The 2016 WHO ANC model for a positive pregnancy experience: Recommendations mapped to eight scheduled ANC contacts

Type of intervention	Recommendation	Type of recommendation	Eight scheduled ANC contacts (weeks of gestation)							
			1 (12 weeks)	**2** (20 weeks)	**3** (26 weeks)	**4** (30 weeks)	**5** (34 weeks)	**6** (36 weeks)	**7** (38 weeks)	**8** (40 weeks)
Heartburn	**D.2:** Advice on diet and lifestyle is recommended to prevent and relieve heartburn in pregnancy. Antacid preparations can be used to women with troublesome symptoms that are not relieved by lifestyle modification.	Recommended	X	X	X	X	X	X	X	X
Leg cramps	**D.3:** Magnesium, calcium or non-pharmacological treatment options can be used for the relief of leg cramps in pregnancy, based on a woman's preferences and available options.	Recommended	X	X	X	X	X	X	X	X
Low back and pelvic pain	**D.4:** Regular exercise throughout pregnancy is recommended to prevent low back and pelvic pain. There are a number of different treatment options that can be used, such as physiotherapy, support belts and acupuncture, based on a woman's preferences and available options.	Recommended	X	X	X	X	X	X	X	X
Constipation	**D.5:** Wheat bran or other fibre supplements can be used to relieve constipation in pregnancy if the condition fails to respond to dietary modification, based on a woman's preferences and available options.	Recommended	X	X	X	X	X	X	X	X
Varicose veins and oedema	**D.6:** Non-pharmacological options, such as compression stockings, leg elevation and water immersion, can be used for the management of varicose veins and oedema in pregnancy, based on a woman's preferences and available options.	Recommended	X	X	X	X	X	X	X	X
E: Health systems interventions to improve utilization and quality of antenatal care										
Woman-held case notes	**E.1:** It is recommended that each pregnant woman carries her own case notes during pregnancy to improve continuity, quality of care and her pregnancy experience.	Recommended	X	X	X	X	X	X	X	X
Task shifting components of antenatal care delivery	**E.5.1:** Task shifting the promotion of health-related behaviours for maternal and newborn health to a broad range of cadres, including lay health workers, auxiliary nurses, nurses, midwives and doctors is recommended.	Recommended	X	X	X	X	X	X	X	X
	E.5.2: Task shifting the distribution of recommended nutritional supplements and intermittent preventive treatment in pregnancy (IPTp) for malaria prevention to a broad range of cadres, including auxiliary nurses, nurses, midwives and doctors is recommended.	Recommended	X	X	X	X	X	X	X	X
Antenatal care contact schedules	**E.7:** Antenatal care models with a minimum of eight contacts are recommended to reduce perinatal mortality and improve women's experience of care.	Recommended	X	X	X	X	X	X	X	X
Midwife-led continuity of care	**E.2:** Midwife-led continuity of care models, in which a known midwife or small group of known midwives supports a woman throughout the antenatal, intrapartum and postnatal continuum, are recommended for pregnant women in settings with well functioning midwifery programmes.	Context-specific recommendation	X	X	X	X	X	X	X	X
Group antenatal care	**E.3:** Group antenatal care provided by qualified health-care professionals may be offered as an alternative to individual antenatal care for pregnant women in the context of rigorous research, depending on a woman's preferences and provided that the infrastructure and resources for delivery of group antenatal care are available.	Context-specific recommendation (research)								

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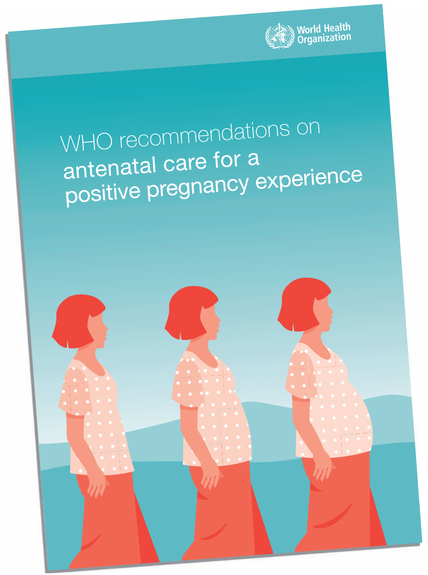
Community-based interventions to improve communication and support	**E.4.1:** The implementation of community mobilization through facilitated participatory learning and action (PLA) cycles with women's groups is recommended to improve maternal and newborn health, particularly in rural settings with low access to health services. Participatory women's groups represent an opportunity for women to discuss their needs during pregnancy, including barriers to reaching care, and to increase support to pregnant women.	Context-specific recommendation	X	X	X	X	X	X	X	X
	E.4.2: Packages of interventions that include household and community mobilization and antenatal home visits are recommended to improve antenatal care utilization and perinatal health outcomes, particularly in rural settings with low access to health services.	Context-specific recommendation	X	X	X	X	X	X	X	X
Recruitment and retention of staff in rural and remote areas	**E.6:** Policy-makers should consider educational, regulatory, financial, and personal and professional support interventions to recruit and retain qualified health workers in rural and remote areas.	Context-specific recommendation	X	X	X	X	X	X	X	X



2016 WHO Recommendations: Antenatal Care for a Positive Pregnancy Experience

World Health Organization
REGIONAL OFFICE FOR South-East Asia

Goal

The overarching aim of the 2016 WHO ANC model is to provide pregnant women with respectful, individualized, person-centered care at every contact, with implementation of effective clinical practices (interventions and tests), and provision of relevant and timely information, and psychosocial and emotional support, by practitioners with good clinical and interpersonal skills within a well-functioning health system.

Definition of ANC

Antenatal care (ANC) can be defined as the care provided by skilled health-care professionals to pregnant women and adolescent girls in order to ensure the best health conditions for both mother and baby during pregnancy. The components of ANC include: risk identification; prevention and management of pregnancy-related or concurrent diseases; and health education and health promotion.

WHO positive pregnancy experience

- Maintaining physical and sociocultural normality
- Maintaining a healthy pregnancy for mother and baby (including preventing and treating risks, illness and death)
- Having an effective transition to positive labour and birth, and achieving positive motherhood (including maternal self-esteem, competence and autonomy)

Priority areas of action

- **A** Nutritional interventions
- **B** Maternal and fetal assessment
- **C** Preventive measures
- **D** Interventions for common physiological symptoms
- **E** Health systems interventions to improve the utilization and quality of ANC

The difference in Focus ANC model and 2016 ANC model

Recent evidence suggests that the focus antenatal care (FANC) model is associated with more perinatal deaths than the 2016 ANC model.

Trimester	WHO focus ANC model		2016 WHO ANC guidelines	
	Visits		Contact	
	Visits: weeks	No. of visits	Contact: weeks	No. of contacts
1st trimester	Visit 1: 8–12 weeks	1	Contact 1: up to 12 weeks	1
2nd trimester	Visit 2: 24–26 weeks	1	Contact 2: 20 weeks	2
			Contact 3: 26 weeks	
3rd trimester	Visit 3: 32 weeks	1	Contact 4: 30 weeks	5
			Contact 5: 34 weeks	
	Visit 4: 36–38 weeks	1	Contact 6: 36 weeks	
			Contact 7: 38 weeks	
			Contact 8: 40 weeks	
			Return for delivery at 41 weeks if not given birth	
	Total visits	**4**	**Total contacts**	**8**
	More focused on the number of times a healthcare provider sees a pregnant woman		It implies an active connection between a pregnant woman and a health care provider	

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A. Nutritional interventions										
Dietary interventions	**A.1.1:** Counselling about healthy eating and keeping physically active during pregnancy is recommended for pregnant women to stay healthy and to prevent excessive weight gain during pregnancy.	Recommended	X	X	X	X	X	X	X	X
Iron and folic acid supplements	**A.2.1:** Daily oral iron and folic acid supplementation with 30 mg to 60 mg of elemental iron and 400 µg (0.4 mg) of folic acid is recommended for pregnant women to prevent maternal anaemia, puerperal sepsis, low birth weight, and preterm birth.	Recommended	X	X	X	X	X	X	X	X
Dietary interventions	**A.1.2:** In undernourished populations, nutrition education on increasing daily energy and protein intake is recommended for pregnant women to reduce the risk of low-birth-weight neonates.	Context-specific recommendation	X	X	X	X	X	X	X	X
Dietary interventions	**A.1.3:** In undernourished populations, balanced energy and protein dietary supplementation is recommended for pregnant women to reduce the risk of stillbirths and small-for-gestational-age neonates.	Context-specific recommendation	X	X	X	X	X	X	X	X
Iron and folic acid supplements	**A.2.2:** Intermittent oral iron and folic acid supplementation with 120 mg of elemental iron and 2800 µg (2.8 mg) of folic acid once weekly is recommended for pregnant women to improve maternal and neonatal outcomes if daily iron is not acceptable due to side-effects, and in populations with an anaemia prevalence among pregnant women of less than 20%.	Context-specific recommendation	X	X	X	X	X	X	X	X
Calcium supplements	**A.3:** In populations with low dietary calcium intake, daily calcium supplementation (1.5–2.0 g oral elemental calcium) is recommended for pregnant women to reduce the risk of pre-eclampsia.	Context-specific recommendation	X	X	X	X	X	X	X	X
Vitamin A supplements	**A.4:** Vitamin A supplementation is only recommended for pregnant women in areas where vitamin A deficiency is a severe public health problem, to prevent night blindness.	Context-specific recommendation	X	X	X	X	X	X	X	X
Zinc supplements	**A.5:** Zinc supplementation for pregnant women is only recommended in the context of rigorous research.	Context-specific recommendation (research)								
Restricting caffeine intake	**A.10.1:** For pregnant women with high daily caffeine intake (more than 300 mg per day), lowering daily caffeine intake during pregnancy is recommended to reduce the risk of pregnancy loss and low-birth-weight neonates.	Context-specific recommendation	X	X	X	X	X	X	X	X
Dietary interventions	**A.1.4:** In undernourished populations, high-protein supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes.	Not recommended								
Multiple micronutrient supplements	**A.6:** Multiple micronutrient supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes.	Not recommended								
Vitamin B6 (pyridoxine) supplements	**A.7:** Vitamin B6 (pyridoxine) supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes.	Not recommended								
Vitamin E and C supplements	**A.8:** Vitamin E and C supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes.	Not recommended								
Vitamin D supplements	**A.9:** Vitamin D supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes.	Not recommended								

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B. Maternal and fetal assessment										
Gestational diabetes mellitus (GDM)	**B.1.4:** Hyperglycaemia first detected at any time during pregnancy should be classified as either, gestational diabetes mellitus (GDM) or diabetes mellitus in pregnancy, according to WHO 2013 criteria.	Recommended	X	X	X	X	X	X	X	X
Tobacco use	**B.1.5:** Health-care providers should ask all pregnant women about their tobacco use (past and present) and exposure to second-hand smoke as early as possible in the pregnancy and at every antenatal care visit.	Recommended	X	X	X	X	X	X	X	X
Substance use	**B.1.6:** Health-care providers should ask all pregnant women about their use of alcohol and other substances (past and present) as early as possible in the pregnancy and at every antenatal care visit.	Recommended	X	X	X	X	X	X	X	X
Human immunodeficiency virus (HIV) and syphilis	**B.1.7:** In high prevalence settings, provider-initiated testing and counselling (PITC) for HIV should be considered a routine component of the package of care for pregnant women in all antenatal care settings. In low-prevalence settings, PITC can be considered for pregnant women in antenatal care as a key component of the effort to eliminate mother-to-child transmission of HIV, and to integrate HIV testing with syphilis, viral or other key tests, as relevant to the setting, and to strengthen the underlying maternal and child health systems.	Recommended	X							
Ultrasound scan	**B.2.4:** One ultrasound scan before 24 weeks of gestation (early ultrasound) is recommended for pregnant women to estimate gestational age, improve detection of fetal anomalies and multiple pregnancies, reduce induction of labour for post-term pregnancy, and improve a woman's pregnancy experience.	Recommended	X	X						
Anaemia	**B.1.1:** Full blood count testing is the recommended method for diagnosing anaemia in pregnancy. In settings where full blood count testing is not available, on-site haemoglobin testing with a haemoglobinometer is recommended over the use of the haemoglobin colour scale as the method for diagnosing anaemia in pregnancy.	Context-specific recommendation	X		X			X		
Asymptomatic bacteriuria (ASB)	**B.1.2:** Midstream urine culture is the recommended method for diagnosing asymptomatic bacteriuria (ASB) in pregnancy. In settings where urine culture is not available, on-site midstream urine Gram-staining is recommended over the use of dipstick tests as the method for diagnosing ASB in pregnancy.	Context-specific recommendation	X		X		X			
Intimate partner violence (IPV)	**B.1.3:** Clinical enquiry about the possibility of intimate partner violence (IPV) should be strongly considered at antenatal care visits when assessing conditions that may be caused or complicated by IPV in order to improve clinical diagnosis and subsequent care, where there is the capacity to provide a supportive response (including referral where appropriate) and where the WHO minimum requirements are met.	Context-specific recommendation	X	X	X	X	X	X	X	X
Tuberculosis (TB)	**B.1.8:** In settings where the tuberculosis (TB) prevalence in the general population is 100/100 000 population or higher, systematic screening for active TB should be considered for pregnant women as part of antenatal care.	Context-specific recommendation	X							
Daily fetal movement counting	**B.2.1:** Daily fetal movement counting, such as with "count-to-ten" kick charts, is only recommended in the context of rigorous research.	Context-specific recommendation (research)								

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Symphysis-fundal height (SFH) measurement	**B.2.2:** Replacing abdominal palpation with symphysis-fundal height (SFH) measurement for the assessment of fetal growth is not recommended to improve perinatal outcomes. A change from what is usually practiced (abdominal palpation or SFH measurement) in a particular setting is not recommended.	Context-specific recommendation	X	X	X	X	X	X	X	X
Antenatal cardio-tocography	**B.2.3:** Routine antenatal cardiotocography is not recommended for pregnant women to improve maternal and perinatal outcomes.	Not recommended								
Doppler ultrasound of fetal blood vessels	**B.2.5:** Routine Doppler ultrasound examination is not recommended for pregnant women to improve maternal and perinatal outcomes.	Not recommended								
C. Preventive measures										
Antibiotics for asymptomatic bacteriuria (ASB)	**C.1:** A seven-day antibiotic regimen is recommended for all pregnant women with asymptomatic bacteriuria (ASB) to prevent persistent bacteriuria, preterm birth and low birth weight.	Recommended	X		X		X			
Tetanus toxoid vaccination	**C.5:** Tetanus toxoid vaccination is recommended for all pregnant women, depending on previous tetanus vaccination exposure, to prevent neonatal mortality from tetanus.	Recommended	X							
Antibiotic prophylaxis to prevent recurrent urinary tract infections	**C.2:** Antibiotic prophylaxis is only recommended to prevent recurrent urinary tract infections in pregnant women in the context of rigorous research.	Context-specific recommendation (research)								
Antenatal anti-D immunoglobulin administration	**C.3:** Antenatal prophylaxis with anti-D immunoglobulin in non sensitized Rh-negative pregnant women at 28 and 34 weeks of gestation to prevent RhD alloimmunization is only recommended in the context of rigorous research.	Context-specific recommendation (research)								
Preventive anthelminthic treatment	**C.4:** In endemic areas, preventive anthelminthic treatment is recommended for pregnant women after the first trimester as part of worm infection reduction programmes.	Context-specific recommendation		X						
Malaria prevention: Intermittent preventive treatment in pregnancy (IPTp)	**C.6:** In malaria-endemic areas in Africa, intermittent preventive treatment with sulfadoxine-pyrimethamine (IPTp-SP) is recommended for all pregnant women. Dosing should start in the second trimester, and doses should be given at least one month apart, with the objective of ensuring that at least three doses are received.	Context-specific recommendation	X (13 weeks)	X	X	X		X		X
Pre-exposure prophylaxis for HIV prevention	**C.7:** Oral pre-exposure prophylaxis (PrEP) containing tenofovir disoproxil fumarate (TDF) should be offered as an additional prevention choice for pregnant women at substantial risk of HIV infection as part of combination prevention approaches.	Context-specific recommendation	X							
D. Interventions for common physiological symptoms										
Nausea and vomiting	**D.1:** Ginger, chamomile, vitamin B6 and/or acupuncture are recommended for the relief of nausea in early pregnancy, based on a woman's preferences and available options.	Recommended	X	X	X					