Updated Interim Zika Clinical Guidance for Pregnant Women and Data on Contraceptive Use to Decrease Zika-affected Pregnancies

Clinician Outreach and Communication Activity (COCA) Call
August 9, 2016
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  - "Click" in the white space
  - "Type" your question
  - "Click" ask

- **On the Phone**
  - Press Star (*) 1 to enter the queue
  - State your name
  - Listen for the operator to call your name
  - State your organization and then ask your question
Objectives

At the conclusion of this session, the participant will be able to:

- Discuss revised diagnostic testing for Zika virus infection among pregnant women
- Discuss clinical management of pregnant women with confirmed or possible Zika virus infection
- Discuss use of a range of contraceptive methods in states, with a focus on highly effective methods; and
- Discuss strategies for increasing access and availability to highly effective contraception
Today’s First Presenter

Titilope Oduyebo, MD, MPH
Medical Officer
Division of Reproductive Health
National Center for Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention
Today’s Second Presenter

Erin Berry-Bibee, MD, MPH
Guest Researcher/Assistant Professor
Department of Obstetrics and Gynecology
University of North Carolina Chapel Hill
Today’s Third Presenter

Charlan Kroelinger, PhD, MA
Team Lead
Division of Reproductive Health
National Center for Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention
Topics to be covered

- Updated Interim Zika Clinical Guidance for Pregnant Women
  - Rationale for changes and updates to testing algorithm
  - Additional testing recommendations
  - Clinical management recommendations

- Pregnancy Planning and Contraception during a Zika Outbreak
  - Unintended pregnancy in states potentially affected by Zika
  - Data on contraception use in the United States
  - Strategies to increase access to and availability of contraception
Zika Virus & Pregnancy: CDC’s Updated Interim Guidance for Pregnant Women

Titilope Oduyebo, M.D., M.P.H.

August 9, 2016
Background: Map of Areas with Active Transmission of Zika

54 countries and territories worldwide, including 41 countries and territories in the Americas, reporting active Zika virus transmission

As of August 2, 2016
Local Transmission in the United States

- Florida Department of Health identified mosquito-borne transmission of Zika virus in a 1 square mile area of Miami.

- CDC released recommendations for travel and testing of pregnant women and women of reproductive age who live in or have traveled to this area any time after June 15, 2016.

- Health Advisory Notice emphasized that this updated interim clinical guidance should be applied in the context of active Zika virus transmission in Florida.
Diagnostic Testing for Zika Virus

- **Molecular method**
  - Real-time reverse transcriptase-polymerase chain reaction (rRT-PCR) for viral RNA in body fluids or tissues

- **Serologic method**
  - Zika virus immunoglobulin M (IgM) enzyme-linked immunosorbent assay
  - Plaque reduction neutralization test (PRNT) to detect neutralizing antibodies in serum
Detecting Zika Virus RNA

- Zika Virus RNA
- Anti-Zika IgM Antibodies
- Symptom Onset
- ~10 days
- TIME
- ~12wks
Detecting Zika Virus Antibodies

- Zika Virus RNA
- Anti-Zika IgM Antibodies

Symptom Onset

~10 days

TIME

~12wks
Limitations of Zika Tests

- Presence of Zika virus RNA is relatively short-lived and negative results do not preclude infection.
- Testing for Zika virus IgM can result in false positive results because of cross-reacting antibodies against related flaviviruses and for nonspecific reasons.
- PRNT levels may not distinguish infecting virus in people previously infected with or vaccinated against a related flavivirus.
Rationale for Expanded RT-PCR Testing: Prolonged Detection of Zika Virus RNA

- Pregnant woman with Zika virus infection and prolonged detection of Zika virus in serum

- Case report highlights
  - Detection of ZIKV RNA in serum longer than expected

Prolonged Detection of Zika Virus RNA

- **US Zika Pregnancy Registry**
  - Case series: 5 pregnant women with Zika virus infection reported in 1st or 2nd trimester
    - 4 symptomatic (Zika RNA detected 17-46 days after symptom onset)
    - 1 asymptomatic (Zika RNA detected 53 days after possible exposure)

- Case series demonstrated that
  - Some pregnant women including asymptomatic women may have prolonged detection of Zika virus RNA in serum
  - Expanded rRT-PCR testing can provide a definitive diagnosis of Zika virus infection

Meaney-Delman et al., Prolonged Detection of Zika Virus RNA in Pregnant Women. Obstetrics and Gynecology, 2016. 0(1-7).
Update: Interim Guidance for Health Care Providers Caring for Pregnant Women with Possible Zika Virus Exposure — United States, July 2016

On July 25, 2016, this report was posted as an MMWR Early Release on the MMWR website (http://www.cdc.gov/mmwr).

CDC has updated its interim guidance for U.S. health care providers caring for pregnant women with possible Zika virus exposure, to include the emerging data indicating that Zika virus RNA can be detected for prolonged periods in some pregnant women. For asymptomatic pregnant women who live in areas without active Zika virus transmission and who are evaluated <2 weeks after last possible exposure, rRT-PCR testing should be performed. If the rRT-PCR result is negative, a Zika virus IgM antibody test should be performed 2–12 weeks after the exposure. Asymptomatic pregnant women who do not live in...
Updated Testing Recommendations
Updated Testing Algorithm

**PREGNANT WOMAN**

Assess for possible Zika virus exposure
Evaluate for signs and symptoms of Zika virus disease

### A

- **Symptomatic:** <2 weeks after symptom onset, or
- **Asymptomatic and NOT living in an area with active Zika virus transmission:** 2-12 weeks after possible exposure

Zika virus rRT-PCR on serum and urine

- **Positive Zika virus rRT-PCR on serum or urine:** Recent Zika virus infection
- **Negative Zika virus rRT-PCR on serum and urine**

Zika virus IgM and dengue virus IgM negative: No recent Zika virus infection

Zika virus IgM and dengue virus IgM positive or equivocal: Presumptive recent Zika virus or flavivirus infection

### B

- **Symptomatic:** 2-12 weeks after symptom onset, or
- **Asymptomatic and NOT living in an area with active Zika virus transmission:** 2-12 weeks after possible exposure, or
- **Asymptomatic and living in an area with active Zika virus transmission:** 1st and 2nd trimester

Zika virus IgM and dengue virus IgM on serum

- **Dengue virus IgM positive or equivocal and Zika virus IgM negative:** Presumptive dengue virus infection
- **Zika virus IgM positive or equivocal and any result on dengue virus IgM:** Presumptive recent Zika virus or flavivirus infection
- **Zika virus IgM and dengue virus IgM negative:** No recent Zika virus infection

Reflex Zika virus rRT-PCR on serum and urine

- **Negative Zika virus rRT-PCR on serum**
- **Positive Zika virus rRT-PCR on serum or urine:** Recent Zika virus infection

Plaque reduction neutralization test (PRNT)

- **Zika virus PRNT ≥10 and dengue virus PRNT <10:** Recent Zika virus infection
- **Zika virus PRNT ≥10 and dengue virus PRNT ≥10:** Recent flavivirus infection, specific virus cannot be identified
- **Zika virus PRNT <10:** No recent evidence of Zika virus infection
Step 1: Assess Exposure and Evaluate Patient Patient

Assess for possible Zika virus exposure
Evaluate for signs and symptoms of Zika virus disease

Assess for possible exposure to Zika

1) Does she live in or has she traveled to an area with active Zika virus transmission during pregnancy or in the periconceptional period?

2) Has she had sexual activity without barrier protection with a partner who lives in or traveled to an area with active Zika virus transmission during her pregnancy or in the periconceptional period?

3) How long ago was the last possible exposure?
   - < 2 weeks ago
   - 2-12 weeks ago
   - > 12 weeks ago

Evaluate for signs & symptoms of Zika virus disease

1) Does the patient report currently having or has she had one or more signs or symptoms of Zika virus disease, including:
   - acute onset of fever, rash, arthralgia, or conjunctivitis

2) How long ago did the symptoms begin?
   - < 2 weeks ago
   - 2-12 weeks ago
   - > 12 weeks ago
Arm A: Pregnant Women Presenting for Care within 2 Weeks of Symptoms or Exposure

**IF**

- **Symptomatic**: <2 weeks after symptom onset
- **Asymptomatic and NOT living in an area with active Zika virus transmission**: <2 weeks after possible exposure

**Testing indicated**
Zika virus rRT-PCR on serum and urine
Arm A: rRT-PCR Results

Results

Positive Zika virus rRT-PCR on serum or urine
- Recent Zika virus infection

Results

- Negative Zika virus rRT-PCR on serum and urine

Additional testing
- Symptomatic: Zika virus IgM and dengue virus IgM
- Asymptomatic and NOT living in an area with active Zika virus transmission: Zika virus IgM 2-12 weeks after exposure
Arm A: IgM Results

Results

Zika virus IgM and dengue virus IgM negative
- No evidence of recent Zika virus infection

Results

- Zika virus IgM or dengue virus IgM positive or equivocal

Additional testing
- Plaque reduction neutralization test (PRNT)
Arm A: PRNT Results

Results
Zika virus PRNT ≥ 10 and dengue virus PRNT <10
- Recent Zika virus infection

Results
Zika virus PRNT ≥ 10 and dengue virus PRNT ≥ 10
- Recent flavivirus infection, specific virus cannot be identified

Results
Zika virus PRNT < 10
- No evidence of recent Zika virus infection
Updated Testing Algorithm: Arm B

**PREGNANT WOMAN**

Assess for possible Zika virus exposure
Evaluate for signs and symptoms of Zika virus disease

**A**
- Symptomatic: <2 weeks after symptom onset, or
- Asymptomatic and NOT living in an area with active Zika virus transmission: <2 weeks after possible exposure

Zika virus rRT-PCR on serum and urine

Positive Zika virus rRT-PCR on serum or urine: Recent Zika virus infection
Negative Zika virus rRT-PCR on serum and urine

**B**
- Symptomatic: 2–12 weeks after symptom onset, or
- Asymptomatic and NOT living in an area with active Zika virus transmission: 2–12 weeks after possible exposure, or
- Asymptomatic and living in an area with active Zika virus transmission: 1st and 2nd trimester

Zika virus IgM and dengue virus IgM on serum

Dengue virus IgM positive or equivocal and Zika virus IgM negative: Presumptive dengue virus infection
Zika virus IgM positive or equivocal and any result on dengue virus IgM: Presumptive recent Zika virus or flavivirus infection
Zika virus IgM and dengue virus IgM negative: No recent Zika virus infection

Reflex Zika virus rRT-PCR on serum and urine

Negative Zika virus rRT-PCR on serum
Positive Zika virus rRT-PCR on serum or urine: Recent Zika virus infection

Plaque reduction neutralization test (PRNT)

Zika virus PRNT ≥10 and dengue virus PRNT <10: Recent Zika virus infection
Zika virus PRNT ≥10 and dengue virus PRNT ≥10: Recent flavivirus infection, specific virus cannot be identified
Zika virus PRNT <10: No recent evidence of Zika virus infection
Arm B: Pregnant Women Presenting for Care 2-12 Weeks after Symptoms or Exposure

**IF**
- **Symptomatic:** 2-12 weeks after symptom onset, or
- **Asymptomatic and NOT living in an area with active Zika virus transmission:** 2-12 weeks after possible exposure, or
- **Asymptomatic and living in an area with active Zika virus transmission:** 1st & 2nd trimester

**Testing indicated:**
Zika virus IgM and dengue virus IgM

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5 Dengue virus IgM antibody testing is recommended only for symptomatic pregnant women
Arm B: IgM Results

Results

Dengue virus IgM positive or equivocal and Zika virus IgM negative

Additional testing:
- Plaque reduction neutralization test (PRNT)

Results

Zika virus IgM positive or equivocal and any result on dengue virus IgM

Additional testing:
- Reflex Zika virus rRT-PCR on serum and urine

Results

Zika virus IgM and dengue virus IgM negative
- No evidence of recent Zika virus infection
Arm B: Positive IgM Results Leading to rRT-PCR Results

Results

Negative Zika virus reflex rRT-PCR on serum

Additional testing:
- Plaque reduction neutralization test (PRNT)

Results

Positive Zika virus rRT-PCR on serum or urine
- Recent Zika virus infection
Results
Zika virus PRNT ≥ 10 and dengue virus PRNT <10
- Recent Zika virus infection

Results
Zika virus PRNT ≥ 10 and dengue virus PRNT ≥ 10
- Recent flavivirus infection, specific virus cannot be identified

Results
Zika virus PRNT < 10
- No evidence of recent Zika virus infection
Additional Testing Recommendations

- For symptomatic and asymptomatic pregnant women who seek care >12 weeks after symptom onset or possible exposure
  - Consider IgM antibody testing
    - If fetal abnormalities are present, also perform rRT-PCR testing

- A negative IgM or rRT-PCR result >12 weeks does not rule out Zika virus infection
  - Zika virus IgM antibody and RNA levels decrease over time
  - Serial fetal ultrasounds should be considered
Recommendations for Prenatal & Postnatal Management of Pregnant Women with Laboratory Evidence of Confirmed or Possible Zika Virus Infection
Prenatal Management: Confirmed or Presumptive Recent Zika Virus or Flavivirus Infection

- Serial ultrasounds every 3-4 weeks to assess fetal anatomy and growth

- Amniocentesis
  - Individualized for pregnant women with confirmed recent Zika virus or flavivirus infection
  - Can be considered for pregnant women with presumptive recent Zika virus or flavivirus infection
Postnatal Management: Confirmed or Presumptive Recent Zika Virus or Flavivirus Infection

- **Live births**
  - Infant serum should be tested for Zika RNA, Zika IgM, & dengue IgM
    - CSF (if obtained for other reasons)
  - Pathology testing by Zika rRT-PCR and/or immunohistochemical staining (IHC) of umbilical cord and placenta is recommended

- **Fetal loss**
  - Pathology testing with Zika virus rRT-PCR and/or IHC staining of fetal tissues is recommended
Prenatal ultrasound to evaluate for fetal abnormalities consistent with congenital Zika virus infection

- If fetal ultrasound is
  - Abnormal: repeat Zika virus rRT-PCR and IgM antibody tests; clinical management should be based on corresponding laboratory results
  - Normal: obstetric care should be based on whether pregnant woman has an ongoing risk of Zika virus exposure
<table>
<thead>
<tr>
<th>Interpretation of Laboratory Results*</th>
<th>Prenatal Management</th>
<th>Postnatal Management</th>
</tr>
</thead>
</table>
| **Recent Zika virus infection**      | • Consider serial ultrasounds every 3–4 weeks to assess fetal anatomy and growth†  
• Decisions regarding amniocentesis should be individualized for each clinical circumstance§ | LIVE BIRTHS:  
• Cord blood and infant serum should be tested for Zika virus rRT-PCR, Zika IgM, and dengue virus IgM antibodies. If CSF is obtained for other reasons, it can also be tested.  
• Zika virus rRT-PCR and IHC staining of umbilical cord and placenta is recommended.‖  
FETAL LOSSES:  
• Zika virus rRT-PCR and IHC staining of fetal tissues is recommended.¶ |
| **Recent flavivirus infection; specific virus cannot be identified** | • Consider serial ultrasounds every 3–4 weeks to assess fetal anatomy and growth†  
• Amniocentesis might be considered; decision should be individualized for each clinical circumstance§ | LIVE BIRTHS:  
• Cord blood and infant serum should be tested for Zika virus rRT-PCR, Zika IgM, and dengue virus IgM antibodies. If CSF is obtained for other reasons, it can also be tested.  
• Zika virus rRT-PCR and IHC staining of umbilical cord and placenta should be considered.‖  
FETAL LOSSES:  
• Zika virus rRT-PCR and IHC staining of fetal tissues should be considered.¶ |
| **Presumptive recent Zika virus infection** || |
| **Presumptive recent flavivirus infection** || |
| **Recent dengue virus infection**    | • Clinical management in accordance with existing guidelines (http://apps.who.int/iris/bitstream/10665/44188/1/9789241547871_eng.pdf). | |
| **No evidence of Zika virus or dengue virus infection** | • Prenatal ultrasound to evaluate for fetal abnormalities consistent with congenital Zika virus syndrome.¶  
• Fetal abnormalities present: repeat Zika virus rRT-PCR and IgM test; base clinical management on corresponding laboratory results.  
• Fetal abnormalities absent: base obstetric care on the ongoing risk of Zika virus exposure to the pregnant woman. | |
Clinician Testing Assistance

- CDC maintains a 24/7 Zika consultation service for health officials and healthcare providers caring for pregnant women to assist with test interpretation and questions about clinical management.
  
  - To contact the service, call 770-488-7100 and ask for the Zika Pregnancy Hotline or email ZIKAMCH@cdc.gov

- Healthcare providers should work closely with the state, local, or territorial health department to ensure that all appropriate testing will be performed.
Contraception and Pregnancy Planning During a Zika Outbreak

Erin Berry-Bibee, MD, MPH
Charlan Kroelinger, PhD

August 9, 2016
Topics to be Covered: Contraception

- Considerations for women and couples interested in conceiving
- Unintended pregnancy in states potentially affected by Zika
- Contraception to minimize Zika-affected pregnancies
- Contraceptive method effectiveness
- Data on contraception use in the United States
- Strategies to increase access to and availability of long-acting reversible contraception (LARC)
Considerations for Women and Couples Interested in Conceiving in the Context of Zika

- Reproductive life plan
- Environmental risk of exposure
- Personal measures to prevent mosquito bites
- Personal measures to prevent sexual transmission
- Education about Zika virus infection during pregnancy
- Risks and benefits of pregnancy at this time
- Delay in conception if either partner infected with Zika virus
Tools for Healthcare Providers and Couples Who Want to Conceive

www.cdc.gov/Zika

*Free online materials available to download in English and Spanish
Preventing Zika-related Outcomes for Women Who Choose to Delay or Avoid Pregnancy
Unintended Pregnancy in States Potentially Impacted by Zika

Unintended pregnancy is common in many states potentially impacted by Zika

Estimated northern range for:

- Aedes albopictus
- Aedes aegypti

Unintended Pregnancy Rate
Per 1,000 women aged 15–44, 2010

- 32–41
- 42–47
- 48–54
- 56–62


Preventing Unintended Pregnancy During a Zika Outbreak

- The best way to reduce risk of unintended pregnancy is to use effective birth control *consistently* and *correctly*.

- Preventing unintended pregnancy is a *primary strategy* to prevent poor pregnancy and birth outcomes linked to Zika infection during pregnancy.
Contraceptive Counseling during a Zika Virus Outbreak

- Healthcare providers should discuss:
  - Strategies to prevent unintended pregnancy
  - Use of contraceptive methods that best meet the needs of the woman and/or couple and can be used correctly and consistently
  - Role of correct and consistent use of condoms and other barrier methods to reduce the risk for sexually transmitted infections, including Zika
Client-Centered Approach to Contraceptive Counseling

- Respects the client’s primary purpose for seeking services
- Notes the importance of confidential services
- Encourages the availability of the full-range of FDA-approved contraceptive methods
- Delivers culturally competent services

Contraceptive Guidance for Healthcare Providers

www.cdc.gov/reproductivehealth/contraception/contraception_guidance.htm
http://www.hhs.gov/opa/pdfs/zikatoolkit.pdf
Principles for Providing Quality Counseling

Counseling is a process that enables your client to make and follow through on choices, and is an integral component of the counseling process that helps clients make informed decisions.

Providing quality counseling is an essential component of client-centered care. Your client is the primary focus when providing counseling related to health decision making about preventing or achieving pregnancy and reproductive health. Using client-centered skills, you tailor the interactive counseling and education to meet the unique and culturally appropriate needs of your client.

**PRINCIPLE 1:**

Establish and maintain rapport with the client

- Create a welcoming environment — greet the client warmly, show interest, and openness.
- Listen to and engage your client by asking open-ended questions.
- Use confidentiality to help build a climate of safety and trust that will encourage the client to share information and make informed decisions.

www.cdc.gov/reproductivehealth/contraception/contraception_guidance.htm
http://www.hhs.gov/opa/pdfs/zikatoolkit.pdf
Contraceptive Effectiveness
Highly Effective Contraceptive Methods

- Failure rate: < 1 pregnancy per 100 women each year
- Permanent methods: female sterilization (tubal ligation, transcervical sterilization), male vasectomy
- Long-acting reversible methods: Intrauterine devices (IUDs), contraceptive implants

Long-Acting Reversible Contraception (LARC)

- Most effective type of reversible birth control
  - Safe
  - No effort after correct insertion
  - Effective for 3-10 years
  - Highest rates of satisfaction and continuation
  - Immediate return to fertility

- Nationally, use of LARC is low

Moderately Effective Contraceptive Methods

- Failure rate: 6-12 pregnancies per 100 women each year
- Methods: injections, pills, patches, rings, diaphragms

Less Effective Contraceptive Methods

- Failure rate: $\geq 18$ pregnancies per 100 women each year
- Methods: male and female condoms, cervical cap, sponge, withdrawal, spermicide, and fertility-based awareness methods


Sheree L. Boulet, DrPH\textsuperscript{1}; Denise V. D’Angelo, MPH\textsuperscript{1}; Brian Morrow, MA\textsuperscript{1}; Lauren Zapata, PhD\textsuperscript{1}; Erin Berry-Bibee, MD\textsuperscript{1}; Maria Rivera, MPH\textsuperscript{3}; Sascha Ellington, MSPH\textsuperscript{1}; Lisa Romero, DrPH\textsuperscript{1}; Eva Lathrop, MD\textsuperscript{4}; Meghan Frey, MA, MPH\textsuperscript{2}; Tanya Williams, MPH\textsuperscript{1}; Howard Goldberg, PhD\textsuperscript{1}; Lee Warner, PhD\textsuperscript{1}; Leslie Harrison, MPH\textsuperscript{1}; Shanna Cox, MSPH\textsuperscript{1}; Karen Pazol, PhD\textsuperscript{1}; Wanda Barfield, MD\textsuperscript{1}; Denise J. Jamieson, MD\textsuperscript{1}; Margaret A. Honein, PhD\textsuperscript{2}; Charlan D. Kroeling, PhD\textsuperscript{1}
# CDC and State Surveillance of Contraceptive Use

<table>
<thead>
<tr>
<th>Surveillance System</th>
<th>Population Surveyed</th>
<th>Data Analyzed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Risk Factor Surveillance System (BRFSS)</td>
<td>Nonpregnant women aged 18-44 at risk for unintended pregnancy</td>
<td>2011-2013 data from 17 states</td>
</tr>
<tr>
<td>Pregnancy Risk Assessment Monitoring System (PRAMS)</td>
<td>Postpartum women aged 15-44 at risk for unintended pregnancy</td>
<td>2013 data from 28 PRAMS states</td>
</tr>
<tr>
<td>Maternal and Infant Health Assessment (MIHA)</td>
<td>Postpartum women at risk for unintended pregnancy</td>
<td>2013 data from California</td>
</tr>
<tr>
<td>Youth Risk Behavior Surveys (YRBS)</td>
<td>Sexually active female students in grades 9-12</td>
<td>2015 data</td>
</tr>
</tbody>
</table>

Contraceptive Use in the United States, 2011-2013 & 2015

- For this analysis
  - Less effective contraception: >10 pregnancies per 100 women each year
  - Moderately effective contraception: 6-10 pregnancies per 100 women each year

- Contraception use varied across states

- Moderately and less effective methods were used more frequently than highly effective methods across all age groups and race/ethnicity.


## Contraceptive Use in the US: Women of Reproductive Age

<table>
<thead>
<tr>
<th>Surveillance System</th>
<th>Population</th>
<th>Percentage of Use by Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High (&lt; 1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate (6% - 10%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Less (&gt; 10%)</td>
</tr>
<tr>
<td>BRFSS</td>
<td>Women of reproductive age</td>
<td>5.5% — 18.9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13.8% — 30.2%</td>
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<tr>
<td></td>
<td></td>
<td>16.0% — 26.1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12.3% — 34.3%</td>
</tr>
</tbody>
</table>


## Contraceptive Use in the US: Postpartum Women

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<tbody>
<tr>
<td></td>
<td></td>
<td>High &lt; 1%</td>
</tr>
<tr>
<td>PRAMS &amp; MIHA</td>
<td>Postpartum women</td>
<td>6.9% — 30.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate 6% - 10%</td>
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<tr>
<td></td>
<td></td>
<td>25.8% — 42.7%</td>
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<tr>
<td></td>
<td></td>
<td>Less &gt; 10%</td>
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<tr>
<td></td>
<td></td>
<td>15.6% — 37.6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.5% — 15.3%</td>
</tr>
</tbody>
</table>


# Contraception Use in the US: Sexually Active Female High School Students

<table>
<thead>
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<th>Surveillance System</th>
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<th>Percentage of Use by Effectiveness</th>
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<tbody>
<tr>
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<td></td>
<td></td>
<td>Moderate: 6% - 10%</td>
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<tr>
<td></td>
<td></td>
<td>Less: &gt; 10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>None:</td>
</tr>
<tr>
<td>YRBS</td>
<td>Sexually active HS students</td>
<td>1.7% — 8.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>19.7% — 47.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36.6% — 59.9%</td>
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<tr>
<td></td>
<td></td>
<td>7.3% — 22.8%</td>
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Barriers to LARC Access and Availability

- High cost
- Limited provider reimbursement
- Training
- Lack of awareness about LARC methods
- Cultural and other factors

# Strategies to Improve LARC Access and Availability

<table>
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<tr>
<th>Barriers</th>
<th>Strategies</th>
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| High cost                        | • Remove administrative barriers for contraceptive services and supplies  
                                         • Partner with health system payers to implement contraceptive services                                                              |
| Limited provider reimbursement    | • Reimburse for the full range of contraceptive services                                                                                   |
| Training                         | • Increase healthcare provider training on insertion and removal techniques  
                                         • Improve same-day access to services by removing non-essential requirements                                                              |
| Lack of awareness about LARC methods | • Provide client-centered contraceptive counseling on the full range of FDA-approved birth control methods  
                                          • Increase awareness of LARC methods to all clients                                                                                  |
| Cultural and other factors       | • Provide youth-friendly, culturally appropriate services during visits                                                                    |

CDC’s Activities
THE 6|18 INITIATIVE

EVIDENCE SUMMARY

Prevent Unintended Pregnancy

LARC Learning Community Cohorts 1 & 2 State Teams

CDC’s 6|18 Initiative: Evidence Summary to Prevent Unintended Pregnancy. CDC, Atlanta, GA
http://www.astho.org/Programs/Maternal-and-Child-Health/Long-Acting-Reversible-Contraception-LARC/
Thanks to our many collaborators and partners!

For clinical questions, please contact

ZikaMCH@cdc.gov

For US Zika Pregnancy Registry questions, please contact

ZikaPregnancy@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
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- **Using the Webinar System**
  - “Click” the Q&A tab at the top left of the webinar tool bar
  - “Click” in the white space
  - “Type” your question
  - “Click” ask

- **On the Phone**
  - Press Star (*) 1 to enter the queue
  - State your name
  - Listen for the operator to call your name
  - State your organization and then ask your question
Thank you for joining!
Please email us questions at coca@cdc.gov

Centers for Disease Control and Prevention
Atlanta, Georgia
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CDC Guideline for Prescribing Opioids for Chronic Pain: Dosing and Titration of Opioids (final call in a series of 4)

- Date: Wednesday, August 17, 2016
- Time: 2:00 – 3:00 pm (Eastern Time)

Free Continuing Education. Registration Not Required

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