bleeding or discharge, pain with urination, fever, other	

Priority Interventions	Quality of Care Measures
Perform physical exam: weight, blood pressure (BP), uterine sizing, conjunctival pallor, cardiopulmonary, other (targeted to symptoms)	• Proportion of women with BP recorded ◆ • Proportion of women with elevated BP with appropriately classified hypertensive disorder (chronic, gestational, pre-eclampsia) ◆ • Proportion of women with elevated BP treated appropriately (counseling, appropriate antihypertensive treatment if indicated) ◆ • Proportion of women with elevated BP referred to appropriate level of care
Estimate gestational age based on last menstrual period (and perform first trimester ultrasound if available)	• Proportion of women with gestational age recorded ◆ • Proportion of women initiating antenatal care (ANC) in first trimester
Order/perform laboratory testing, including anemia and infection screening: HIV provider-initiated testing and counseling ; syphilis; other sexually transmitted infections/vaginal infections; tuberculosis (TB); hemoglobin/hematocrit; detection of asymptomatic bacteriuria/urinary tract infection	• Proportion of women tested for anemia (hemoglobin or hematocrit) ◆ • Proportion of women with diagnosis of anemia who were appropriately treated • Proportion of women tested for syphilis • Proportion of women with positive syphilis test who were appropriately treated • Proportion of women tested for HIV during pregnancy or who already knew they were HIV-positive • Proportion of women with positive HIV test or known HIV diagnosis on documented antiretroviral treatment • Proportion of women diagnosed with sexually transmitted infection treated or managed appropriately (per country guidelines) (e.g., gonorrhea, chlamydia, herpes simplex virus)
Interventions based on gestational age: Universal and context-specific	
Preventive interventions: Universal • Administer tetanus toxoid TT • Prescribe/provide iron and folic acid (IFA)	• Proportion of women who received TT (if indicated) • Proportion of women prescribed or provided IFA tablets
Preventive interventions: Context-specific • Mebendazole (de-worming) (after first trimester) • Long-lasting insecticide-treated nets (malaria prevention) • Calcium supplementation (pre-eclampsia prevention) • Intermittent preventive treatment during pregnancy (IPTp) (malaria prophylaxis)	• Proportion of women who reported sleeping under an LLIN the previous night • Proportion of women with a pregnancy > 13 weeks' gestation who received first dose of IPTp
Interventions based on individual woman's history or assessment findings • Nutritional supplementation if woman is undernourished • Acetylsalicylic acid if woman has history of pre-eclampsia or other predisposing factors • Antihypertensive medications and lifestyle measures if woman has chronic or gestational hypertension • Diabetic management if woman has pre-established or gestational diabetes mellitus • Asthma management if woman has pre-established or new onset asthma • Other chronic conditions as indicated	

Priority Interventions	Quality of Care Measures
Counseling according to gestational age	
Counsel on nutrition and food hygiene; danger signs; water and sanitation; activity and rest; managing common physiologic symptoms; no use of alcohol, tobacco, or drugs; no use of medications unless prescribed at health center or hospital	• Proportion of women who received nutrition counseling • Proportion of women counseled on danger signs and care seeking
Provide emotional and psychological support: family support, mental health issues (if woman presents with complaints/signs); woman's concerns and desires for pregnancy and birth care; screening, support, and referral for intimate partner violence (for women presenting with complaints or signs **if** providers have been trained and referral services are available)	• Proportion of women with depression symptoms who were screened for depression using validated screening tool (e.g., Patient Health Questionnaire, PHQ-9) • Proportion of women diagnosed with depression who were linked to mental health care
Counsel on birth plan and complication preparedness	• Proportion of women with documented birth plan (e.g., place of birth, transport, etc.)
Review ANC routine contact schedule and follow-up, including number and sequence of contacts	• Proportion of women counseled on ANC contact schedule/follow-up
Detection, stabilization, and management or referral for complications	
Systematically assess for acute or chronic conditions or risk factors for problems (based on history, assessment, and exam)	• Proportion of pregnant women assessed for an acute or chronic condition or for risk factors, with assessment documented
If complication or risk factors identified, provide appropriate management or referral	• Proportion of women with identified acute problem or high-risk pregnancy who were referred for specialty consultation (if indicated based on facility capacity to manage)

Table 3. Antenatal Care Follow-Up Contacts in First and Second Trimesters: Priority Interventions and Quality Measures

(See Table 1 if client presents for first contact in second trimester.) Country users are encouraged to adapt proposed measures and develop new measures as needed.

Priority Interventions	Quality of Care Measures
Assessment: History, review of symptoms, physical exam	
Check for danger signs and respond immediately if present Review history of pregnancy to date, including information from prior contacts (e.g., medical problems)	
Review any recent complaints or difficulties experienced by the pregnant woman	
Update gestational age (GA) at every contact	• Proportion of women with GA recorded at each contact ◆
Verify fetal movement	
Review symptoms (including danger signs): headache, visual changes, shortness of breath, vaginal bleeding, pelvic or abdominal pain, signs of premature labor (e.g., regular contractions), and other symptoms requiring attention (e.g., coughing, vaginal discharge, burning with urination)	

Priority Interventions	Quality of Care Measures
Review first contact HIV, syphilis, anemia, and any other relevant testing	
Measure blood pressure (BP) (diagnosis, classification, and management of hypertension [HTN])	• Proportion of women with BP recorded at each contact ◆ • Proportion of women with elevated BP with appropriately classified HTN (chronic, gestational, pre-eclampsia) ◆ • Proportion of women with elevated BP who were treated appropriately (counseling, antihypertensive treatment if indicated)◆ • Proportion of women with chronic or gestational HTN for whom BP was controlled (< 140/90 mm Hg) ◆ • Proportion of women with elevated BP who were referred (if primary-level facility)
Record maternal weight	
Assess uterine size and compare to previous GA estimate; if discrepancy noted, follow up to determine if related to fetal growth or inaccurate estimate	• Proportion of women with uterine size documented at each contact ◆
Determine fetal heart rate (FHR) (beginning at about 20 weeks' gestation)	• Proportion of women with presence or absence of FHR documented
Perform conjunctival/pallor exam	
Perform additional targeted examinations if woman has specific complaints/pain	
Interventions by gestational age: Universal and context-specific	
Preventive interventions: Universal • Administer tetanus toxoid (TT), if not previously administered • Prescribe/provide iron and folic acid (IFA)	• Proportion of women with TT-2 • Proportion of women prescribed or provided IFA tablets
Preventive interventions: Context-specific • Mebendazole (de-worming) • Intermittent preventive treatment of malaria during pregnancy (IPTp) (malaria prophylaxis) • Long-lasting insecticide-treated net (malaria prevention) • Calcium supplement (pre-eclampsia prevention)	• Proportion of women who received IPTp-2, IPTp-3, IPTp-4 (per country protocol) • Proportion of women who reported sleeping under a long-lasting insecticide-treated net on the previous night
Interventions based on the individual woman's history and assessment • Nutritional protein-energy supplementation if the woman is undernourished • Acetylsalicylic acid if the woman has history of pre-eclampsia • Antihypertensive medication and management if the woman has chronic or gestational HTN • Diabetic management if the woman has pre-established or diagnosed gestational diabetes mellitus • Asthma management if the woman has pre-established or new-onset asthma • Other chronic conditions as indicated	

Priority Interventions	Quality of Care Measures
Counseling according to gestational age Counsel on nutrition and food hygiene; danger signs; water and sanitation; activity and rest; managing common physiologic symptoms; no use of alcohol, tobacco, and drugs; no use of medications unless prescribed at health center or hospital	• Proportion of women who received nutrition counseling • Proportion of women counseled on danger signs and care seeking
Provide emotional and psychological screening and support: family support, intimate partner violence, mental health	• Proportion of women with depression symptoms who were screened for depression using validated screening tool (e.g., Patient Health Questionnaire, PHQ-9) • Proportion of women diagnosed with depression who were linked to mental health care
Review birth plan and complication preparedness	• Proportion of women with documented birth plan (e.g., place of birth, transport, etc.)
Counsel on postpartum family planning (PPFP) (Note: WHO recommends initiating PPFP counseling and method selection in the third trimester; however, country norms vary.)	• Proportion of women with PPFP counseling and method of choice documented
Review routine ANC contacts and follow-up, including community-based contacts	
Detection, stabilization, and referral for complication or increased risk during antenatal care	
Systematically assess for acute or chronic conditions or risk factors for problems (based on history, assessment, and exam)	• Proportion of women assessed for an acute or chronic condition or for risk factors, with assessment documented
Provide appropriate management or referral for women with identified complications or significant risk factors	• Proportion of women with an identified acute problem or high-risk pregnancy who were referred for specialty consultation (if indicated based on facility capacity to manage) • Proportion of women with signs of premature labor (< 37 weeks' gestation) referred to a facility with capacity to care for preterm infants ◆

Table 4. Antenatal Care Contacts in the Third Trimester (28–40 weeks): Priority Interventions and Quality Measures

Note that antenatal care contacts should occur every 2 weeks in the third trimester. Country users are encouraged to adapt proposed measures and develop new measures as needed.

Priority Interventions	Quality of Care Measures
Assessment: History, review of symptoms, physical exam, laboratory testing	
Check for danger signs and respond immediately if present Review history of pregnancy to date, including information from prior contacts	
Review any recent complaints or difficulties being experienced by the woman	
Update gestational age (GA)	• Proportion of women with GA recorded at each contact ◆

Priority Interventions	Quality of Care Measures
Verify fetal movement	
Review health status and symptoms: shortness of breath, headache, visual changes, coughing, vaginal bleeding, vaginal discharge, loss of fluid, pain with urination, signs of premature labor (contractions) if < 37 weeks At term, review signs of labor	
Order/perform laboratory testing, including anemia and infection screening (if indicated)	• Proportion of women diagnosed with anemia in first trimester with normal hematocrit by third trimester • Proportion of women treated for syphilis who have documented normalization of RPR titer after treatment in third trimester • Proportion of women with HIV-negative results at first ANC who received provider-initiated HIV testing and counseling services (in areas with a generalized HIV epidemic)
Measure blood pressure (BP) (diagnosis, classification, and management of hypertension [HTN])	• Proportion of women with BP recorded at each contact ◆ • Proportion of women with elevated BP who have appropriately classified HTN (chronic, gestational, pre-eclampsia) ◆ • Proportion of women with elevated BP treated appropriately (counseling, antihypertensive treatment if indicated) ◆ • Proportion of women with elevated BP referred (if primary-level facility) • Proportion of women with chronic or gestational HTN for whom BP was controlled (< 140/90 mm Hg) ◆
Record maternal weight	
Assess uterine size	• Proportion of women with uterine size documented ◆
Assess for multiple pregnancy, fetal lie	• Proportion of women in third trimester with fetal lie documented ◆
Determine fetal heart rate	• Proportion of women with fetal heart rate documented ◆
Perform conjunctival/pallor exam	
Interventions by gestational age: Universal and context-specific	
Preventive interventions: Universal • Administer tetanus toxoid, if not previously administered • Prescribe/provide iron and folic acid	• Proportion of women with TT-2 • Proportion of women prescribed or provided iron and folic acid tablets
Preventive interventions: Context-specific • Mebendazole (de-worming) • Intermittent preventive treatment during pregnancy (IPTp) • Long-lasting insecticide-treated net (LLIN) for malaria prevention • Calcium supplement (pre-eclampsia prevention)	• Proportion of women with a third dose of IPTp during pregnancy • Proportion of women who report sleeping under a LLIN on the previous night

Priority Interventions	Quality of Care Measures
Interventions based on individual woman's history or assessment findings • Nutritional protein-energy supplementation if the woman is undernourished • Acetylsalicylic acid if the woman has a history of pre-eclampsia • Antihypertensive medications and management if the woman has chronic HTN • Diabetic management if the woman has pre-established diabetes mellitus • Asthma management if the woman has pre-established asthma • Other chronic conditions as indicated	
Counseling according to gestational age	
Counsel on labor signs; nutrition and food hygiene; danger signs; water and sanitation; activity and rest; managing common physiologic symptoms; no use of alcohol, tobacco and drugs; no use of medications unless prescribed at health center or hospital	• Proportion of women who received nutrition counseling • Proportion of women counseled on danger signs and care seeking
Review postpartum danger signs, breastfeeding, mother and infant well-being	• Proportion of women who received breastfeeding counseling
Provide emotional and psychological screening and support: family support, intimate partner violence, mental health	• Proportion of women with depression symptoms who were screened for depression using validated screening tool (e.g., Patient Health Questionnaire, PHQ-9) • Proportion of women diagnosed with depression who were linked to mental health care
Review birth plan and complication preparedness	• Proportion of women with documented birth plan (e.g., place of birth, transport, etc.)
Counsel on family planning and postpartum follow-up care	• Proportion of women who received PPFP counseling, and method of choice documented
Review ANC contact schedule in the third trimester (every 2 weeks)	• Proportion of women counseled on ANC contact schedule/follow-up
Review estimated delivery date and follow-up plan to implement if woman does not give birth within 2 weeks of her due date	• Proportion of women counseled to seek care if labor does not start within two weeks of their due date
Detection, stabilization, management, or referral for complication or increased risk	
Systematically assess for acute or chronic conditions or risk factors for problems (based on history, assessment, and exam)	• Proportion of pregnant women assessed for acute or chronic conditions or risk factors, with assessment documented
Provide appropriate management or referral for women with identified complications or significant risk factors	• Proportion of women with identified acute problem or high-risk pregnancy who were referred for specialty consultation (if indicated based on facility capacity to manage) • Proportion of women with signs of premature labor (< 37 weeks' gestation) who were referred to a facility with capacity to care for preterm infants ◆

Table 5. Essential Antenatal Care Commodities and Medicines

The table below lists inputs that are essential for provision of high-quality ANC. Stakeholders are encouraged to regularly measure availability of these essential inputs. See http://siapsprogram.org/publication/rmnch-quantification/ for additional resources related to essential commodities.

Antenatal Care Input Category
Commodities • Scale • Sphygmomanometer • Stethoscope • Middle upper arm circumference (MUAC) measure • Pregnancy wheel (to calculate gestational age)
Medicines and Supplements • Iron and folic acid • Sulfadoxine-pyrimethamine (for intermittent preventive treatment of malaria during pregnancy) • Amoxicillin, penicillin • Mebendazole (de-worming) • Tetanus vaccine • Aspirin • Magnesium sulfate • Antihypertensive safe in pregnancy (per country protocol; nifedipine)
Laboratory Testing • Malaria • Urine protein dipsticks • Hemoglobin • Rapid plasma reagin (RPR) (for syphilis) • HIV • Glucometer • Urine microbiology (urine culture, gram stain)
Information, Education, and Counseling Materials • Healthy nutrition in pregnancy • Birth preparedness • Postpartum family planning • Breastfeeding • Anemia prevention and treatment • Pregnancy danger signs and where to seek care • HIV prevention, testing, and treatment during pregnancy • Schedule of contacts for antenatal care • Depression (in pregnancy and postpartum) • Avoidance of harmful medications/substances (tobacco, alcohol, non-prescribed medications, etc.)