

# Estimating Gestational Age and Counseling Antenatal Care Clients in the Context of Zika

## Using the Maternal and Child Survival Program Zika Pregnancy Wheel

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[www.mcsprogram.org](http://www.mcsprogram.org)

### Key Messages

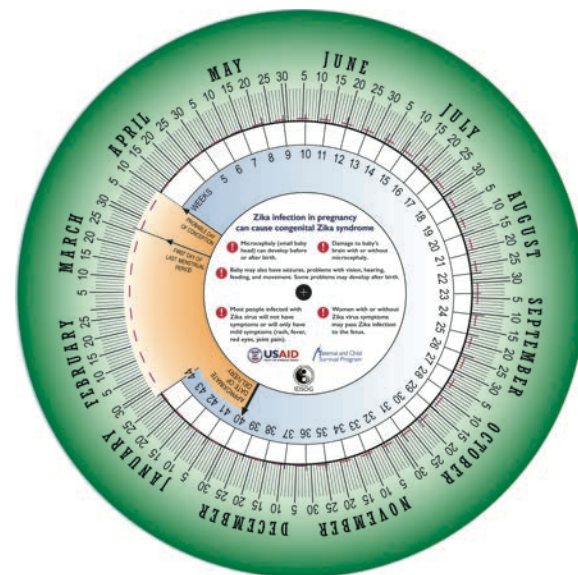
- Estimating gestational age (GA) and expected date of delivery (EDD) are critical components of care for pregnant women.
- Zika virus can cause infection in mothers and babies and lead to birth defects and developmental problems in some cases.
- Counselling clients on prevention of Zika virus infection is an important part of antenatal care (ANC) for women at risk for Zika virus infection.
- The MCSP Zika Pregnancy Wheel can help providers to recall important components of counseling for women at risk for Zika virus infection in pregnancy, as well as to estimate gestational age and estimated date of delivery.

### Background

Estimating GA and EDD are critical components of care for all ANC and intrapartum care clients. The safe and effective delivery of time-dependent interventions in pregnancy depends on having a correct understanding of a pregnancy's GA. Pregnancy wheels can help health providers and their clients understand how far along a pregnancy has progressed. Accurate and precise GA estimation also contributes to better diagnosis of preterm birth and can facilitate birth preparedness and complication readiness by helping clients to estimate timing of their birth. Providers caring for women who live in, travel to, or have partners that travel to areas with active Zika virus transmission can use the MCSP Zika Pregnancy Wheel as a job aid for counselling clients on key aspects of Zika infection prevention and management as well as for estimating GA.

This brief presents a summary of the counselling points on the MCSP Zika Pregnancy Wheel, as well as guidance on how to use pregnancy wheels in general. Both the MCSP Zika Pregnancy Wheel and this brief can be incorporated into existing ANC training strategies for providers working in areas where pregnant women are at risk for Zika virus infection. Providers can learn how to use a pregnancy wheel through hands-on activities using real or mock clinical scenarios in pre-service education, in-service education, or clinical mentoring. They can also combine estimated GA by

**Figure 1. Front side of Zika Pregnancy Wheel**



last menstrual period (LMP) with other important pieces of clinical information, including uterine size and/or ultrasound estimate (if this is available), to obtain the best obstetric estimate for GA.<sup>1</sup>

## Counselling Clients on Potential Impact and Symptoms of Infection during Pregnancy

Providers should counsel clients on the potential effects and symptoms of Zika virus infection, described on the front of the Zika Pregnancy Wheel (see Figure 1). Zika virus infection can pass from a pregnant women to her foetus and cause malformations such as microcephaly (abnormally small head), eye malformations, hearing problems, problems with brain function, and other serious impacts on normal development. Some research has suggested a higher risk of adverse effects on foetuses of mothers who are infected with Zika virus in the first trimester (less than 14 weeks) compared to other trimesters of pregnancy.<sup>2</sup> However, Zika virus infection during any trimester of pregnancy can cause birth defects.<sup>2</sup> Because about 80% of Zika virus infections are asymptomatic, many women do not know when they are infected or if their foetus is at risk for malformations. Therefore, it is very important that providers counsel clients on how to prevent Zika virus infection and unintended pregnancy.

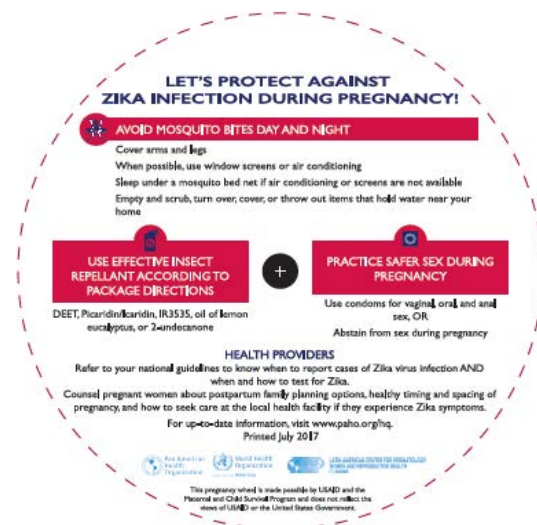
## Counselling Clients on Preventing Zika Virus Infection

The back of the Zika Pregnancy Wheel includes counselling points related to prevention of Zika virus infection (see Figure 2). Providers should counsel clients to use window screens or stay in air-conditioned rooms (where possible), use insect repellent, cover arms and legs with clothing, decrease the opportunities for mosquitos to reproduce in nearby resting water sources, and practice safer sex. Practising safer sex includes use of a condom when having vaginal, oral, and anal sex or abstaining from sexual activity during pregnancy. While these interventions do not completely eliminate the chance of infection, they can minimise the risk.

## Reminders for Health Providers

The wheel also reminds providers to consult their national guidelines to know when to report cases of Zika virus infection and when and how to test for Zika, as these guidelines vary by country. Counselling women on postpartum family planning options, healthy timing and spacing of pregnancy, and care-seeking are other important components of counselling for women at risk for Zika virus infection during pregnancy. Additional up-to-date information can be found by searching.

Figure 2. Back of Zika Pregnancy Wheel



<sup>1</sup> Committee on Obstetric Practice, the American Institute of Ultrasound in Medicine, and the Society for Maternal-Fetal Medicine. 2017. Committee Opinion No 700: methods for estimating the due date. *Obstet Gynecol.* 129(5):e150–e154. doi: 10.1097/AOG.0000000000002046.  
<sup>2</sup> Reynolds MR, Jones AM, Petersen EE, et al. 2017. Vital signs: update on Zika virus–associated birth defects and evaluation of all U.S. infants with congenital Zika virus exposure — U.S. Zika Pregnancy Registry, 2016. *MMWR Morb Mortal Wkly Rep.* 66(13):366–373. doi: 10.15585/mmwr.mm6613e1.

# How to Use a Pregnancy Wheel to Estimate GA and EDD

A pregnancy wheel is made of two overlapping discs:

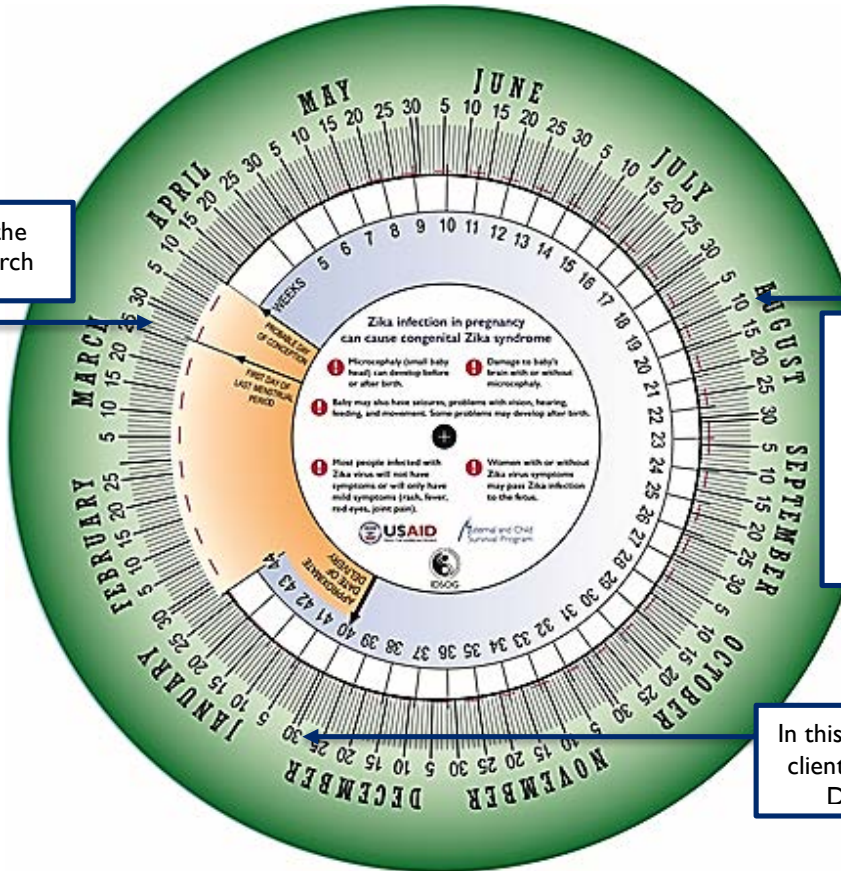


**To estimate GA from the last normal menstrual period:**

1. Through history taking, determine date of the first day of most recent normal menstrual period.  
*Note: Many women may be unaware of the exact date of their LMP. Taking the time to help women estimate this date in relation to a recent holiday or event may be helpful. If the woman's partner is present for the ANC visit, the partner may be able to help the woman estimate this date.*
2. Turn the top rotating disc so that the arrow labelled "FIRST DAY OF LAST MENSTRUAL PERIOD" points to the month and day of the LMP on the stationary calendar disc.
3. Holding the rotating disc still, follow the wheel around with your eyes to find today's date on the stationary calendar disc.
4. Find the number indicating the last completed week on the rotating disc and count the number of small marks (days) up until today's date on the stationary disc. This gives the GA in weeks and days.
5. Find the arrow pointing to week 40 on the stationary disc. This gives the EDD.
6. Communicate to the client her estimated GA today, as well as EDD, and answer any questions she may have.
7. Record the LMP, GA, and EDD on the client's health record.

**Example scenario:**  
 Today is August 10. The first day of the client's last normal menstrual period was 27 March.

In this scenario, the LMP began 27 March



If today is 10 August, then the client's estimated GA is 19 weeks and 3 days

In this scenario, the client's EDD is 30 December

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