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# *Tdap Vaccine Presentation-For Healthcare Workers*

## Tdap Vaccination during Pregnancy

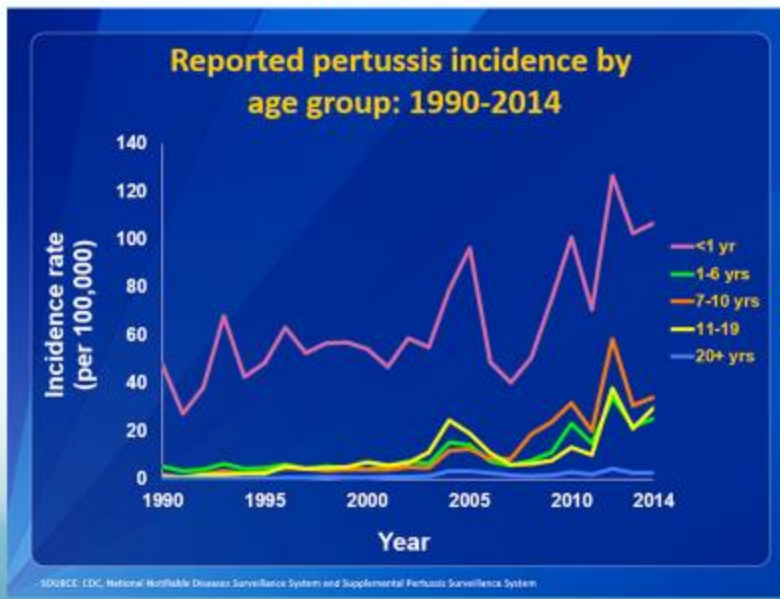
Enhancing Prenatal Care for Pregnant Inmates



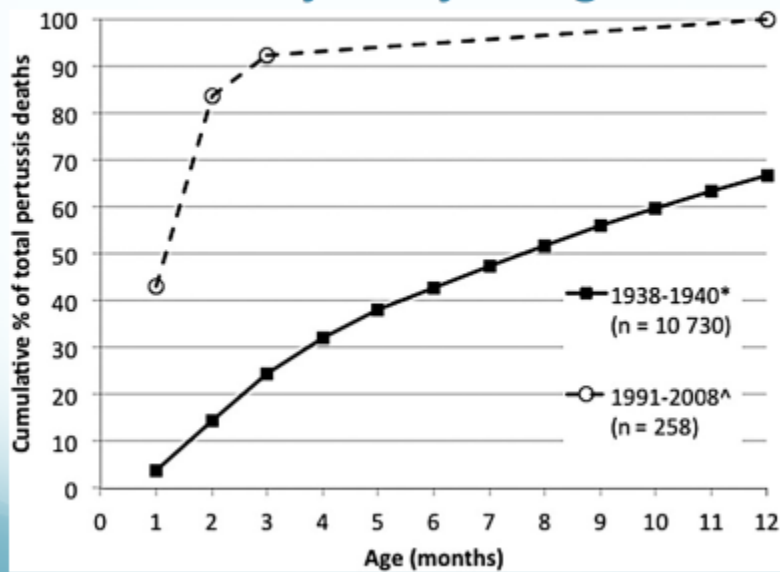
## What is the Tdap Vaccine?

- Tdap stands for “Tetanus, diphtheria and acellular pertussis”
- The Tdap vaccine protects against all 3 of these diseases
- It’s pertussis, or whooping cough, that’s worrisome
  - Tetanus and diphtheria both rare in the United States today;
  - Pertussis cases are starting to reach levels of concern.
  - Infants are MOST vulnerable to pertussis

## Highest number of cases in infants



## Most deadly for youngest infants



Chow et al  
CID 2016



## What are the symptoms?

- Pertussis is a respiratory infection that causes a thick, grayish mucus.
- Symptoms can initially look like a cold:
  - Mild coughing, sneezing, runny nose and low fever
- After 1-2 weeks, the cough worsens and can lead to dramatic coughing spells
- During a coughing spell, children cough nonstop and then struggle with breathing.
  - Creates the characteristic “whoop” sound as kids gasp for air

## Why is it so much worse for babies?

- Infants, especially those younger than 2 – 3 months old, don’t have the strength to cough through the mucus
  - May gasp for air with a reddened face
  - Turn blue while coughing from lack of oxygen
- Infants are especially vulnerable to complications from pertussis, such as pneumonia, brain damage and even death
- **Greatest risk: babies stop breathing altogether**

## Role of maternal pertussis vaccination

- Childhood vaccinations don't start until 2 months old
  - Recommended pediatric dosing schedule:
    - 2 mo, 4 mo, 6 mo, 15 mo; last at 4-6 years.
  - Babies' own immune systems aren't developed enough before 2 months to get the first dose
- **Solution: vaccinate the moms during pregnancy**

## How does vaccination during pregnancy help?

- A woman's immune system produces protective antibodies after vaccination
- These antibodies can pass through the placenta to the fetus
  - Confers some protection before birth
- These maternal antibodies then protect the baby during the critical first 2 months of life when:
  - They are most vulnerable to infection
  - Before they get vaccinated themselves

## Current Recommendation

- Established in 2012
- **Every pregnant women should receive a Tdap vaccine during every single pregnancy**
  - Ideally, give between the 27<sup>th</sup> and 36<sup>th</sup> week of pregnancy.
  - This timeframe maximizes the number of antibodies the baby receives right before birth.
- This recommendation is endorsed by:
  - The Centers for Disease Control and Prevention (CDC)
  - The American Congress of Obstetricians and Gynecologists (ACOG)
  - The American College of Nurse-Midwives (ACNM)
  - The Advisory Committee on Immunization Practices (ACIP)

## Implications for Correctional Healthcare

- Women detained in correctional facilities are at risk for experiencing lapses in prenatal care
- The care they get during time at a jail may be the only prenatal care they receive
- Correctional healthcare providers should vaccinate pregnant women with Tdap
  - Ideal to give during third trimester, but OK to give before 27 weeks if obvious the woman likely will not have consistent prenatal care following jail time

## What You Can Do

- **Be in touch with your local health department if you encounter a pregnant woman.** They can:
  - Search her record in the state immunization record (GRITS) to see if she has been vaccinated already
  - Provide you with a Tdap vaccine if you do not have one on site
  - For the purposes of this demonstration project with Emory University, we are assisting your county health department with acquiring extra Tdap doses for you to use

## Key contacts at your county health department

- Main health department phone number:
- Immunization program direct number:
- Contact information for current immunization program contact or head nurse:

## TAKE HOME MESSAGES:

1. *Tdap vaccination during pregnancy is ultimately to protect the baby against pertussis (i.e. whooping cough).*
2. *A Tdap vaccine should be administered to every pregnant woman during every pregnancy.*
3. *Pregnant women in jails should not be forgotten. Time in jail poses an ideal time to educate and vaccinate these women with Tdap.*

**IF YOU SEE A PREGNANT WOMAN AT INTAKE, THINK TDAP !**

## For More Information

### **ACOG Update on Immunization and Pregnancy: Tetanus, Diphtheria, and Pertussis**

**Vaccination** [http://www.acog.org/Resources\\_And\\_Publications/Committee\\_Opinions/Committee\\_on\\_Obstetric\\_Practice/Update\\_on\\_Immunization\\_and\\_Pregnancy\\_Tetanus\\_Diphtheria\\_and\\_Pertussis\\_Vaccination](http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Obstetric_Practice/Update_on_Immunization_and_Pregnancy_Tetanus_Diphtheria_and_Pertussis_Vaccination)

### **ACNM Position Statement on Immunization in Pregnancy and Postpartum**

[http://midwifery.org/ACNM/33w/ACNM\\_Library/Data/UPLOAD/FILENAME/00000000289/immunization-in-Pregnancy-and-Postpartum-May-2014.pdf](http://midwifery.org/ACNM/33w/ACNM_Library/Data/UPLOAD/FILENAME/00000000289/immunization-in-Pregnancy-and-Postpartum-May-2014.pdf)

### **ACIP Recommendations for Tdap in Pregnancy**

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6207a4.htm>

### **CDC: Pregnancy and Whooping Cough**

<http://www.cdc.gov/pertussis/pregnant/index.html>

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# ZIKA PRESENTATION – FOR HEALTHCARE WORKERS



## The Zika Virus & Pregnancy

For the Healthcare Worker



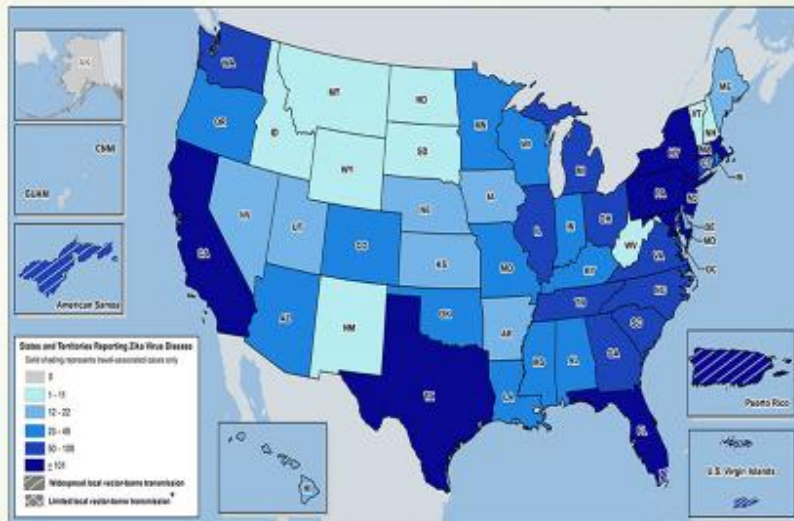
### Outline

- Zika Overview
  - Spread
  - Symptoms & Diagnosis
  - Treatment
  - Adverse Outcomes
  - Prevention
- Implications for Correctional Healthcare
  - Overview
  - A Florida Jail Case Example
  - Federal Bureau of Prisons Guidelines



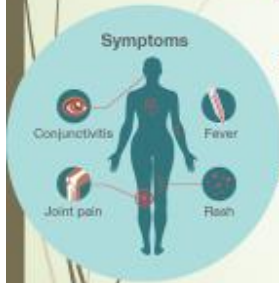
## Zika Overview: Spread

- Zika is a viral disease
- Transmission
  - Mosquito bites
    - *Aedes* species mosquitoes bite during the day and night
  - From a pregnant woman to her fetus
  - Sex
- Travel-associated cases in all states other than Alaska
  - Locally-acquired cases in Florida



Source: <http://www.cdc.gov/dpdx/influenza-zika-us.html>

## Zika Overview: Symptoms & Diagnosis



- Many people are asymptomatic or only have mild symptoms
- Some common symptoms: fever, rash, joint pain, conjunctivitis
  - Less common symptoms – muscle pain and headaches
- Diagnosis
  - Travel history
  - Symptoms (two or more)
  - Need a blood or urine test to confirm infection
- The following two slides can be printed out and used as a hand out for patients

## Zika Overview: Treatment



- Treatment
  - Rest
  - Drink fluids to prevent dehydration
  - Take medicine to reduce fever and pain (i.e Tylenol)
    - Do not take aspirin or other NSAIDs
  - Research ongoing on the use of already developed medication
- Vaccination
  - There is no vaccine for Zika at the moment but NIH scientists are actively working on a vaccine

## Zika Overview: Adverse Outcomes

- Serious birth defects (mother-to-child transmission)
  - Microcephaly and other severe fetal brain defects
  - Defects of the eye
  - Hearing deficits
  - Impaired growth
- Guillian-Barre syndrome
  - Affects men more than women



## Zika Overview: Prevention

- Prevention
  - Long-sleeved shirts and long pants
  - Insect repellents
  - Mosquito-control
    - Air conditioning
    - Door screens
    - Mosquito nets
    - Remove standing water
  - Condom-use or abstinence



## Implications for Correctional Healthcare: Overview

- Are correctional facility populations at risk?
  - Pregnant inmates are at risk for mosquito bites when outside
  - Male inmates with Zika can transmit if the same mosquito bites multiple inmates
- Consider the role of the facility in prevention, identification, and management
- Staff should be aware of ongoing updates to clinical guidelines

## Implications for Correctional Healthcare: A Florida Jail Case Example

- Symptomatic entrant to the jail with confirmed Zika infection
- Florida jail maintained close relationship with the local health department



## Implications for Correctional Healthcare: A Florida Jail Case Example

- Protocol for jail developed (with the help of local health department):
  - All patients asked about Zika exposure at entrance
    - Women of childbearing age asked about pregnancy
  - Those with two or more symptoms:
    - Pregnant patients taken to OB triage
    - Others taken to clinical evaluation and treatment center
  - Blood and urine samples collected and delivered to health department for confirmation of suspected cases
  - Standard infection control precautions used for suspected or confirmed cases

## Implications for Correctional Healthcare: A Florida Jail Case Example

- Prevention and Control
  - Health department
    - Spray jail grounds with insecticides
  - Jail staff
    - Remove standing water
  - Pregnant inmates provided with
    - Long sleeve uniforms
    - Pants
    - Mosquito repellent
    - Education and counseling



## Implications for Correctional Healthcare: Federal Bureau of Prisons Guidelines

- Can be found online: [https://www.bop.gov/resources/pdfs/zika\\_virus\\_2016.pdf](https://www.bop.gov/resources/pdfs/zika_virus_2016.pdf)
- Content overview
  - Testing preparation, screening, and treatment
  - Infection control
  - Shipping specimens
  - Exposure-risk questionnaire
  - Educational resources
  - Pregnant women-specific recommendations
- Recommend that facilities partner with local health department
  - Establish contact person
  - Identify local procedures for testing and treatment

## Zika Exposure Risk Questionnaire

**APPENDIX 1. PREGNANT FEMALE ZIKA EXPOSURE RISK QUESTIONNAIRE**

SECTION 1. ZIKA EXPOSURE RISK QUESTIONS		
Yes	No	?
<p>➔ <b>If answers to all 3 questions are (No), Stop.</b> Save below, and Scan the document into the BOPIS Document Manager</p> <p>➔ <b>If the answer to any question above is Yes or Unclear (U).</b> Continue to Section 2 and Section 3 below. Once all sections are complete, sign and scan the document into the BOPIS Document Manager. Contact the local or state health department and Regional County Inspector and Coordinator to report the information on this document and seek direction regarding screening Zika testing.</p>		
SECTION 2. ZIKA SYMPTOMS		
<p>4. Have you had any of the following symptoms while pregnant?</p> <p><input type="checkbox"/> Rash <input type="checkbox"/> Fever <input type="checkbox"/> Muscle or joint pain <input type="checkbox"/> Headache <input type="checkbox"/> Conjunctivitis <input type="checkbox"/> Swave of these symptoms</p> <p>Date symptoms began? _____</p> <p>How long did the symptoms last? _____</p> <p>Did you see a health care provider for these symptoms? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>		
SECTION 3. Based on answers to questions 1-4 above, check appropriate boxes indicating Zika exposure risk history.		
<p><input type="checkbox"/> <b>No Zika symptoms</b> while pregnant &amp; lived in an area with active Zika virus transmission during her pregnancy</p> <p><input type="checkbox"/> <b>No Zika symptoms</b> while pregnant &amp; did not live in an area with active Zika transmission &amp; had potential Zika exposure via travel or unprotected sex with someone who lived in or traveled to Zika transmission area</p> <p><input type="checkbox"/> It is less than 2 weeks since possible exposure</p> <p><input type="checkbox"/> It is 2-12 weeks since possible exposure</p> <p><input type="checkbox"/> It is greater than 12 weeks since possible exposure</p> <p><input type="checkbox"/> <b>She has experienced Zika symptoms</b> while pregnant and</p> <p><input type="checkbox"/> Symptoms started less than 2 weeks ago</p> <p><input type="checkbox"/> Symptoms started 2-12 weeks ago</p> <p><input type="checkbox"/> Symptoms started greater than 12 weeks ago</p>		
<p>Estimated Delivery Date: ____/____/____ Gestational age (in weeks): _____</p>		
<p>Provider Name (Print): _____</p> <p>Provider Signature: _____ Date: ____/____/____</p> <p>Facility Name: _____</p> <p>Registration #: _____</p> <p>DOC: ____/____/____ Institution: _____</p>		