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Zika Virus: Implications for Family Planning

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Bixby Center
for **Global**
Reproductive
Health



CAPTC

Disclosures

Dr. Seidman has no relevant financial relationships.

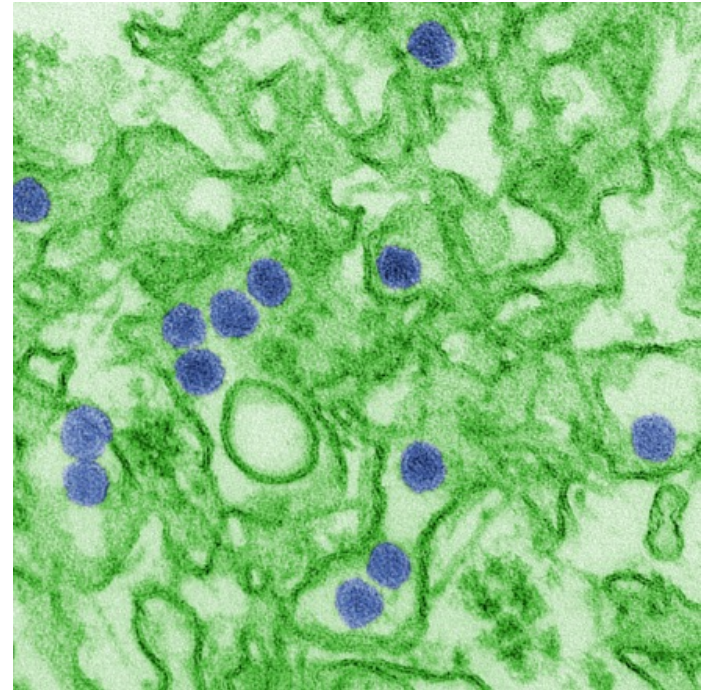
There is no commercial support for the activity.

Objectives

- **Review Zika transmission, epidemiology & implications for family planning**
- **Use principles of shared decision-making to counsel women at risk of Zika about family planning options**
- **List Zika resources for family planning clinicians**

Zika virus

- **Single-stranded RNA virus**
- ***Flaviviridae* family, genus *Flavivirus***



Electron micrograph of Zika virus

Zika transmission



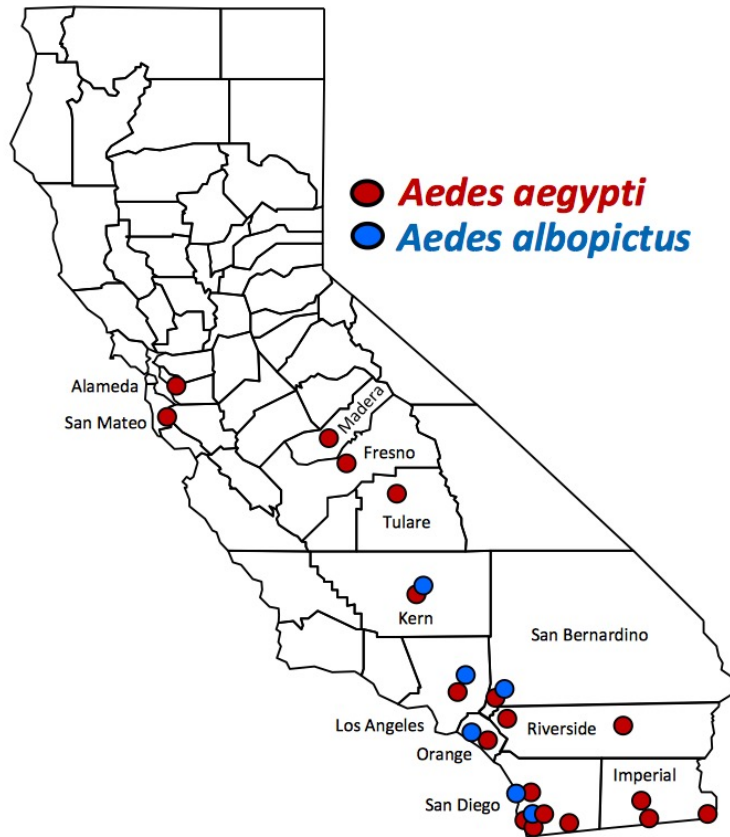
- Primarily through infected *Aedes* mosquitos (*Ae. aegypti* & *Ae. albopictus*)
- Sexual transmission
- Vertical transmission (no reported lactational transmissions to date)
- Blood transfusion (reported outside the US)

Active Zika transmission, May 2016

Reported active transmission



Aedes mosquitos in CA



Aedes aegypti and *Aedes albopictus* Detection Sites by County/City

Alameda

Hayward

Fresno

Clovis

Fowler

Fresno

Kerman

Mendota

Sanger

Imperial

Andrade*

Brawley

Calexico

El Centro

Heber*

Holtville

Imperial

Seeley *

Kern

Arvin

Arvin

Los Angeles

Commerce

East Los Angeles*

Florence*

La Mirada

Los Angeles

Maywood

Montebello

Pico Rivera

South Gate

Alhambra

Arcadia

Avocado Heights*

Los Angeles

(continued)

Azusa

Baldwin Park

Bradbury

Covina

Duarte

El Monte

Glendora

Irwindale

La Cañada Flintridge

La Puente

Los Angeles

Monrovia

Monterey Park

Pico Rivera

Rosemead

San Gabriel

South El Monte

South Whittier*

Temple City

West Covina

Whittier*

Madera

Madera

Madera Ranchos*

Parkwood*

Orange

Anaheim

Costa Mesa

Garden Grove

Lake Forest

Mission Viejo

Orange

Orange

(continued)

Santa Ana

Huntington Beach

Los Alamitos

Santa Ana

Riverside

Coachella

Riverside

San Jacinto

San Bernardino

Colton

Montclair

Upland

San Diego

Bonita*

Chula Vista

El Cajon

Escondido

Imperial Beach

Oceanside

San Diego

Spring Valley*

Tecate*

Vista

Carlsbad

San Diego

San Mateo

Atherton

Menlo Park

Tulare

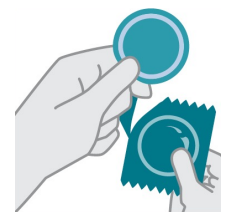
Exeter

Who is at risk of Zika?

- **Anyone living in area with local transmission**
- **Anyone traveling to areas with local transmission**
- **Sexual partners of either of the above**

Zika prevention

- Long-sleeved shirts & pants
- Air conditioning, window/door screens
- Mosquito bed nets if unable to close windows/doors
- Environmental Protection Agency-registered repellents with active ingredients (DEET, picaridin, IR3535, lemon eucalyptus oil, or para-menthane-diol)
- Treat clothing with permethrin
- Eliminate standing water at home and work
- Condoms or abstinence to prevent sexual transmission



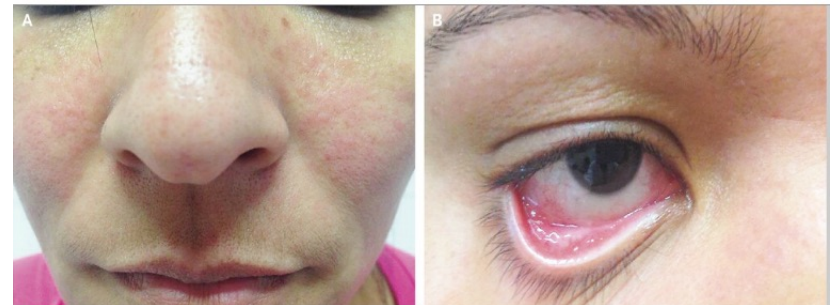
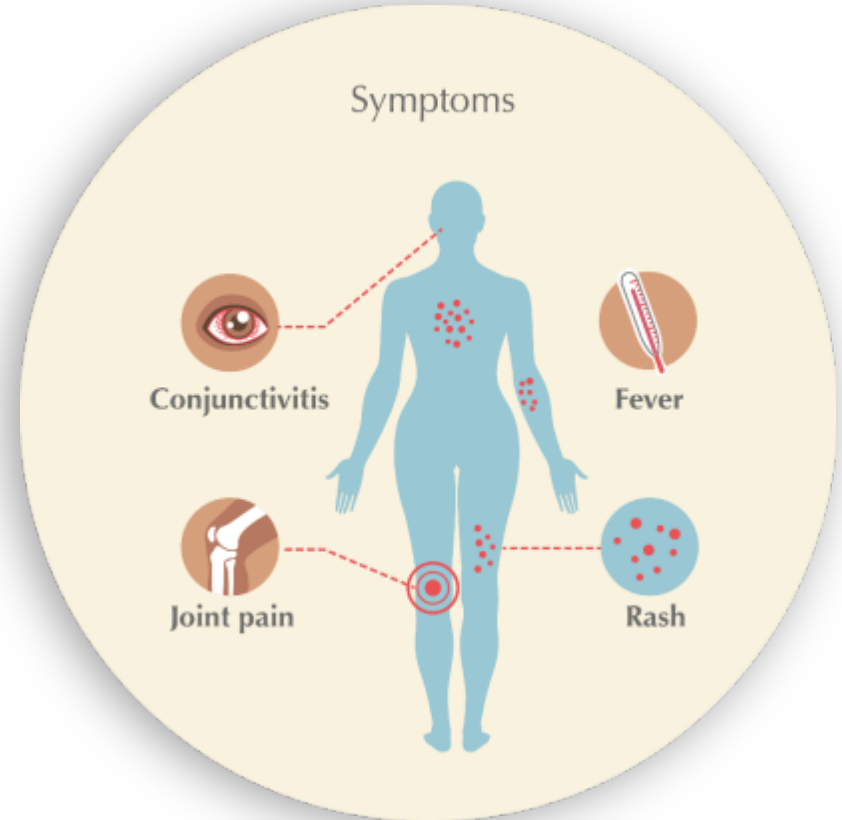
Zika symptoms

Most common:

- Fever
- Maculopapular rash
- Joint pain
- Conjunctivitis

Others:

- Muscle pain
- Headache



Zika 101 slide set, CDC June 2016

Zika testing overview

- **<1 wk after symptoms: serum PCR**
- **<3 wks after symptoms: urine PCR**
 - send urine & serum together
- **IgM develops 1-2 wks after symptoms, but cross reacts with other viruses (dengue, yellow fever). Present for ~12 wks.**
 - Plaque-reduction neutralization (PRNT) testing measures virus-specific neutralizing antibodies; discriminates between cross-reacting antibodies in primary flavivirus infections.
 - If negative & high suspicion, repeat testing

https://www.cdph.ca.gov/programs/vrdl/Documents/Zika_Testing_VRDL_Quicksheet.pdf

Zika testing in CA – requires DPH approval

Appropriate Clinical Specimens for Laboratory Testing of Suspected Cases *					
	Symptomatic Suspect Cases				Asymptomatic Pregnant Women
	Serum	CSF	Urine [§]	Other [¶]	Serum only
RT-PCR [§]	YES	YES	YES	YES	NO
Serology: IgM with PRNT confirmation [†]	YES	YES		YES	YES

[¶] CDC will consider testing other specimen types (e.g., saliva, placental tissue, umbilical cord, fetal and other tissues) on a case by case basis.

[§] RT-PCR is the preferred method and urine is the preferred specimen for confirming an acute case.

[†] PRNT (plaque-reduction neutralization test) may confirm cross-reactive IgM tests by measuring virus-specific neutralizing antibodies.

Asymptomatic pregnant women: blood sample 2 - 12 weeks after last exposure.

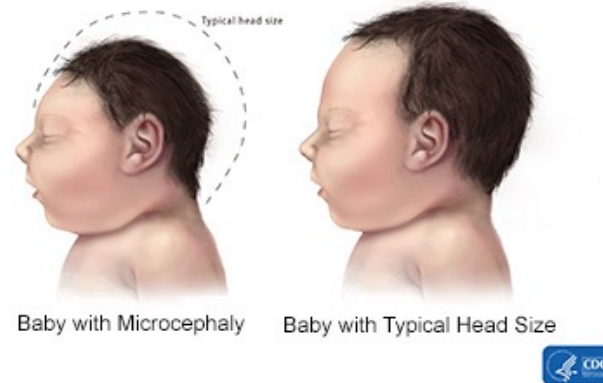
NOTE: negative serology cannot definitively rule out Zika virus infection.

Zika treatment

- **Supportive care**
- **Avoid NSAIDs until Dengue ruled out (hemorrhagic complications)**

Zika in pregnancy

- **Early exposure → microcephaly, brain & eye abnormalities**



- **Later in pregnancy → intrauterine growth restriction, fetal death**

Zika in pregnancy

- **Confirmed maternal Zika infection in pregnancy**
 - 1% fetuses had microcephaly with 1st trimester infection (modeling study, French Polynesia)
 - 29% fetuses had any ultrasound abnormality with any trimester infection (Brazil)
 - ~500 women infected in 3rd trimester who have delivered, no known structural abnormalities identified to date (Colombia)
 - 4 cases of microcephaly confirmed due to Zika infection in asymptomatic women (Colombia)

CDC Recommendations: Couples Interested in Conceiving

	Women	Men
Travelers		
Zika virus disease	Wait at least 8 weeks after symptom onset	Wait at least 6 months after symptom onset
No Zika virus disease	Wait at least 8 weeks after last date of exposure	Wait at least 8 weeks after last date of exposure
Living in an area with Zika		
Zika virus disease	Wait at least 8 weeks after symptom onset	Wait at least 6 months after symptom onset
No Zika virus disease	Talk with healthcare provider	Talk with healthcare provider

Note: Zika virus disease defined as definitive diagnosis OR exposure + symptoms.

<http://www.cdc.gov/zika/pregnancy/thinking-about-pregnancy.html>

Zika screening questions for women who may become pregnant

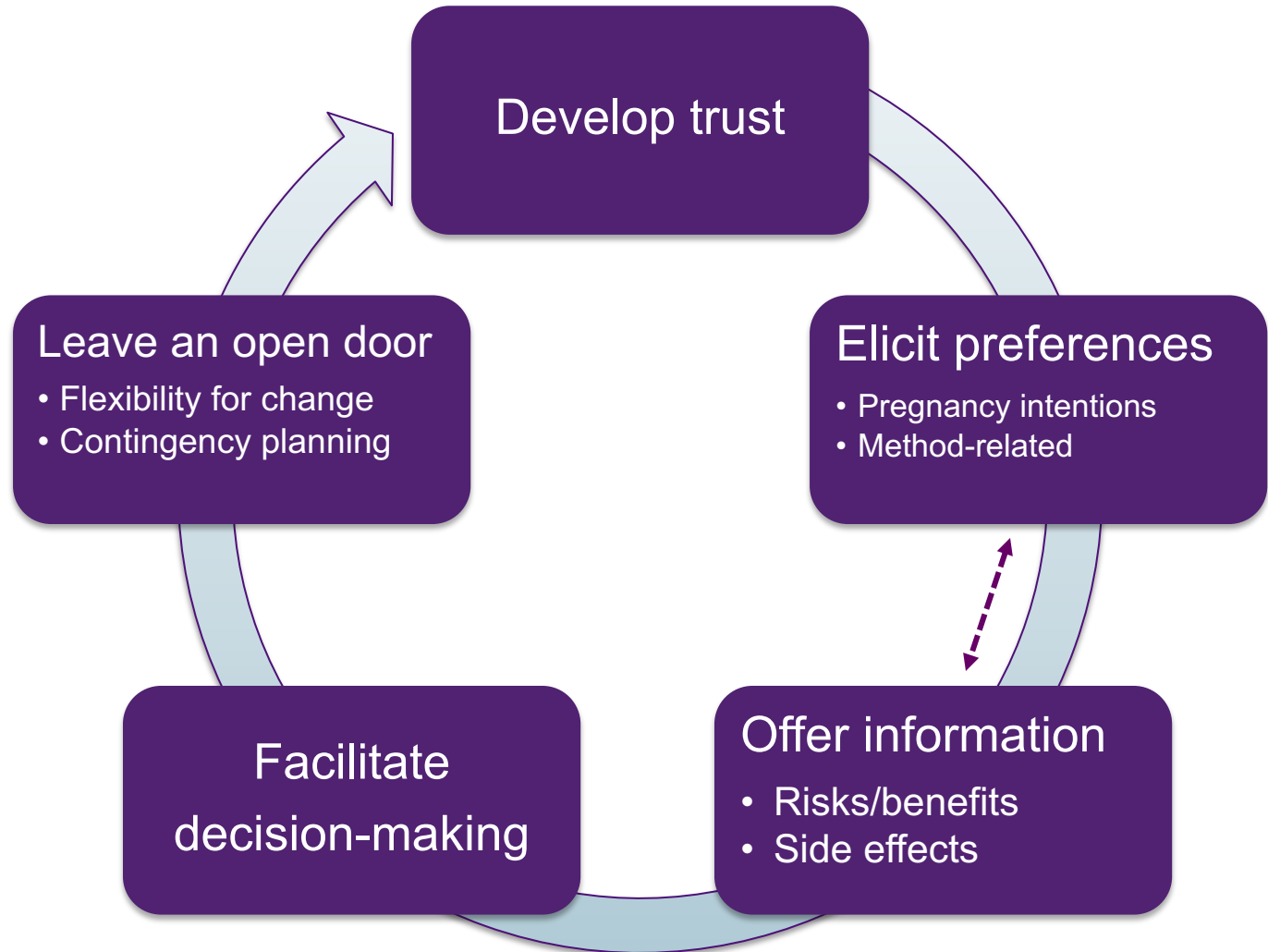
- **Have you traveled to or lived in a place with active Zika transmission in the last 8 weeks?**
 - Did you have fever, rash, joint pain or red eyes within 2 weeks of exposure? If yes → offer testing.
 - Wait at least 8 wks after exposure or symptoms to conceive.
- **Has your partner traveled to or lived in a place with active Zika transmission in the last 6 months?**
 - Did he have fever, rash, joint pain or red eyes within 2 weeks of exposure? If yes → offer testing.
 - Wait at least 6 months after symptoms or 8 wks after exposure to conceive & recommend condoms.

IMPLICATIONS FOR FAMILY PLANNING

Overview: Integrating Zika conversations into family planning care

- 1. Assess pregnancy intentions**
- 2. Acknowledge uncertainty, emerging information and changing recommendations**
- 3. Use shared decision-making**

Shared decision-making



Zika conversations with women who wish to *avoid* pregnancy

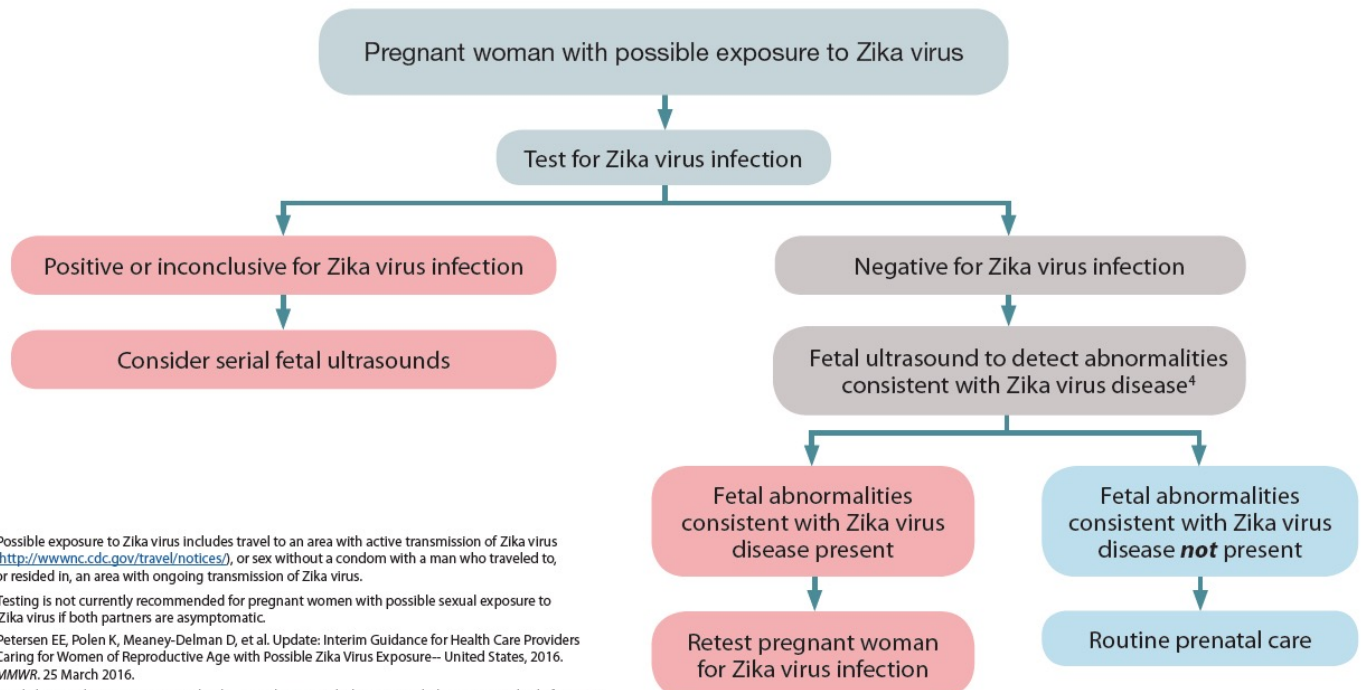
- **Assess Zika risk factors & provide information**
 - Frame as information that may affect method choice and may be useful if pregnancy intentions change
- **Counsel on a range of contraceptive options**
 - Review effectiveness, side effects, frequency of use, etc.
 - Offer full-range of methods on a same-day, onsite basis, including LARC & emergency contraception
 - Counsel that condoms reduce risk of STIs & Zika
- **Offer information on Zika prevention**

Zika conversations with women who *desire* pregnancy

- **Assess Zika risk factors & provide information**
 - CDC conception recommendations after exposure
 - Test woman and/or partner only if exposure & symptomatic
 - Routine testing preconception if exposure and asymptomatic is NOT recommended
 - Any exposure during pregnancy (regardless of symptoms) initiates testing with serum IgM 2-12 wks after exposure: CDC algorithm
 - Evidence of Zika may be detected late in pregnancy *when abortion may not be available*

Pregnant women with possible exposure, not in active transmission area

Updated Interim Guidance: Testing Algorithm for a Pregnant Woman with Possible Exposure to Zika Virus^{1,2}, Not Residing in an Area with Active Zika Virus Transmission³



¹Possible exposure to Zika virus includes travel to an area with active transmission of Zika virus (<http://wwwnc.cdc.gov/travel/notices/>), or sex without a condom with a man who traveled to, or resided in, an area with ongoing transmission of Zika virus.

²Testing is not currently recommended for pregnant women with possible sexual exposure to Zika virus if both partners are asymptomatic.

³Petersen EE, Polen K, Meaney-Delman D, et al. Update: Interim Guidance for Health Care Providers Caring for Women of Reproductive Age with Possible Zika Virus Exposure-- United States, 2016. *MMWR*. 25 March 2016.

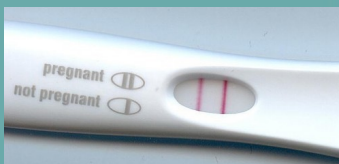
⁴Fetal abnormalities consistent with Zika virus disease include microcephaly, intracranial calcifications, and brain and eye abnormalities. Fetal ultrasounds might not detect abnormalities until late second or early third trimester of pregnancy.

Zika conversations with women who *desire* pregnancy (cont.)

- Explore if information about Zika affects pregnancy desires or timing of planned conception
- Offer information on Zika prevention

Zika conversations with women who are *unsure* about pregnancy

- **Counsel similarly to preconception clients: assess risk factors & provide information**
- **Explore if information about Zika affects pregnancy intentions**
- **Offer information on Zika prevention**



Zika conversations with women presenting for pregnancy testing: (+) *UPT*

- **Assess pregnancy desires & provide options counseling**
- **Assess Zika risk factors & provide information**
 - If plan to continue pregnancy and Zika exposure
 - Serum IgM testing 2-12 wks after exposure regardless of symptoms & CDC testing algorithm
 - Evidence of Zika may be detected late in pregnancy *when abortion may not be available*
- **Explore if information about Zika affects pregnancy decisions**
- **Offer information on Zika prevention**

Zika conversations with women presenting for pregnancy testing: (-) *UPT*

- Assess pregnancy intentions
- Assess Zika risk factors & provide information
- Explore if information about Zika affects pregnancy intentions -> preconception or contraception counseling as appropriate
- Offer information on Zika prevention

ZIKA RESOURCES

Zika resources

- **CDC:** <http://www.cdc.gov/zika/index.html>
- **WHO:**
<http://www.who.int/mediacentre/factsheets/zika/en/>
- **OPA:** <http://www.hhs.gov/opa/pdfs/zika-and-nonpregnant-opa-webinar-final-4-16-2016.pdf>
 - Tool for family planning providers in production
- **CA DPH:**
<http://www.cdph.ca.gov/HealthInfo/discond/Pages/Zika.aspx>
- **ACOG:** <http://www.acog.org/About-ACOG/ACOG-Departments/Zika-Virus>

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QUESTIONS?

