

Mission Briefing

Zika Epidemic

Mission 1



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January 22nd, 2016

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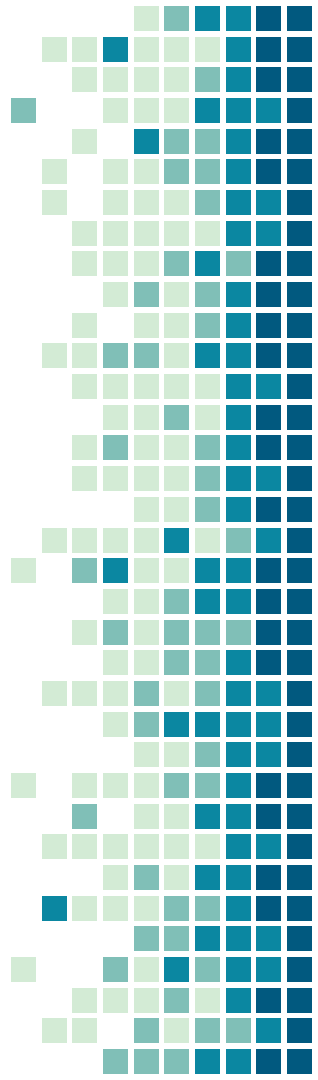
Background

Viral Outbreak in Central and South America

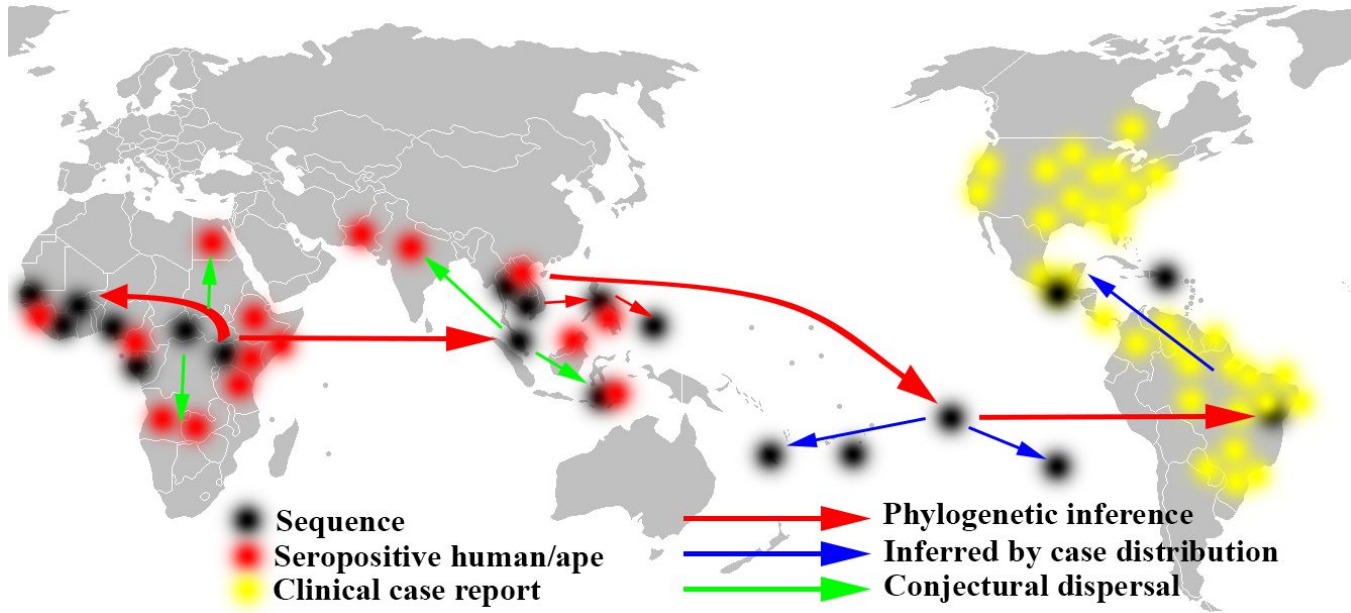
Scientists at the CDC are reporting an outbreak of a viral infection among Central and South American countries.

Cases have been reported in several countries including Brazil, Columbia, Dominican Republic, Ecuador. New reports of the virus are coming in every day. There is strong concern that the virus may spread to the United States.

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Virus Origin



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Zika Virus

About

- Viral Infection

Transmission

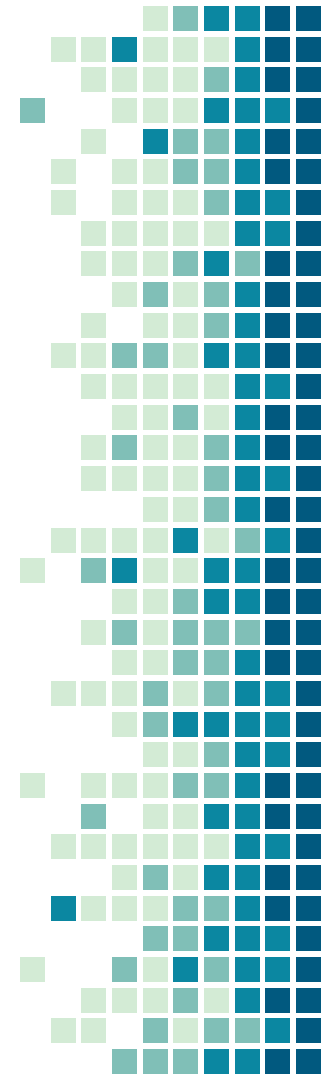
- Mosquitoes
- Blood Transfusion
- Pregnancy
- Sexual Contact

Complications

- Fever
- Birth defects (Microcephaly)

At Risk

- Pregnant women
- Potential Fathers
 - The disease can be transmitted for up to 6 months after diagnosis.
- Potential Mothers
 - The disease can be transmitted for up to 8 weeks after diagnosis.



Microcephaly

Causes delayed brain growth in new-born children.

Complications

- Seizures
- Developmental delay, such as problems with speech or other developmental milestones (like sitting, standing, and walking)
- Intellectual disability (decreased ability to learn and function in daily life)
- Problems with movement and balance
- Feeding problems, such as difficulty swallowing
- Hearing loss
- Vision problems



Image of a baby with **microcephaly** (left) compared to a normal baby (right). This is one of the potential effects of Zika virus. Signs of microcephaly may develop a few months after birth.

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Risk: Worldwide Zika Exposure

2016 Summer Olympics - Rio de Janeiro

Approximately 500,000 travelers from across the globe will descend upon Zika infected Brazil in August. It is estimated that 1.5 million people in Brazil are infected with the Zika virus.

There is significant concern that athletes and visitors will be infected and carry the disease to their home country.



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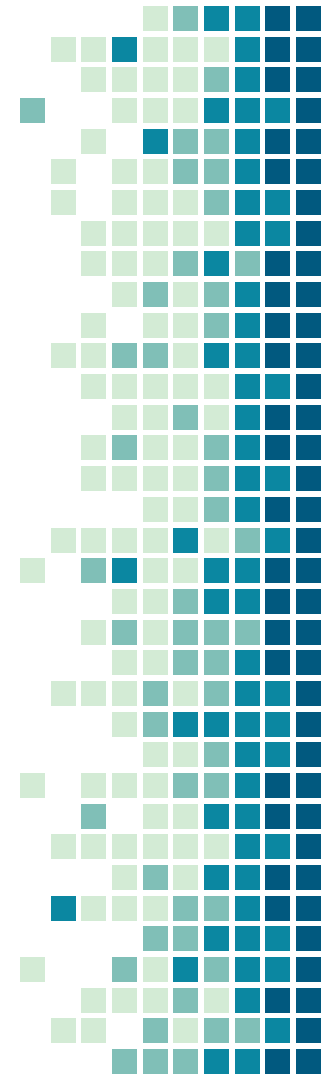
The Problem

GIS Analysts need to be able to effectively share this data and have up to date information as new data becomes available.

Specifically, they need to be able:

- View data aggregated data about each country including:
 - Microcephaly cases confirmed
 - Microcephaly cases under investigation
 - Reported Zika cases
 - Confirmed Zika cases

Note: Reporting format and data quality varies widely between countries.

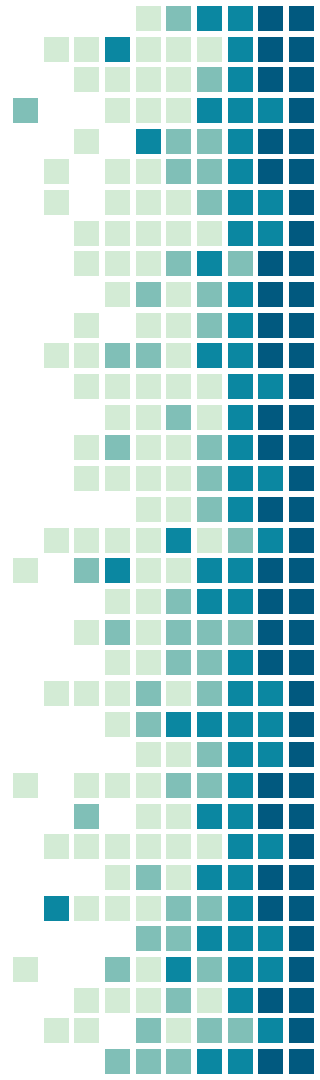


Mission Objectives

Develop a web application that can catalog the Zika reports that are coming in from around the country.

The application must do the following:

- Ingest incoming CSV Zika reports.
- Show a detail page for each country with reported statistics.
- Aggregate statistics across all states or provinces of a country.



Priorities

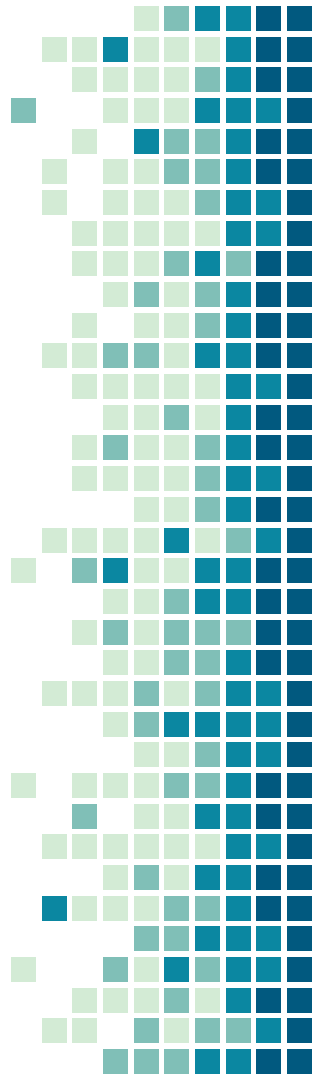
The accuracy of this data is very important. The web application needs to have automated testing written with TDD.

Be sure to use unit and integration tests appropriately.

New Reports will come in throughout the week.

Time - You have four days until your app needs to be deployed.

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Schedule

Tuesday

- 9:30 Standup - What did you do yesterday? What did you do today? Any roadblocks?

Wednesday

- 9:30 Standup - What did you do yesterday? What did you do today? Any roadblocks?

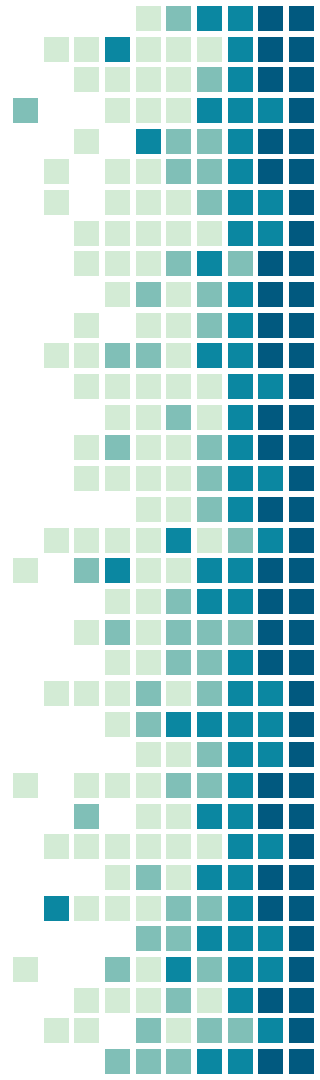
Thursday

- 9:30 Standup - What did you do yesterday? What did you do today? Any roadblocks?

Friday

- 9:30 Standup - What did you do yesterday? What did you do today? Any roadblocks?
- Ship it.

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Questions