



**Zika Webinar Series**  
**Zika Virus Disease Update for EHR Vendors, other Health Information  
Technology Developers, Public Health, and Clinical Healthcare Partners**

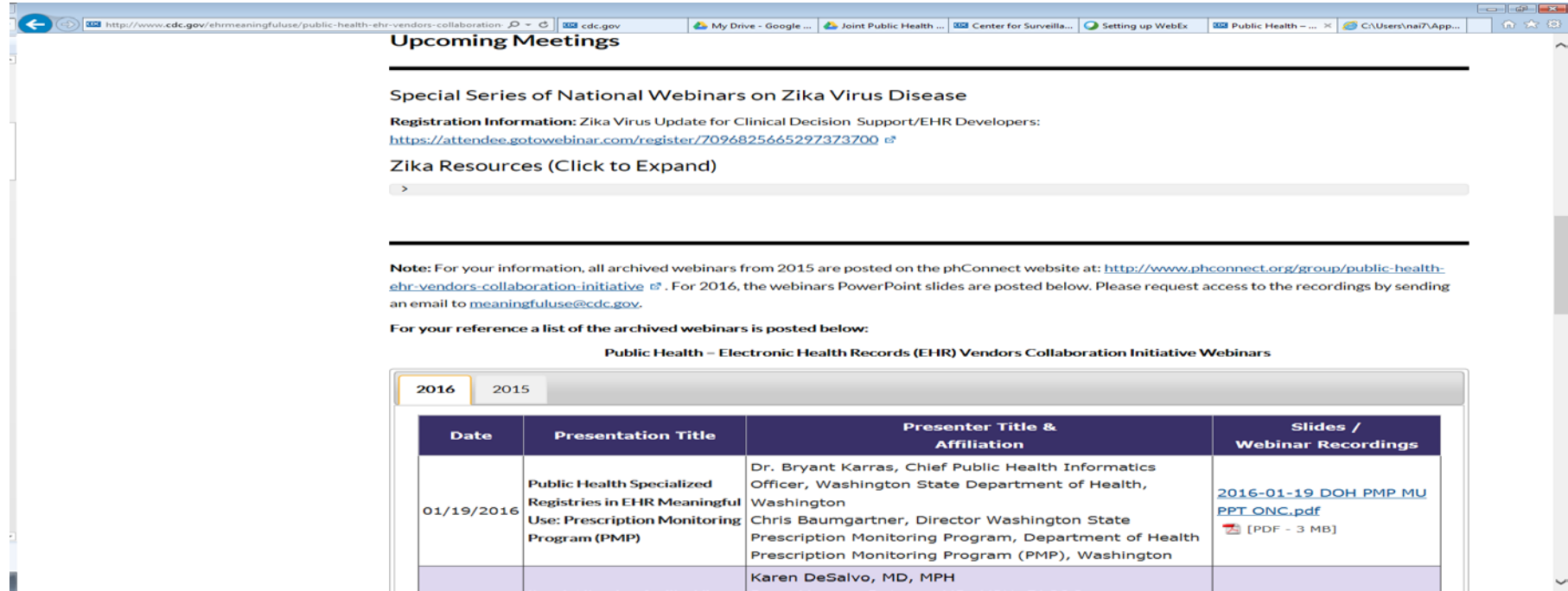
**Public Health - EHR Vendors Collaboration Initiative**

**Presented by:**  
**Margaret Lampe, RN, MPH and Dr. Stephen Hasley**

**National Webinar # 5**  
*August 3, 2016*

# CDC EHR Meaningful Use webpage-Public Health – EHR Vendors Collaboration Initiative

**URL:** <http://www.cdc.gov/ehrmeaningfuluse/public-health-ehr-vendors-collaboration-initiative.html>



The screenshot shows a web browser window with the URL <http://www.cdc.gov/ehrmeaningfuluse/public-health-ehr-vendors-collaboration-initiative.html>. The page title is "Upcoming Meetings".

**Special Series of National Webinars on Zika Virus Disease**

**Registration Information:** Zika Virus Update for Clinical Decision Support/EHR Developers:  
<https://attendee.gotowebinar.com/register/7096825665297373700>

**Zika Resources (Click to Expand)**

>

**Note:** For your information, all archived webinars from 2015 are posted on the phConnect website at: <http://www.phconnect.org/group/public-health-ehr-vendors-collaboration-initiative>. For 2016, the webinars PowerPoint slides are posted below. Please request access to the recordings by sending an email to [meaningfuluse@cdc.gov](mailto:meaningfuluse@cdc.gov).

**For your reference a list of the archived webinars is posted below:**

**Public Health – Electronic Health Records (EHR) Vendors Collaboration Initiative Webinars**

Date	Presentation Title	Presenter Title & Affiliation	Slides / Webinar Recordings
01/19/2016	Public Health Specialized Registries in EHR Meaningful Use: Prescription Monitoring Program (PMP)	Dr. Bryant Karras, Chief Public Health Informatics Officer, Washington State Department of Health, Washington Chris Baumgartner, Director Washington State Prescription Monitoring Program, Department of Health Prescription Monitoring Program (PMP), Washington	<a href="#">2016-01-19 DOH PMP MU PPT ONC.pdf</a> [PDF - 3 MB]
		Karen DeSalvo, MD, MPH Deputy Assistant Secretary, MD, MPH, FACP	

## *CDC Web Resources on Zika Virus Disease*

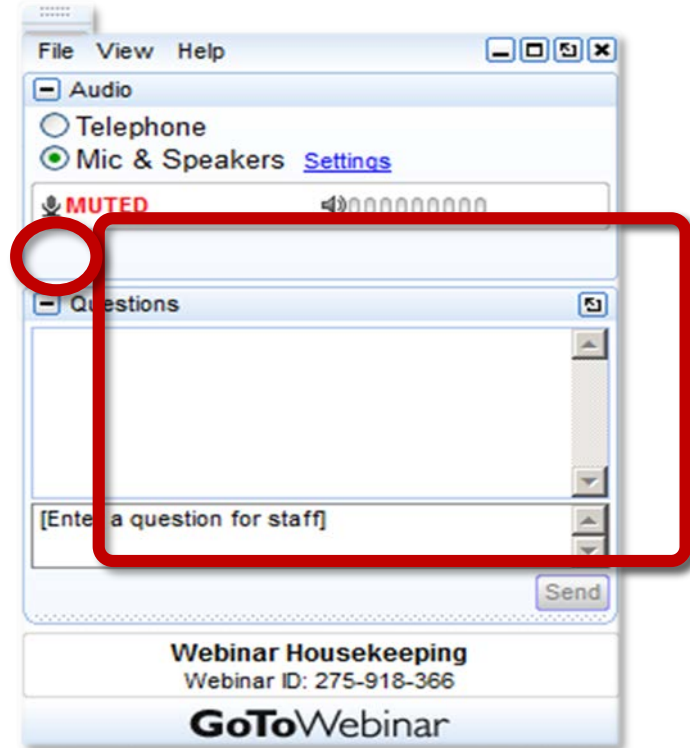
URL: <http://www.cdc.gov/zika/index.html>

URL: <http://www.cdc.gov/zika/hc-providers/index.html>

URL: <http://www.cdc.gov/zika/hc-providers/tools.html>

# *Question and Answer Session*

*How to submit or ask questions for the panel members?*



## Submit or Ask Questions

- Submit your text question and comments using the Question Panel
- Please raise your hand to be unmuted for verbal questions.

# Agenda

- **Announcements-**

- **Introduction of Presenters-**

*-Jim Daniel, MPH, Public Health Coordinator at the Office of the National Coordinator for Health IT*

- **Panel Discussion and Q & A**

# Zika Virus

## The Need for Capturing and Sharing Pregnancy Status from Electronic Health Records

Margaret A. Lampe, RN, MPH

Pregnancy and Birth Defects Surveillance Team, Pregnancy and Birth Defects Task Force

August 3, 2016

# First time in history...



"Never before in history has there been a situation where a bite from a mosquito could result in a devastating malformation," Dr. Tom Frieden, CDC Director, *Fortune*, April 13, 2016

"...the last time an infectious pathogen (rubella virus) caused an epidemic of congenital defects was more than 50 years ago..."  
– S.Rasmussen et al. *New England Journal of Medicine*, April 13, 2016

"[Zika] became the first major infectious disease linked to human birth defects to be discovered in more than half a century and created such global alarm that the World Health Organization (WHO) would declare a Public Health Emergency of International Concern."  
– Petersen et al. *New England Journal of Medicine*, March 30, 2016

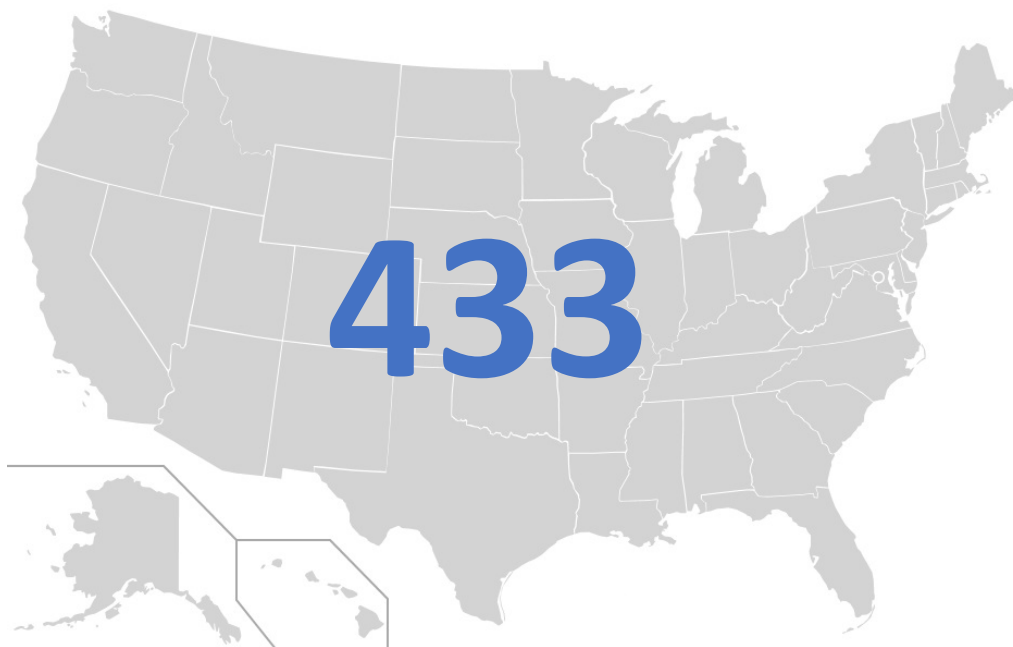
# Zika Virus Infection in Pregnant Women

- Pregnant women can be infected
  - Through a mosquito bite
  - Through sex with an infected partner
- If infected around conception,
  - Zika might present risk to fetus
- If infected during pregnancy,
  - Zika can be passed to the fetus during pregnancy or around the time of birth



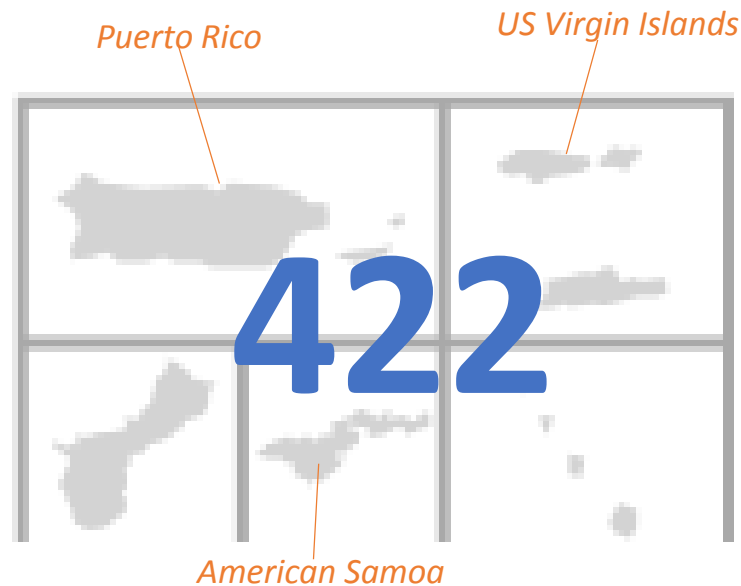


# Number of Pregnant Women Who May Be Affected



Pregnant women with any laboratory evidence of possible Zika virus infection in the **US states and DC**

As of July 21, 2016



Pregnant women with any laboratory evidence of possible Zika virus infection in **U.S. territories** (currently including **Puerto Rico, U.S. Virgin Islands, and American Samoa**)

# Adverse Outcomes and Zika Virus

- A range of problems have been detected among fetuses and infants with known or suspected congenital infection with Zika virus including:
  - Microcephaly
  - Brain atrophy and asymmetry
  - Eye abnormalities
  - Limb abnormalities
  - Growth abnormalities
  - Hearing impairment
  - Seizures
  - Swallowing impairment
  - Developmental delay



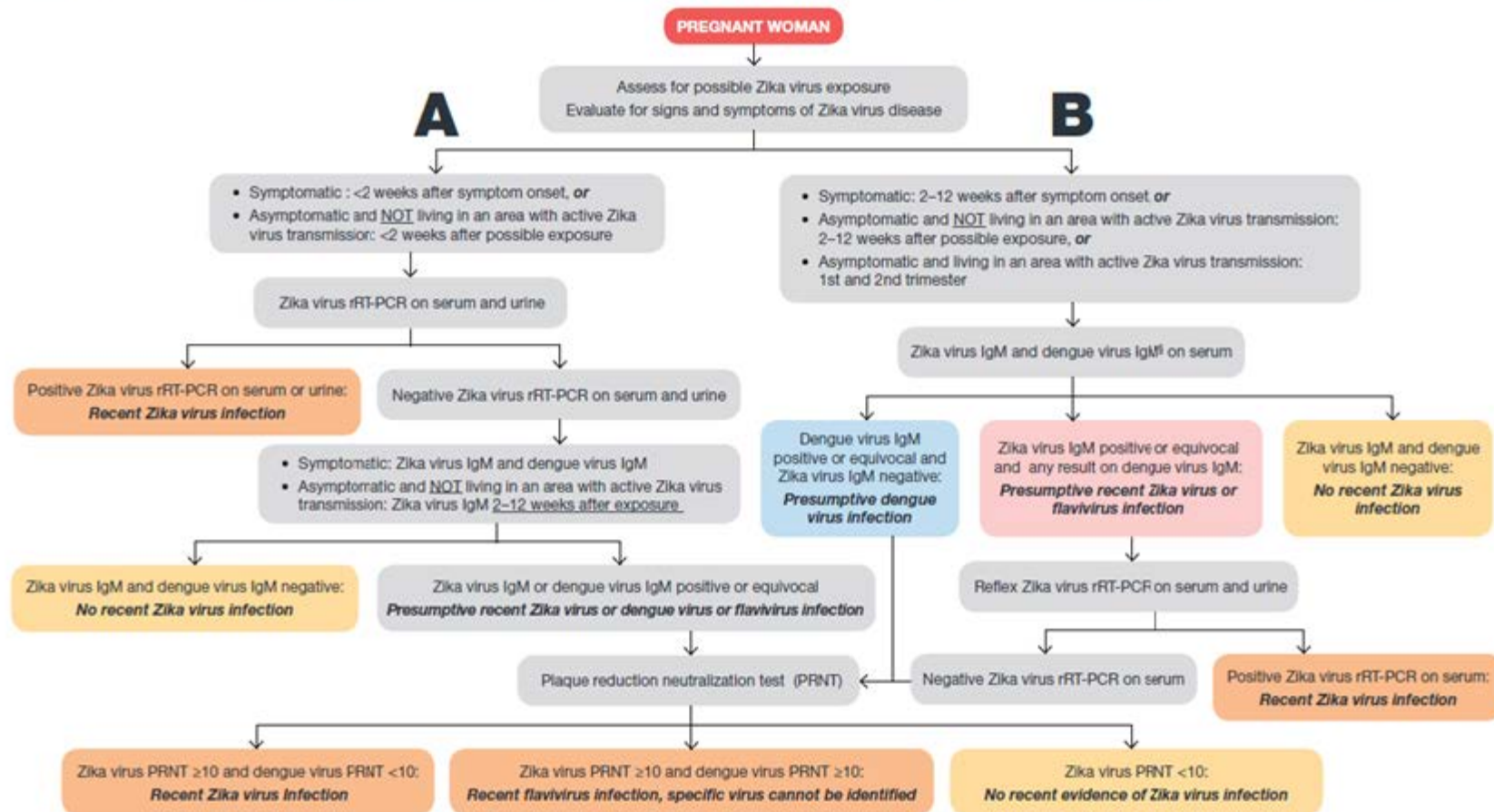
AP Photos/Felipe Dana



# Pregnancy Outcomes and Zika Virus

Zika virus has been linked to spontaneous abortion and fetal demise but evidence is insufficient at this point in time to determine causality

# Testing and interpretation recommendations<sup>1,5,6</sup> for a pregnant woman with possible exposure to Zika virus<sup>7</sup> — United States (including U.S. territories)



# Many Questions Remain

- What is the full range of potential health problems that Zika virus infection may cause?
- What is the level of risk from a Zika virus infection during pregnancy?
- When during pregnancy Zika virus infection poses the highest risk to the fetus?
- What are other factors (e.g., co-occurring infection, nutrition, symptomatic vs. asymptomatic) that might affect the risk for birth defects?
- Researchers are collecting data to better understand the clinical spectrum of congenital Zika virus disease



# What CDC is Doing to Learn More

## Collecting Data for Action

US Zika Pregnancy  
Registry



Zika Active Pregnancy  
Surveillance System  
(Puerto Rico)



Proyecto Vigilancia de  
Embarazadas con Zika  
(Colombia)



# U.S. Zika Pregnancy Registry

- **Purpose of registry:** To monitor pregnancy and infant outcomes following Zika virus infection during pregnancy and to inform clinical guidance and public health response
- **How it works:** The registry is a supplemental surveillance effort coordinated by CDC and dependent on the voluntary collaboration of the state, tribal, local, and territorial health departments



## U.S. Zika Pregnancy Registry

- **Who is included:** Pregnant women with laboratory evidence of Zika virus infection and exposed infants born to these women; infants with laboratory evidence of congenital Zika virus infection and their mothers
- **How can you support the registry?** Enable easy data capture of pregnancy status in electronic health records that can be used for clinical care and accompany laboratory orders for Zika virus testing





# Importance of Pregnancy Reporting with Zika Testing

- **Locations of testing is expanding:**
  - More states are developing capacity for IgM and PRNT testing
  - Additional testing in commercial laboratories
- **Participation in the US Zika Pregnancy Registry will likely decline without pregnancy status reporting**
  - Less data available to monitor and understand Zika and pregnancy in the United States
  - A potentially less informed public health response

# Importance of Pregnancy Reporting with Zika Testing

- Knowledge of pregnancy status is critically important for addressing other important public health problems:
  - severe maternal morbidity and mortality
  - perinatally transmitted infections
    - HIV
    - hepatitis B
    - hepatitis C
    - syphilis
    - cytomegalovirus
  - opioid addiction and substance use in pregnancy.

# Thanks to our many collaborators and partners!

## For clinical questions, please contact

[ZikaMCH@cdc.gov](mailto:ZikaMCH@cdc.gov)

## For U.S. Zika Pregnancy Registry questions, please contact

[ZikaPregnancy@cdc.gov](mailto:ZikaPregnancy@cdc.gov)

For more information, contact CDC  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348 [www.cdc.gov](http://www.cdc.gov)

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.



# Preliminary Investigation of Early Identifiers of Pregnancy

Data Sources: Delivery information provided by Dr. Hasley, Epic

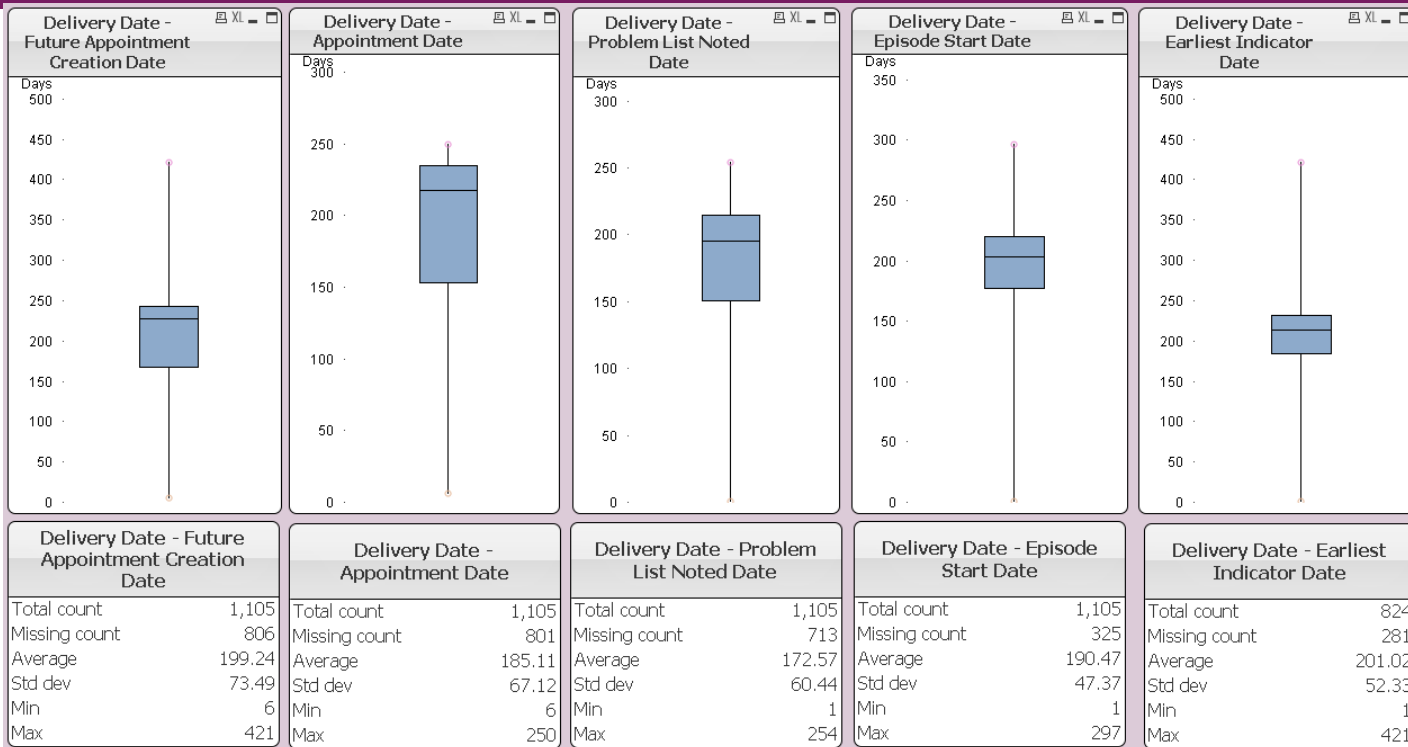
# Population-Defining Metric Definitions

- Sample population consists of 1,100 consecutive deliveries at UPMC in March, 2014. Mothers matched with office visits based on the Medical Record Number.
- Pregnancy –
  - Identified using ICD9 codes in the V22 range and ICD9 code V72.42. Prior to ICD 10, there was not a clear way to differentiate between a first trimester visit and a subsequent trimester visit based on diagnosis code alone.
  - Identified using a free text field in the Epic episode tab.

# Date Metric Definitions

- Future Appointment Creation Date – Date on which the earliest future pregnancy-related appointment was scheduled (V22.\*/Z32.01 as encounter diagnosis, within 250 days of delivery).
- Appointment Date – Earliest pregnancy-related appointment date within 250 days of delivery (V22.\*/Z32.01 as encounter diagnosis).
- Problem List Noted Date – Earliest date on which a pregnancy-related diagnosis (V22.\*/Z32.01) was added to the problem list within 250 days of delivery, with preference given to those problems which had resolved dates after delivery.
- Episode Start Date – Entered “start date” of a pregnancy “episode” in Epic’s episode tab (used to track pregnancies, transplants, etc.). Appears that the entered start date is the same date as the day on which the episode record was created.
- Earliest Indicator Date – Minimum of the four listed dates above

# Distribution of Day Differential between Pregnancy Indicator Dates and Delivery Dates



# Expert Panelists

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Hilary K. Wall, MPH  
Clinical Team  
Pregnancy and Birth Defects Task Force  
2016 CDC Zika Virus Response  
CDC, Atlanta, GA.

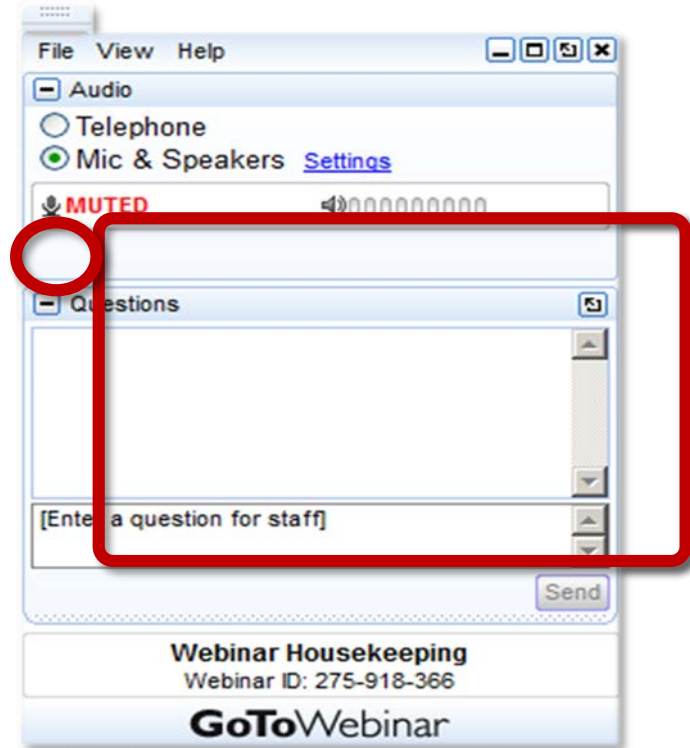
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