

Council on Infectious Disease Preparedness and Response

September 23, 2015
1:00-3:00 PM



Health and Wellness for all Arizonans

Agenda

- Call to Order
- Welcome and Introductions
- Review Council Scope and Purpose
- Ebola Updates
- Emerging Infectious Disease Threats
- Discussion of Council Continuation
- Call to Public

Council Members

1:05-1:15 pm

WELCOME AND INTRODUCTIONS



Health and Wellness for all Arizonans

Cara Christ

1:15-1:25 pm

COUNCIL SCOPE & PURPOSE



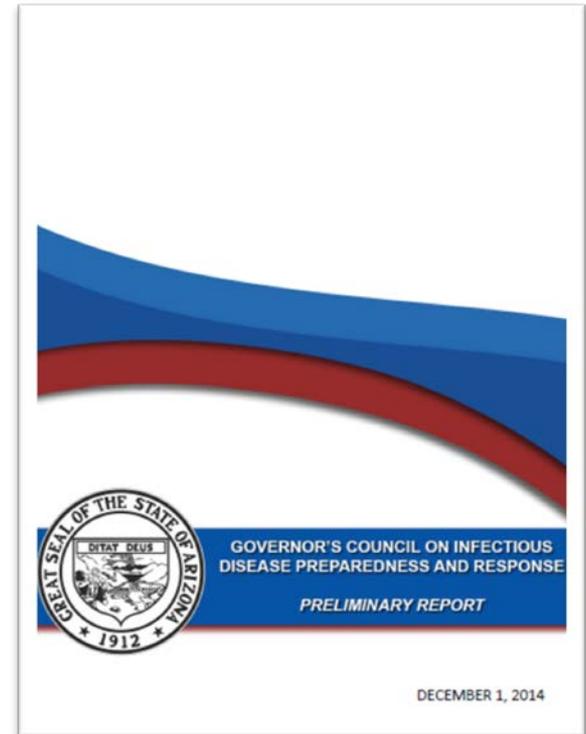
Health and Wellness for all Arizonans

Council's Purpose

- Originally established through Executive Order 2014-08
- Goals:
 - Develop a coordinated plan to protect the safety and well-being of Arizonans in the face of an infectious disease outbreak
 - Strengthen collaboration between partners to effectively address infectious disease transmission and treatment
 - Serve as a reliable and transparent source of information and education about emerging infectious disease threats

Council History

- Initially convened on October 24, 2014
- Report of Council findings & recommendations delivered December 1, 2014



Council Members

1:25-1:55 pm

EBOLA UPDATES

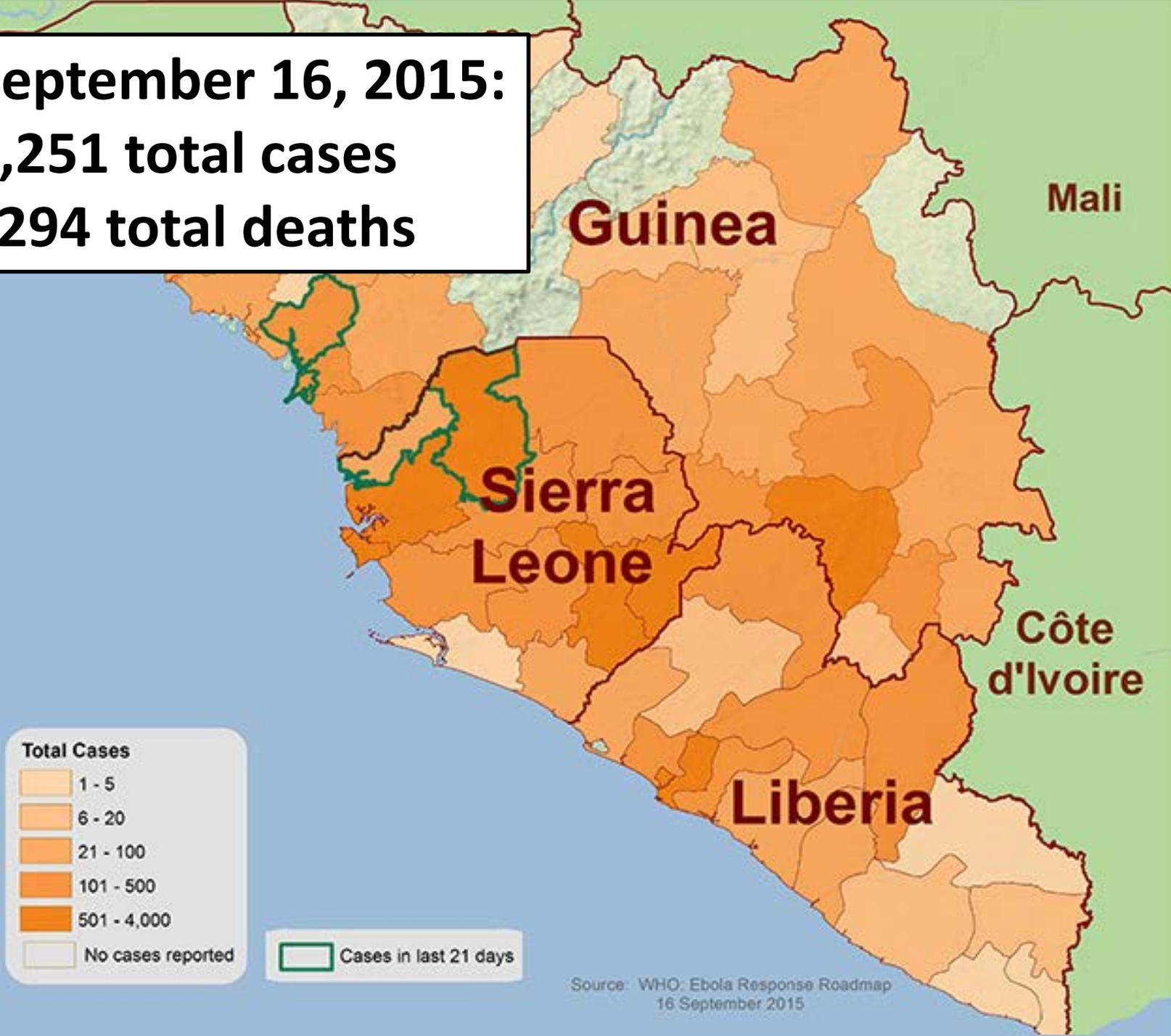


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EBOLA INTERNATIONAL SITUATION

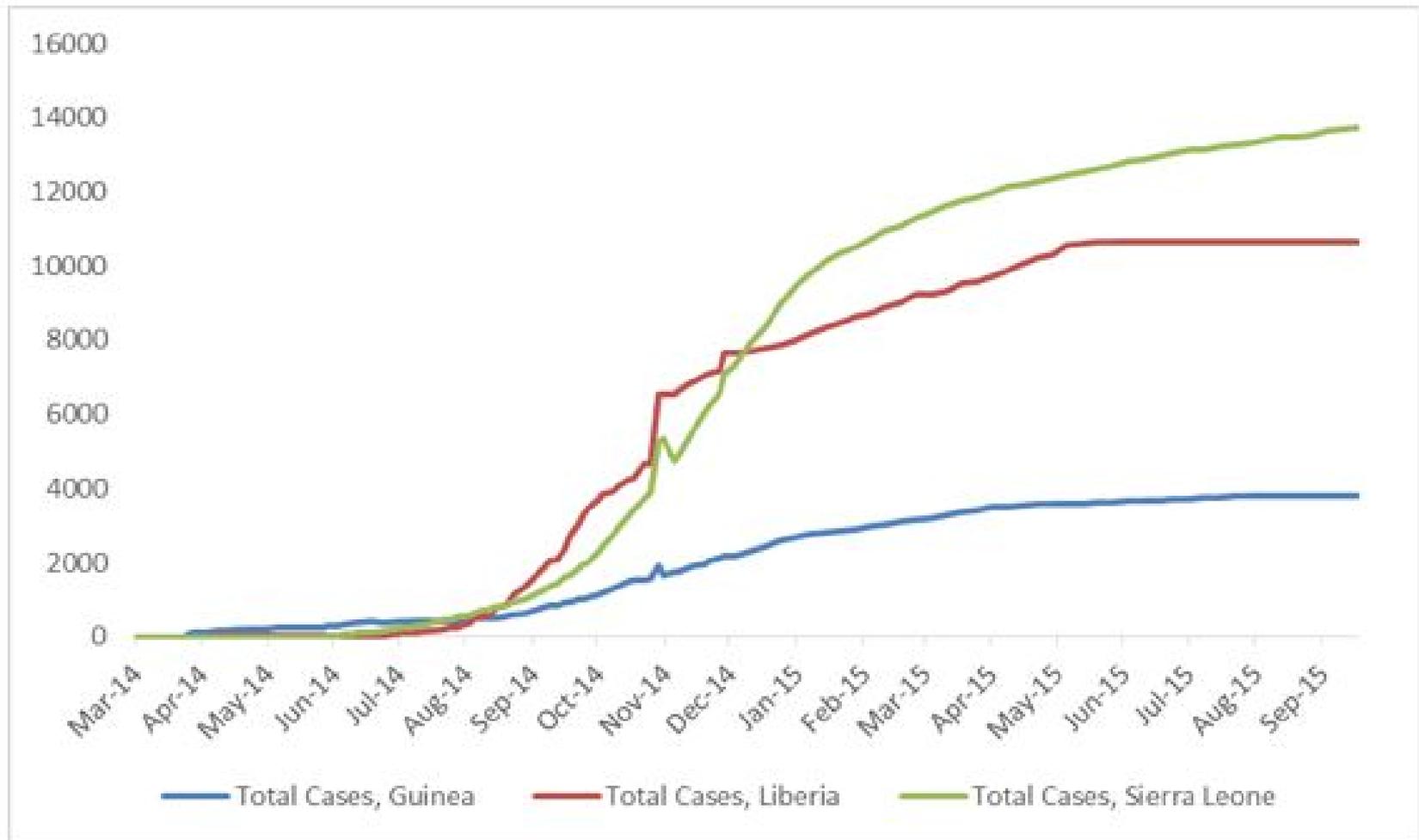
**As of September 16, 2015:
28,251 total cases
11,294 total deaths**



Source: WHO: Ebola Response Roadmap
16 September 2015



Total suspected, probable, and confirmed cases of Ebola virus disease in West Africa, March 25, 2014 – September 13, 2015

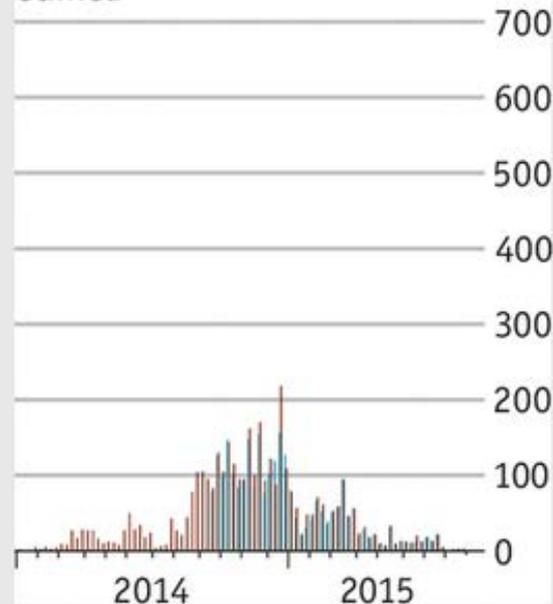


New cases* of Ebola infection per week

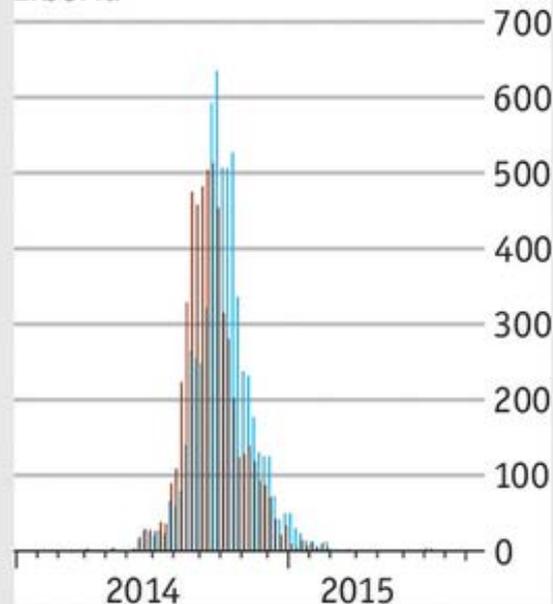
To August 23rd 2015

■ Patient database ■ WHO Situation Report

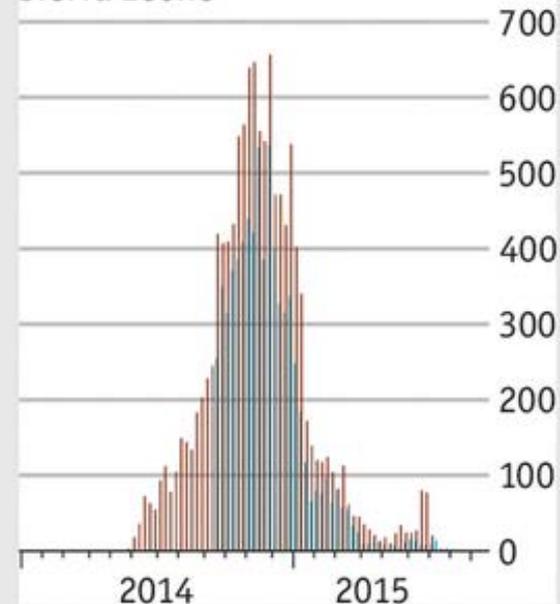
Guinea



Liberia



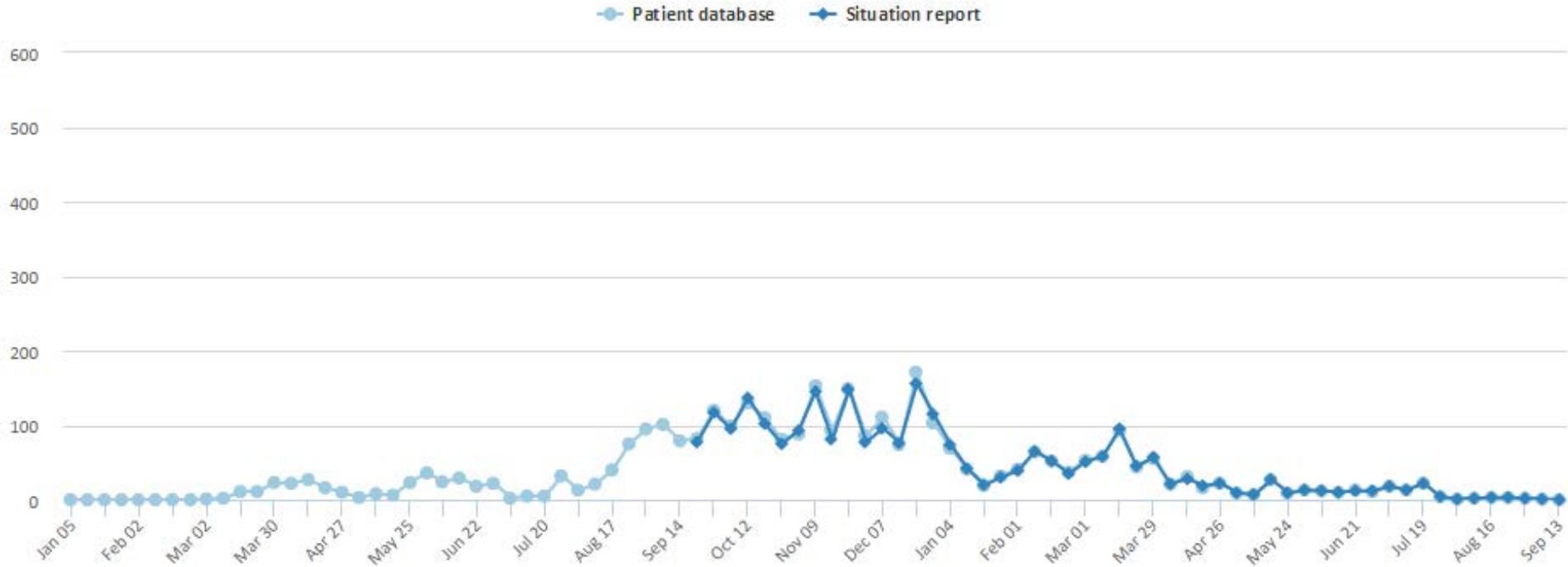
Sierra Leone†



Source: WHO

*Confirmed and probable †Patient database not published from July 5th 2015

Guinea, January 2014–September 2015



Sierra Leone, January 2014–September 2015



Liberia

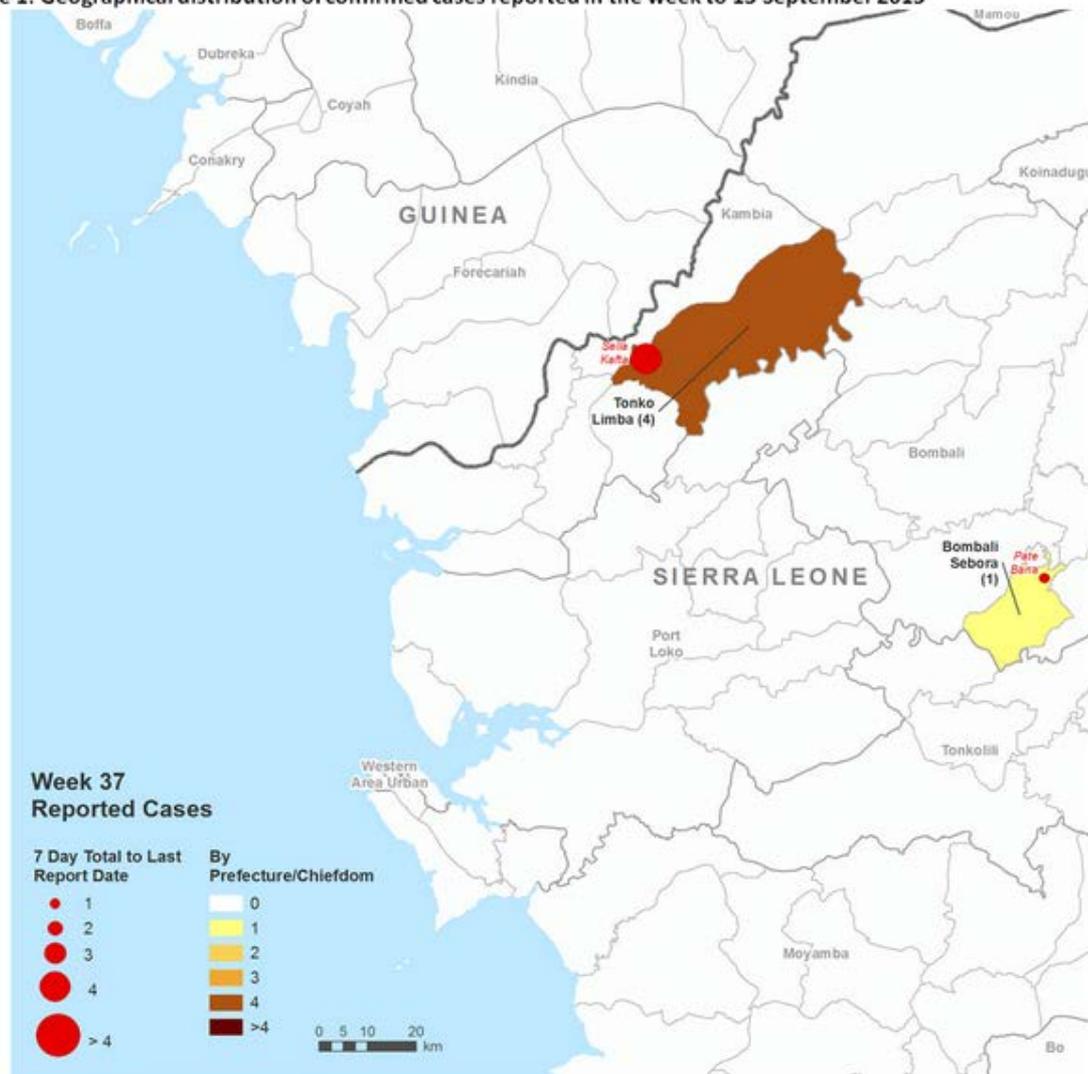
- May 9: Declared Ebola-free
- June 29: 1 new case identified
 - Led to 5 additional cases
- September 3: Declared Ebola-free again
- September 21: CDC stopped monitoring of returning travelers from Liberia

Situation Reports

- 5 cases reported week of Sept 13 – all in Sierra Leone
- Guinea reported first EVD-free week in >12 months

- Ebola cases reported the week of September 13th

Figure 1: Geographical distribution of confirmed cases reported in the week to 13 September 2015



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

WILSON
Marathon



Returning Traveler Monitoring in Arizona

- Since October 2014, a total of 221 travelers have been monitored by AZ local public health
- Multiple revisions of monitoring criteria:

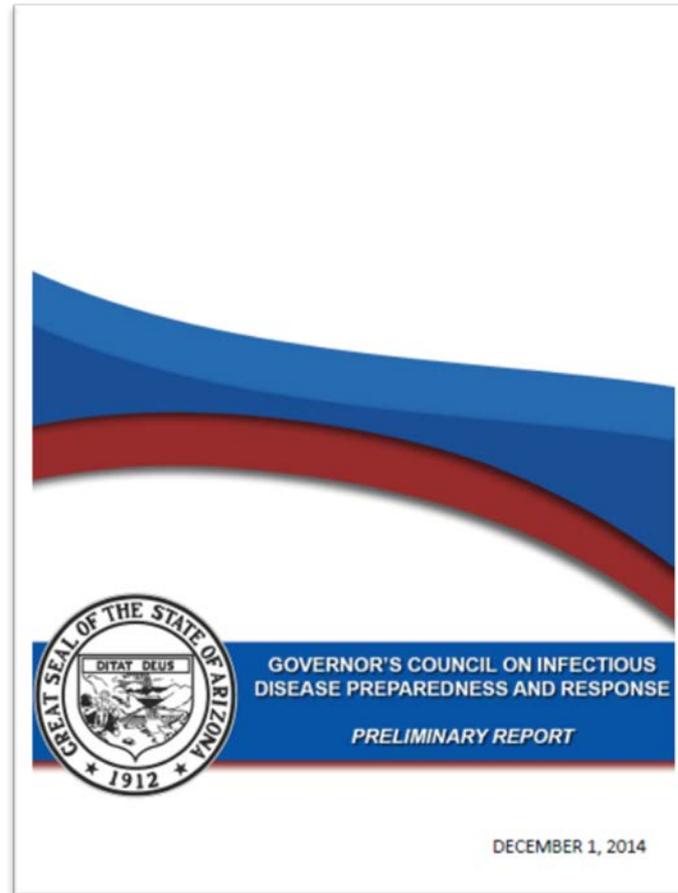
EXPOSURE CATEGORY	PUBLIC HEALTH ACTION		
	MONITORING	ISOLATION/ QUARANTINE	RESTRICT TRAVEL
No Identifiable Risk	NO	NO	NO
Low, but not zero, Risk Liberia*	Self-Observe	NO	NO
Low, but not zero, Risk Sierra Leone, Guinea	Active Monitoring	NO	NO
Some Risk	Direct Active Monitoring	Case by Case Assessment	Case by Case Assessment
High Risk	Direct Active Monitoring	YES	YES

**Travelers from Liberia are recommended to self-observe until 21 days after departing Liberia.*

Arizona Ebola funding

Source	Project Period	Scope
Hospital Preparedness Program	5/18/15-5/17/20	<ul style="list-style-type: none">• Healthcare concept of operations• Healthcare worker readiness and physical infrastructure of designated facilities• Developing healthcare coalition capabilities• Coordination with EMS and 911/PSAPs
Public Health Emergency Preparedness	4/1/15-9/30/16	<ul style="list-style-type: none">• Coordination between state and local public health and healthcare systems• Strengthening partnerships across healthcare, epidemiology, and lab• Establishing partnerships with infection control
Epidemiology and Laboratory Capacity	4/1/15-3/31/18	<ul style="list-style-type: none">• Infection control assessment & training• Laboratory biosafety & biosecurity

Update on Council's Report



Charge 1: Develop and implement a coordinated statewide plan to address potential outbreaks of infectious disease

Recommendation	Status
Returning traveler monitoring protocols and implementation	✓
Recommendations for county collaboration with IHS to monitor returning Public Health Service staff	✓
Public health protocols for case contact investigations	✓
Draft templates of legal documents (isolation & quarantine)	✓
Packing material provided to county health for specimen submission	✓
Packaging and shipping training	✓
Hospital protocols for identification, diagnosis, and isolation of suspect Ebola cases	✓
Designation of treatment facilities	✓
CDC readiness assessments at designated facilities	✓
Hospital preparedness exercises	✓
Hospital certification process	In progress
Coordination with pre-hospital transport	In progress

Laboratory Preparedness

- Continuation of packaging and shipping training
 - Since 6/19/2014, a total of 256 personnel from 105 institutions participated
 - Participants represent public health, hospitals, clinical and reference laboratories, Indian Health Services, and state and federal agencies

Tiered Healthcare System


U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Preparing U.S. Hospitals for Ebola

CDC has developed a strategy to help healthcare facilities and state health officials prepare for patients with possible or confirmed Ebola. This strategy identifies which hospitals will provide different levels of care for patients being assessed and treated for Ebola.



Frontline Healthcare Facility

- 
Quickly identifies and isolates patients with possible Ebola
- 
Notifies facility infection control and state and local public health officials
- 
Has enough Ebola personal protective equipment (PPE) for at least 12–24 hours of care


Prepares for patient transfer, if needed



Ebola Assessment Hospital

- 
Safely receives and isolates a patient with possible Ebola
- 
Provides immediate laboratory evaluation and coordinates Ebola testing
- 
Cares for a patient for up to 5 days (including evaluation and management of alternative diagnoses) until Ebola diagnosis is confirmed or ruled out
- 
Has enough Ebola PPE for up to 5 days of care


Transfers a patient with confirmed Ebola to an Ebola treatment center in consultation with public health officials



Ebola Treatment Center

- 
Safely receives and isolates a patient with confirmed Ebola
- 
Cares for patients with Ebola for duration of illness
- 
Has enough Ebola PPE for at least 7 days of care (will restock as needed)
- 
Has sustainable staffing plan to manage several weeks of care


CDC Ebola Response Teams (CERTs) are ready to deploy to provide assistance as needed

All of the hospitals will be prepared to do the following:



Ensure staff are appropriately trained and have documented competency in safe PPE practices



Have systems in place to safely manage waste disposal, cleaning and disinfection



Adhere to infection control protocols

In some cases, a hospital should be prepared to serve in more than one role. Hospitals may serve simultaneously as an Ebola assessment hospital and an Ebola treatment center. Patients may be transferred between facilities based on the state's plan.

*View Interim Guidance at: <http://www.cdc.gov/vhf/ebola/healthcare-us/preparing/hospitals.html>
CS25378A January 25, 2015 2:21 PM

CDC Readiness Assessments

- CDC visited Arizona to provide onsite technical assistance and readiness assessments
 - December 15, 2014: Maricopa Integrated Health System
 - December 16, 2014: Banner - University Medical Center Tucson
- Site visit participants included hospital staff, state and local public health, and EMS partners
- Assessments addressed all facets of care for suspected or confirmed Ebola patients

Hospital Preparedness Exercises

- At least 12 hospitals in Arizona have exercised plans for identifying and managing a suspect Ebola patient.
- Both MIHS and BUMC –Tucson have conducted full scale exercises to address the main components of Ebola patient management:
 - Patient movement within facility
 - Waste management
 - Laboratory coordination
 - PPE
 - Hospital incident command
 - Internal and external communication

Hospital Certification Process

- Onsite surveys by ADHS to ensure infection control standards are met and maintained
- Voluntary program with three levels of certification:
 - Frontline Initial Assessment and Diagnosis Center
 - General Assessment and Treatment of Infectious Disease
 - Tertiary Infectious Disease Center – Contagious Disease Unity
- Criteria in review

Transport

- Hospital preparedness exercises have included EMS participation:
 - City of Phoenix Fire Department & MIHS
 - Southwest Ambulance & BUMC – Tucson
- ADHS has identified processes and authorities to allow transport providers to operate outside of set jurisdictional boundaries if needed
- Identification of statewide transport method is pending.

Charge 2: Communication and collaboration

Recommendation	Status
Development and distribution of educational toolkits	✓
Subject matter expert visits to hospitals and outpatient treatment centers to provide information and technical assistance	✓
3-dimensional process map development and distribution	✓
Enhanced statewide communication plan	✓
Increased participation in the Health Alert Network	✓
Maintain updated webpages with education and information	✓
Host Ebola preparedness forum	✓
Conduct after-hours contact drills with county health departments	✓
Communication about tiered healthcare system	✓

Health Alert Network



**REGISTER
NOW!**

**You play a critical role
in the health of Arizona**



**ARIZONA HEALTH ALERT
NETWORK**

Register Now: han.health.azdhs.gov

The Arizona Health Alert Network (AzHAN) is a secure web-based notification system available 24/7/365 that distributes important public health alerts to public health officials and healthcare professionals.



Health and Wellness for all Arizonans

ADHS Webpage Updates

Arizona Department of Health Services
Health and Wellness for all Arizonans

HOME AUDIENCES TOPICS DIVISIONS A-Z INDEX Google™ Custom Search

Ebola

ADHS Home / Public Health Services / Public Health Preparedness / Epidemiology & Disease Control / Infectious Disease Services / Ebola - Home

Home

- Ebola FAQs for the Public
- Ebola Preparedness >
- Process Maps of Arizona's Ebola Response Plan
- Advisory Council
- National Information
- Contact Us

Home

- Governor's Council on Infectious Disease Preparedness and Response – Preliminary Report
- Top 10 Things You Really Need to Know about Ebola

FAQs
Information about the disease, transmission, and safety measures.

Professional Toolkits
Information and toolkits for professionals preparing for Ebola.

Advisory Council
Info on Governor's Council for Preparedness and Response.

National Info
National info on Ebola from the CDC.

Feedback & Support

There are no cases of Ebola in Arizona. Ebola is a frightening disease because it is very rare in our country; it has never been in Arizona. It also has a high mortality rate, but that is changing as there is medical intervention in earlier stages of the disease. The virus is hard to transmit from person to person. It can only be transmitted from the bodily fluids of an infected person who is showing symptoms.

Since the outbreak began in West Africa, Arizona has been working with healthcare providers and public health to provide training and information. The Department's focus has been to help prepare the front lines of healthcare in case someone travels here carrying the virus; the key to prevention is to identify and isolate people who are sick with the virus. The Department.

HEALTH ADVISORY: EBOLA
Recently in West Africa?
Watch for fever, headache, and...

1:55-2:35 pm

EMERGING INFECTIOUS DISEASE THREATS



Health and Wellness for all Arizonans



Emerging Infectious Diseases

Known
infections
spreading to
new
geographic
areas or
populations



New infections
resulting from
changes or
evolution of
existing
organisms





Previously
unrecognized
infections
appearing in
areas
undergoing
ecologic
transformation



Old infections
reemerging as a
result of
antimicrobial
resistance in
known agents
or breakdowns
in public health
measures

Mosquito-borne Diseases



Chikungunya Virus

- Transmitted by mosquitoes
 - *Aedes aegypti*
 - *Aedes albopictus*



December 2013



June 2014

Locations with reported local transmission by month



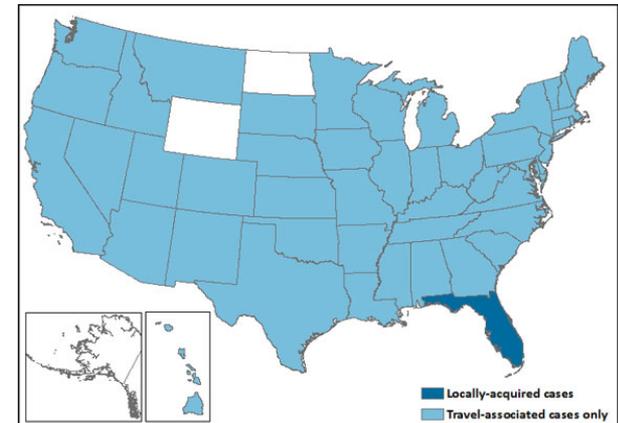
June 2015

Locations with reported local transmission by month



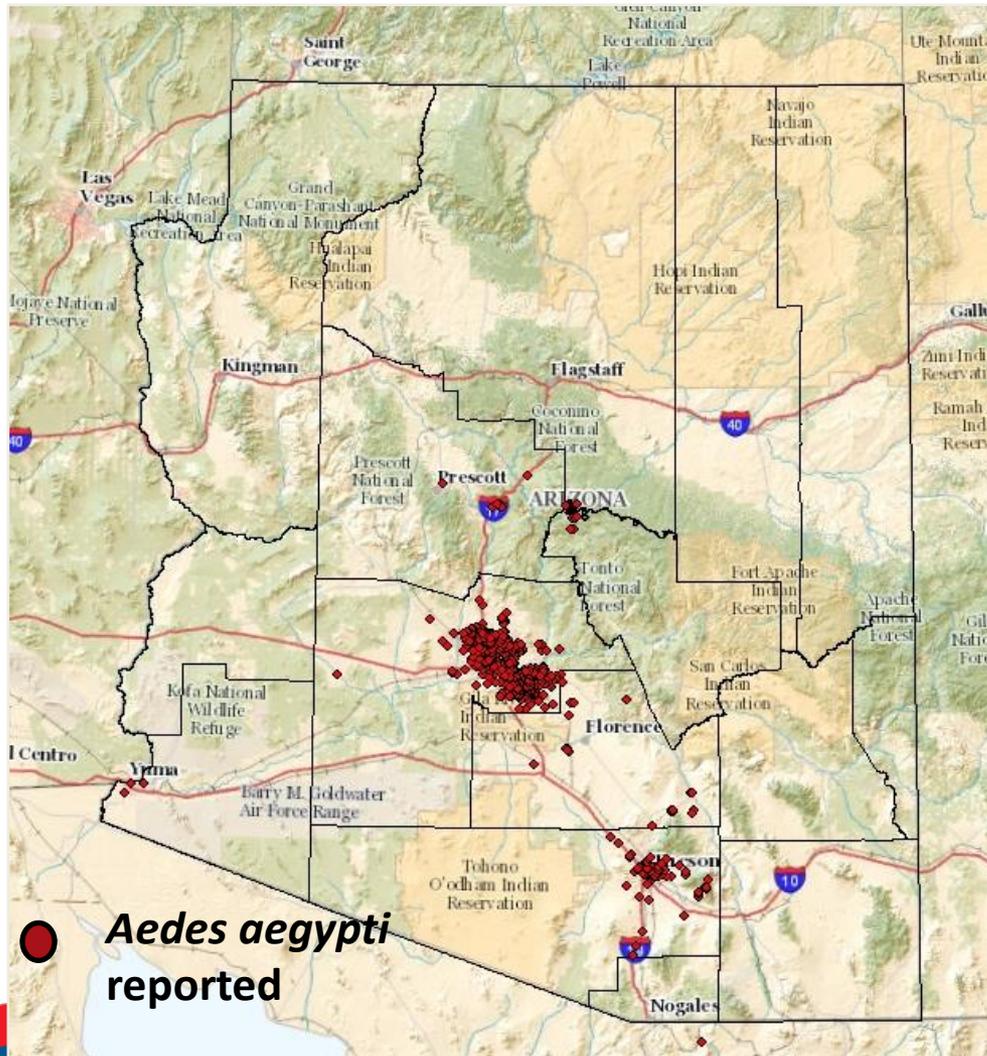
Chikungunya in the U.S.

- Previous annual average: ~28 cases/year
- 2014: 2,492 chikungunya cases
 - 11 locally-acquired cases in FL
- >4000 locally-acquired cases from Puerto Rico and U.S. Virgin Islands



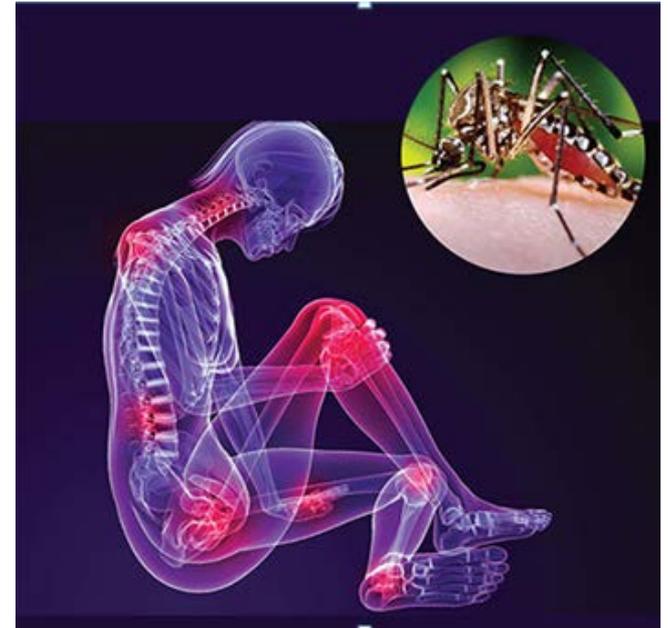
Chikungunya in Arizona

- AZ: 16 cases in 2015
 - All travel-associated



Clinical Course

- 70–90% of exposed persons develop illness
- 38–63% of population affected in outbreak areas
- **Infectious to mosquitoes during 1st week of illness**



Treatment

- No specific treatment
- No vaccine



Chikungunya Summary

- New disease
 - Low mortality, HIGH morbidity
- Potential for local disease introduction in AZ
 - Imported cases (already happening)
 - Locally-acquired cases (possible)



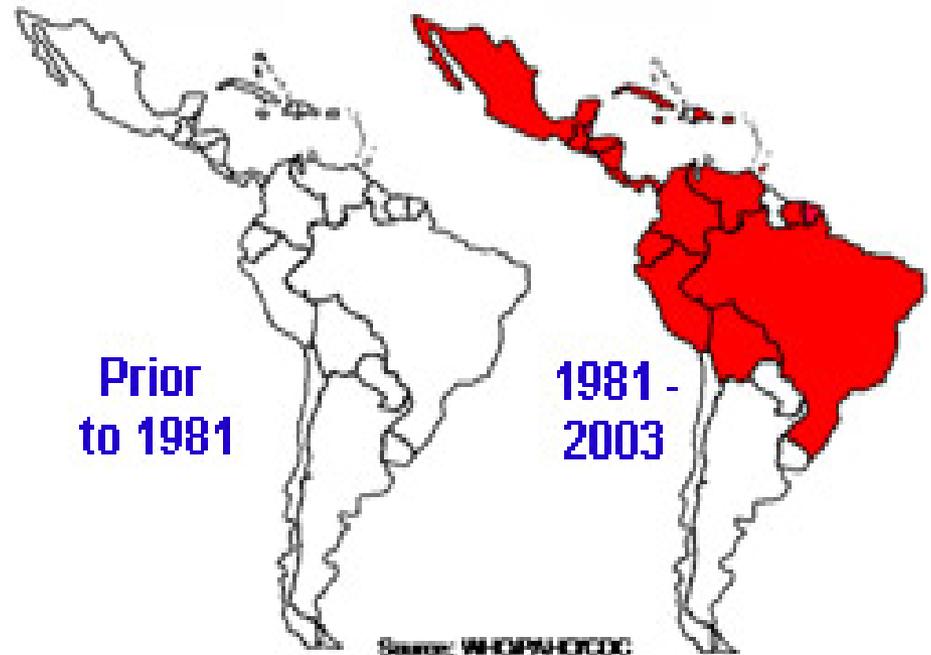
Bhatt S, et al. Nature 2013

DENGUE VIRUS

Dengue Virus

- RNA virus
 - *Aedes aegypti* and *Aedes albopictus* mosquitoes
- First appeared in western hemisphere in 1981

Laboratory-Confirmed DHF in the Americas
Prior to 1981 vs. 1981 - 2003

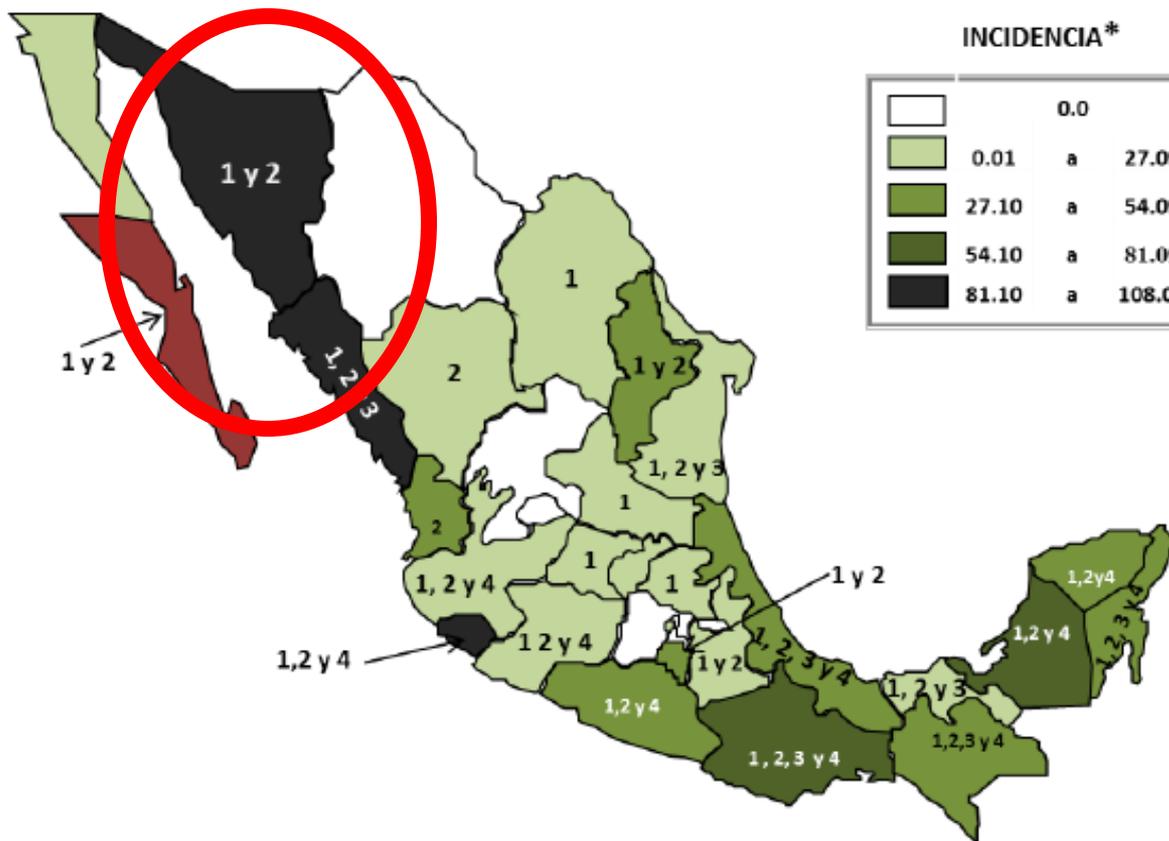


Dengue Epidemiology

- 4 Serotypes (I–IV)
- No vaccine
- 75% of cases asymptomatic
- 5% develop severe, life-threatening disease



INCIDENCIA* Y SEROTIPOS AISLADOS DE CASOS DE DENGUE POR ENTIDAD FEDERATIVA. MÉXICO, 2014



INCIDENCIA*

0.0	0.0	a	27.09
0.01	a	27.10	54.09
27.10	a	54.10	81.09
54.10	a	81.10	108.09
81.10	a	108.09	

ESTADO	SEROTIPOS CIRCULANTES				TOTAL
	1	2	3	4	
Aguascalientes	0	0	0	0	0
Baja California	0	0	0	0	0
Baja California Sur	170	5	0	0	175
Campeche	1	13	0	9	23
Coahuila	10	0	0	0	10
Colima	44	25	0	3	72
Chiapas	14	100	57	2	173
Chihuahua	0	0	0	0	0
Distrito Federal	0	0	0	0	0
Durango	0	6	0	0	6
Guanajuato	1	0	0	0	1
Guerrero	79	33	0	6	118
Hidalgo	2	0	0	0	2
Jalisco	58	83	0	1	142
México	0	0	0	0	0
Michoacán	291	14	0	3	308
Morelos	37	5	0	0	42
Nayarit	0	10	0	0	10
Nuevo León	8	3	0	0	11
Oaxaca	250	11	6	11	278
Puebla	50	28	0	0	78
Querétaro	0	0	0	0	0
Quintana Roo	56	9	2	3	70
San Luis Potosí	9	0	0	0	9
Sinaloa	58	95	1	0	154
Sonora	111	65	0	0	176
Tabasco	4	10	2	0	16
Tamaulipas	88	43	21	0	152
Tlaxcala	0	0	0	0	0
Veracruz	55	119	7	2	183
Yucatán	73	13	0	7	93
Zacatecas	0	0	0	0	0
TOTAL	1469	690	96	47	2302

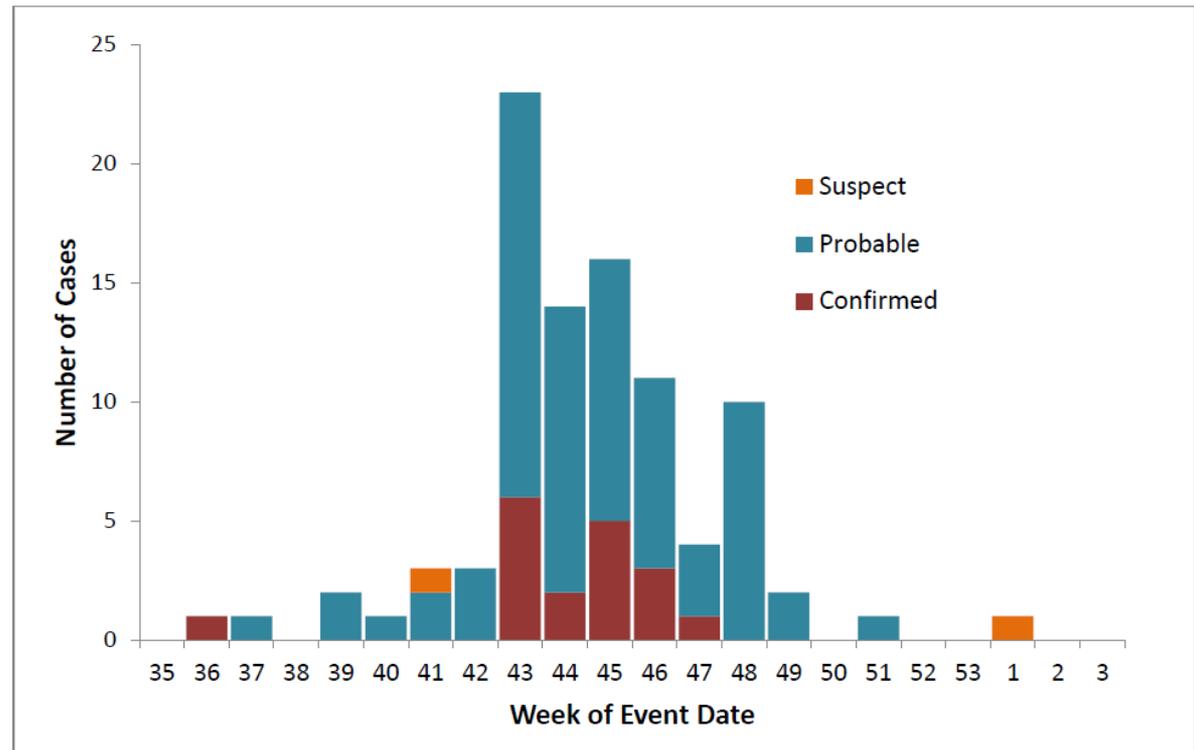
 El estado de Baja California Sur presenta la incidencia mas alta 549.90

*Incidencia de casos por FD y FHD por 100 mil habitantes

*Aislamientos reportados por INDRÉ hasta la semana 47

Dengue in Arizona

- Increase in imported cases
 - 2013: 4 cases
 - Sept–Dec 2014: 92 cases



Dengue Summary

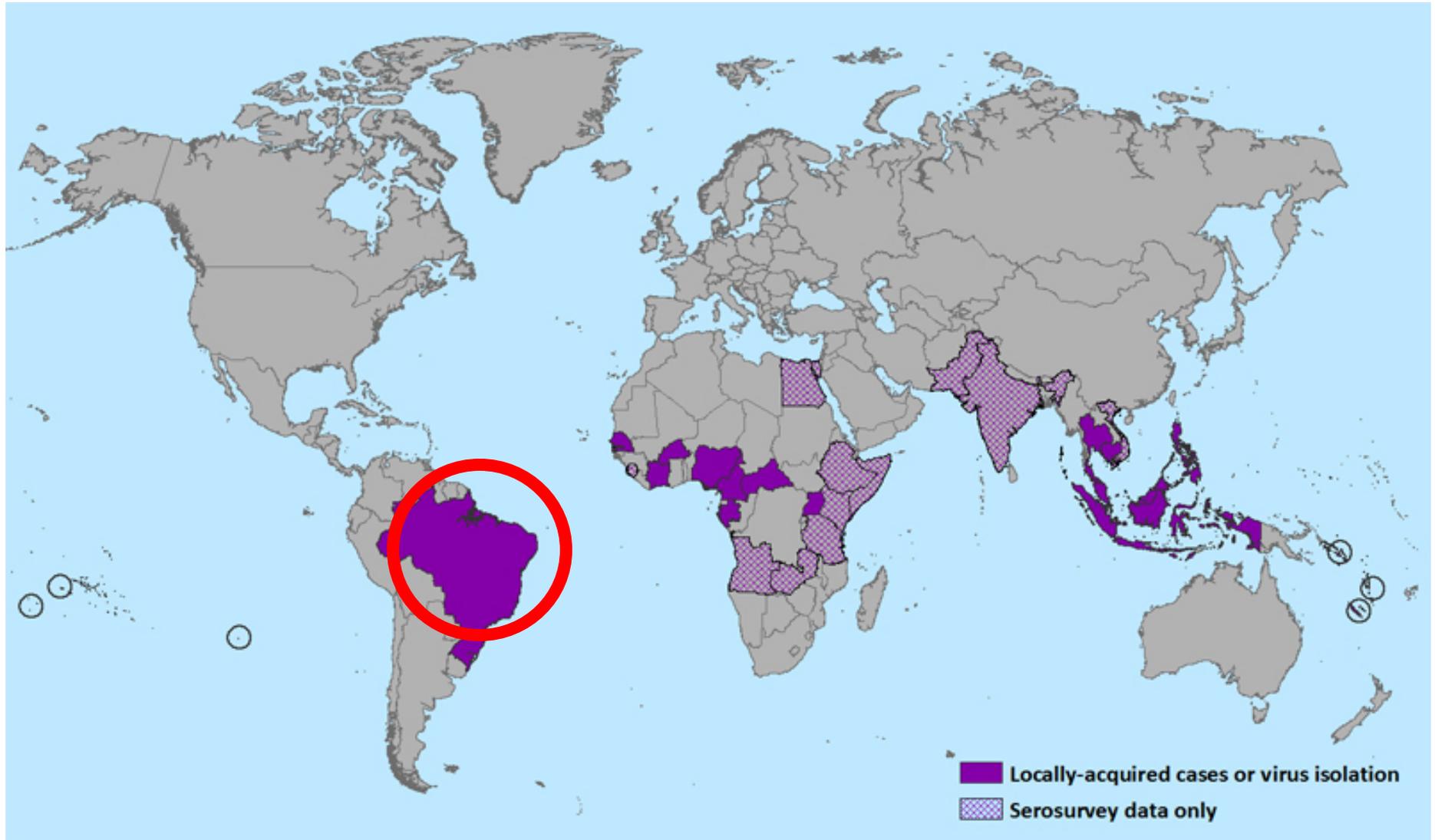
- Encroaching disease threat on southern border
- Spread by same mosquito as chikungunya
- Serious concern for upcoming mosquito seasons

Zika Virus

- Mosquito-borne flavivirus
- Fever, joint pain, eye inflammation, and rash
- Spread in Africa and Pacific Islands



Zika Virus



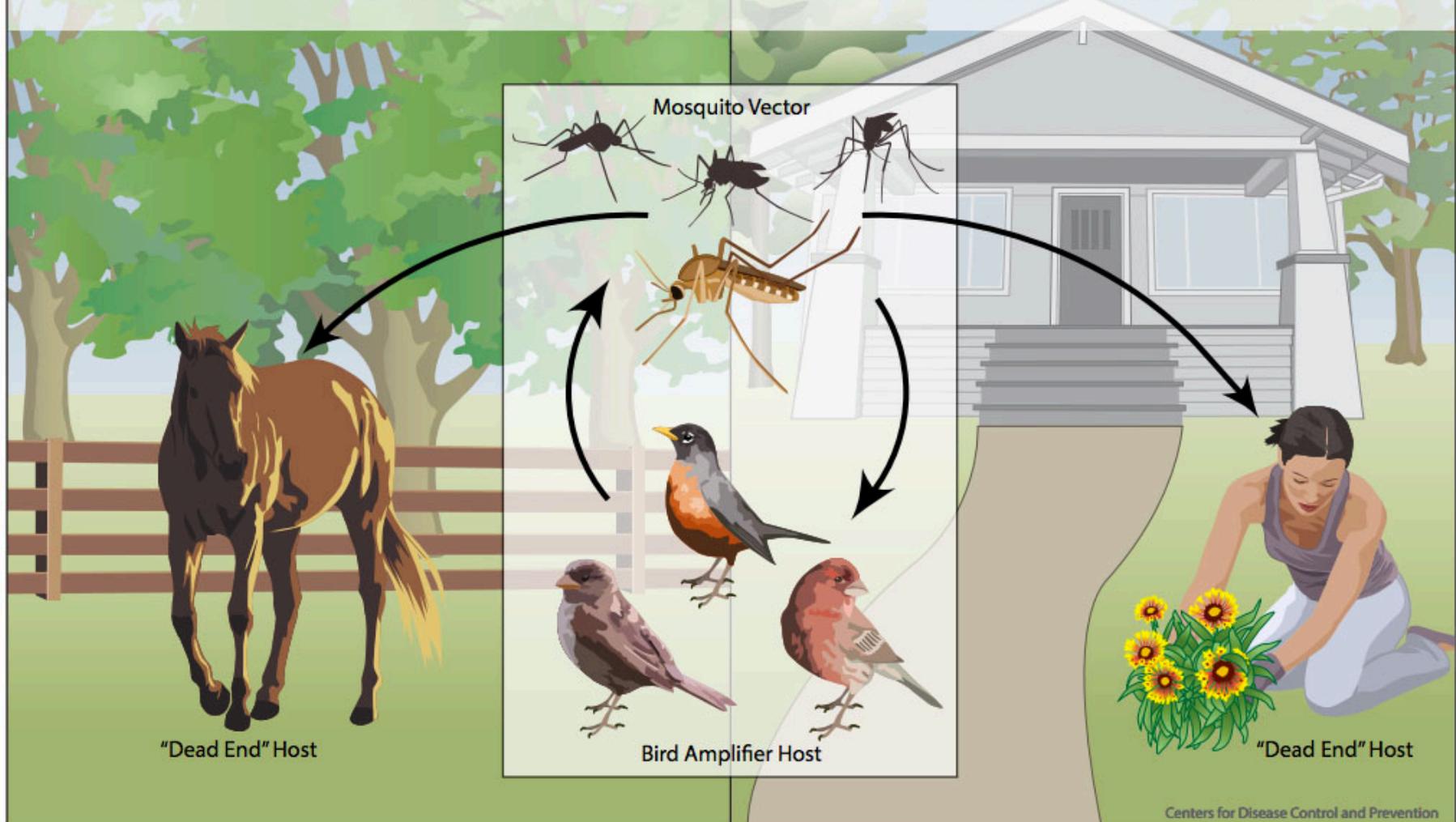
West Nile (WNV) & St. Louis Encephalitis (SLEV) Viruses



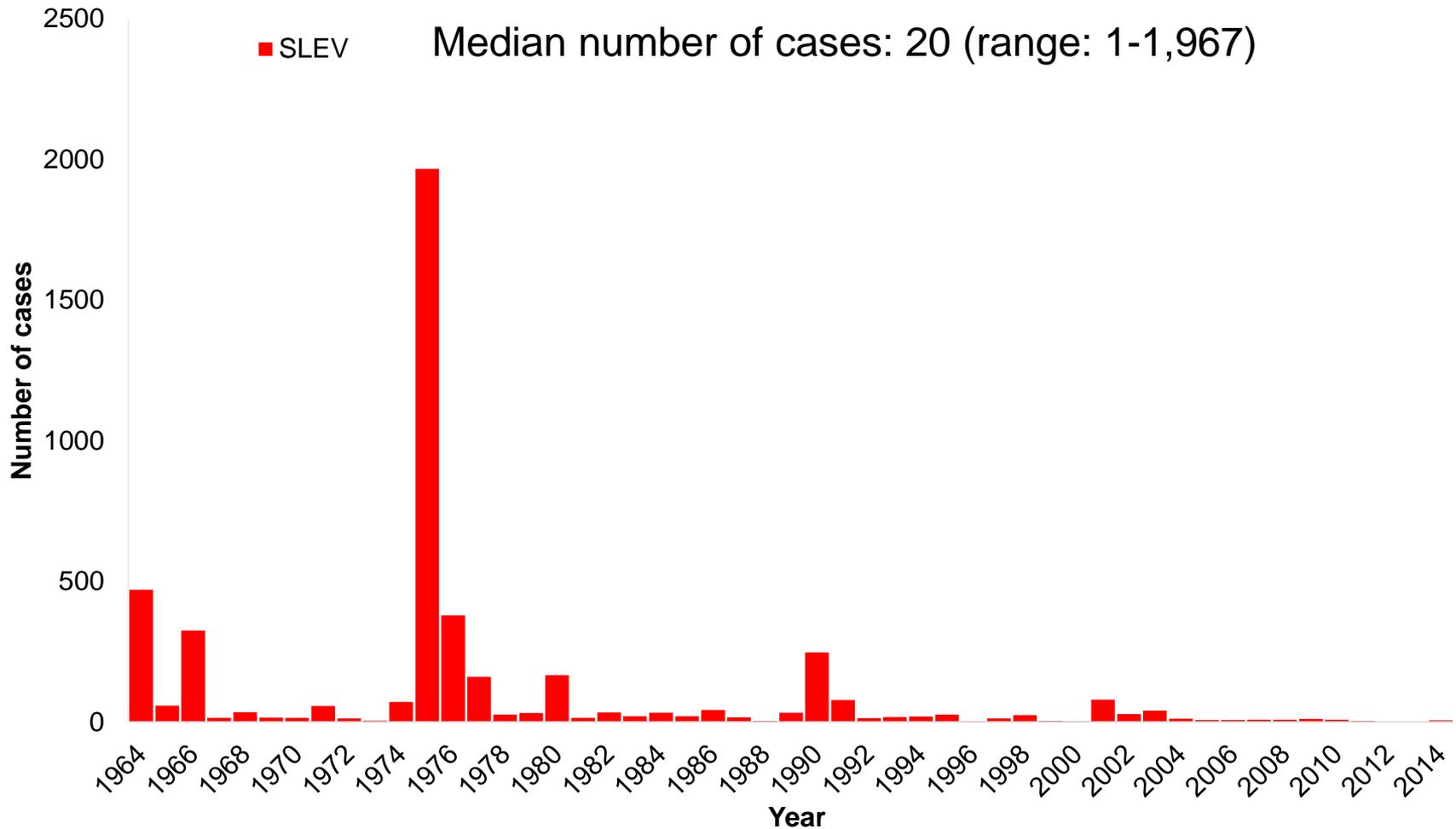
West Nile Virus Transmission Cycle

In nature, West Nile virus cycles between mosquitoes (especially *Culex* species) and birds. Some infected birds, can develop high levels of the virus in their bloodstream and mosquitoes can become infected by biting these infected birds. After about a week, infected mosquitoes can pass the virus to more birds when they bite.

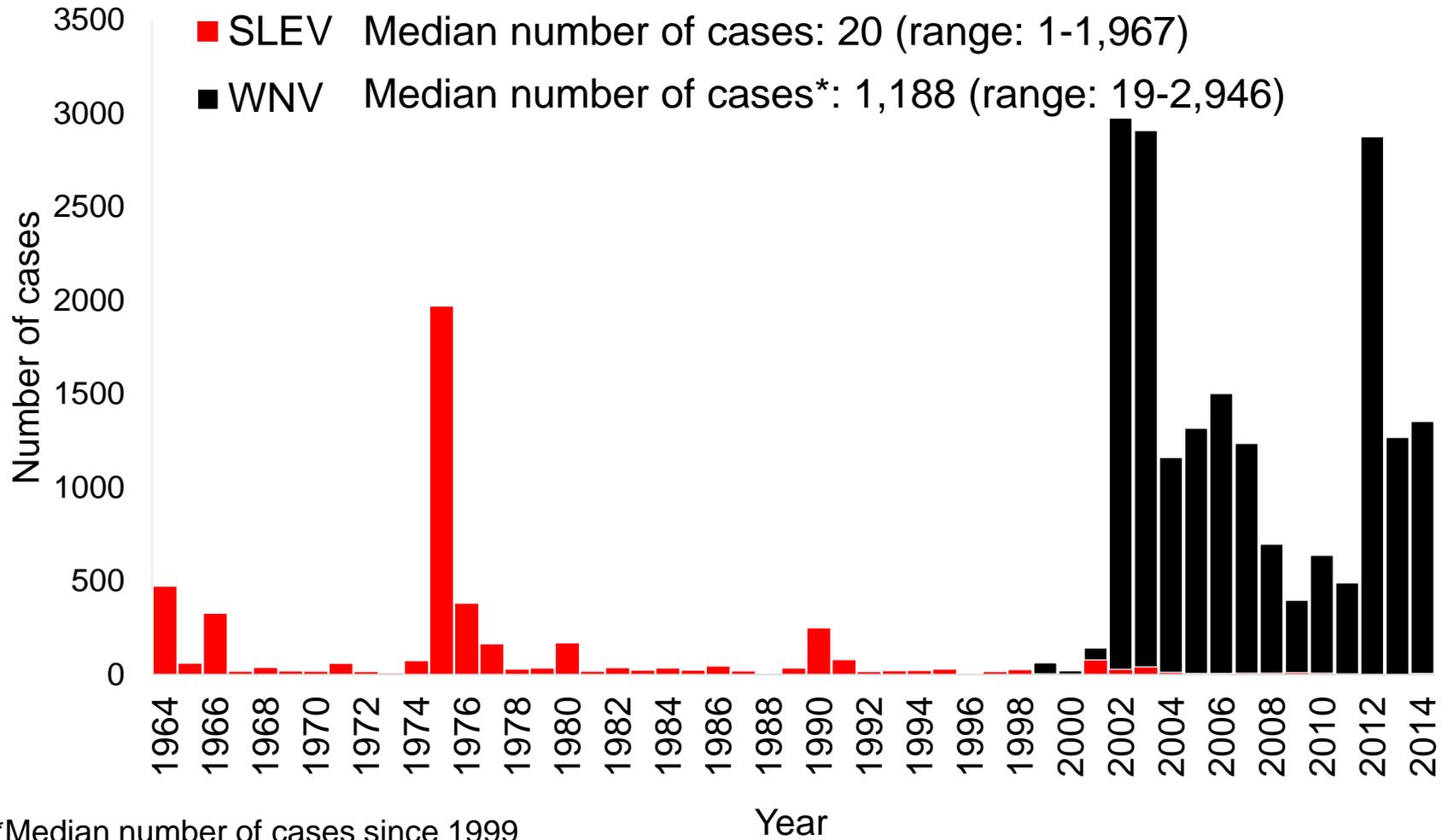
Mosquitoes with West Nile virus also bite and infect people, horses and other mammals. However, humans, horses and other mammals are 'dead end' hosts. This means that they do not develop high levels of virus in their bloodstream, and cannot pass the virus on to other biting mosquitoes.



Number of SLEV neuroinvasive disease cases – United States, 1964–2014



Number of SLEV and WNV neuroinvasive disease cases – United States, 1964–2014



RARE VIRUS OUTBREAK MEANS MARICOPA COUNTY MOSQUITOES DOUBLY DANGEROUS



BY ELIZABETH STUART

MONDAY, AUGUST 24, 2015 | 29 DAYS AGO



581



37



2

16 St. Louis
encephalitis virus
cases

65 West Nile virus
cases



Avian Influenza



Avian Influenza

- AI are flu A viruses that can infect:
 - Wild birds – ducks, gulls, and shorebirds
 - Domestic poultry – chickens, turkeys, ducks, and geese
- Infected birds can shed AI in their saliva, nasal secretions, and feces
- Avian flu viruses do not normally infect humans

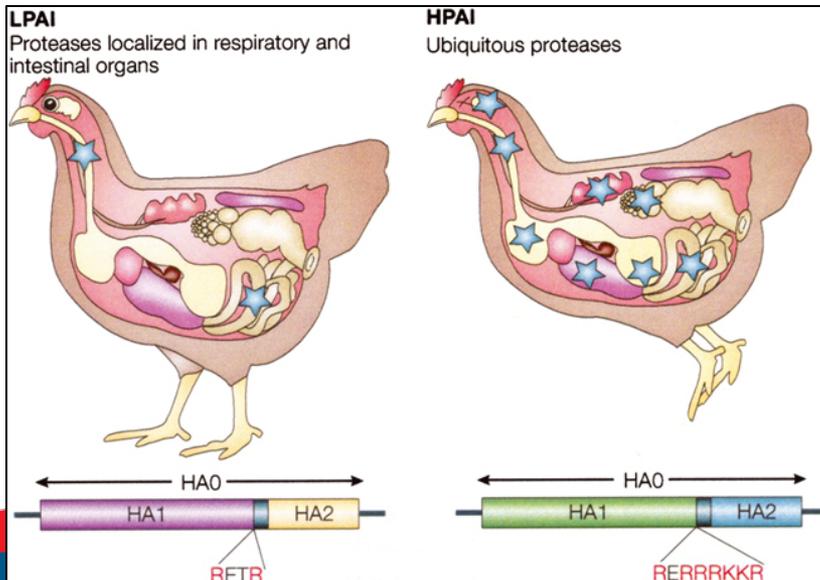
Avian Influenza

Low Pathogenic Avian Influenza (LPAI)

- Cause little to no illness in **birds**
 - Occurs naturally in wild birds
- Commonly found

High Pathogenic Avian Influenza (HPAI)

- Cause severe illness and death in **birds**
 - Particularly in domestic poultry (chickens and turkeys)
- Spreads rapidly and has a higher death rate



AI - Why are we concerned?

- Potential for low pathogenic H5 and H7 viruses to evolve into **highly pathogenic viruses**
- Potential for **rapid spread** and significant illness and death among poultry during outbreaks of HPAI
- **Economic impact** and trade restrictions from a highly pathogenic avian influenza outbreak
- Possibility that avian influenza A viruses could be **transmitted to humans**



HPAI viruses

H5N2

H5N8

Current U.S. Situation

12/19/14

First Detection Reported

6/17/15

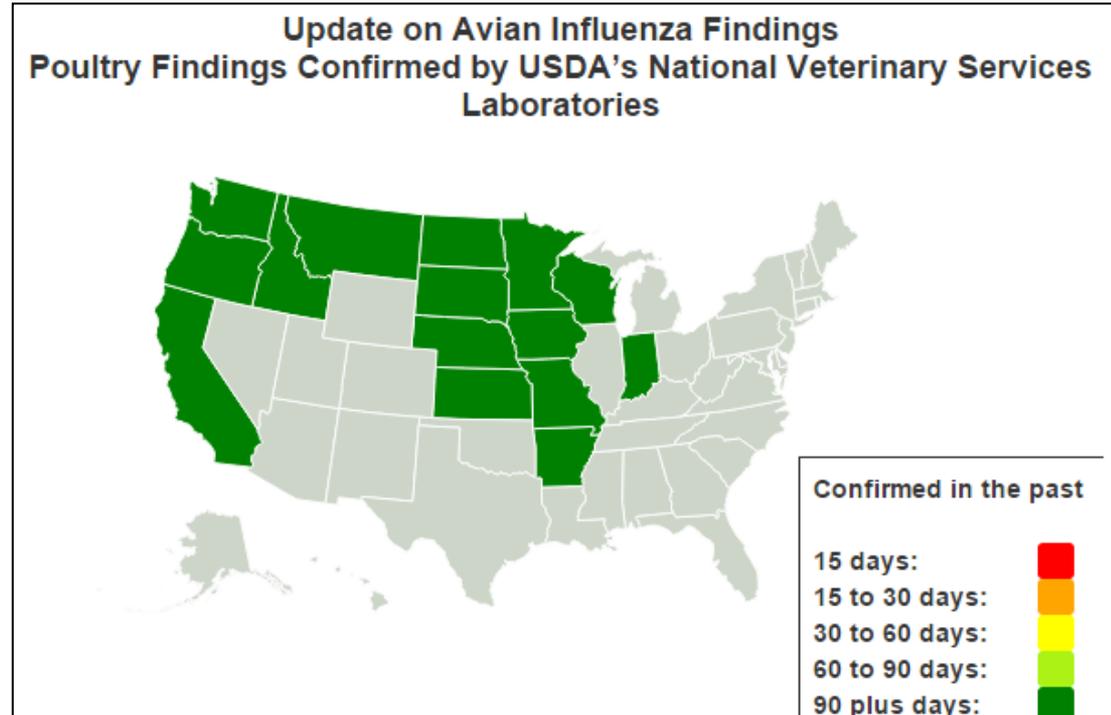
Last Detection Reported

223

Detections
Reported

48,091,293

Birds Affected



Fall 2015 HPAI Preparedness and Response Plan

- Prevent or reduce future outbreaks
- Enhance preparedness
- Improve and streamline response capabilities



United States Department of Agriculture



Health and Wellness for all Arizonans



Middle East Respiratory Syndrome (MERS)

MERS

- Coronavirus
- Fever, cough, shortness of breath
- 3-4 out of every 10 cases die



Countries in or near the Arabian Peninsula





Accessed at
<http://www.cnn.com/2015/06/25/asia/south-korea-mers-toll/at.cnn.com>

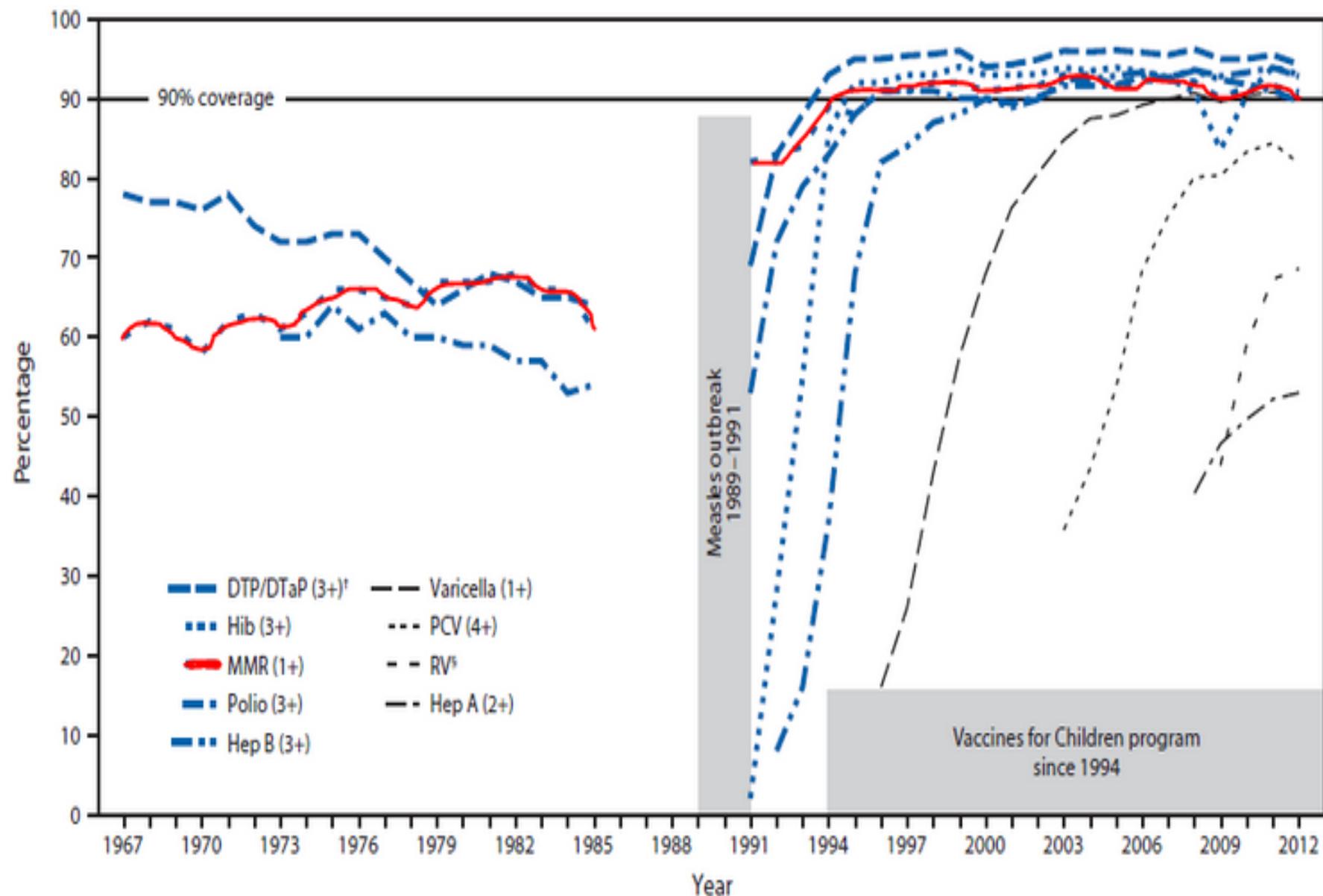


Vaccine Preventable Diseases

Vaccine Preventable Diseases



FIGURE. Vaccine coverage rates among preschool-aged children* – United States, 1967–2012



Measles Cases and Outbreaks

January 1 to August 21, 2015*

188

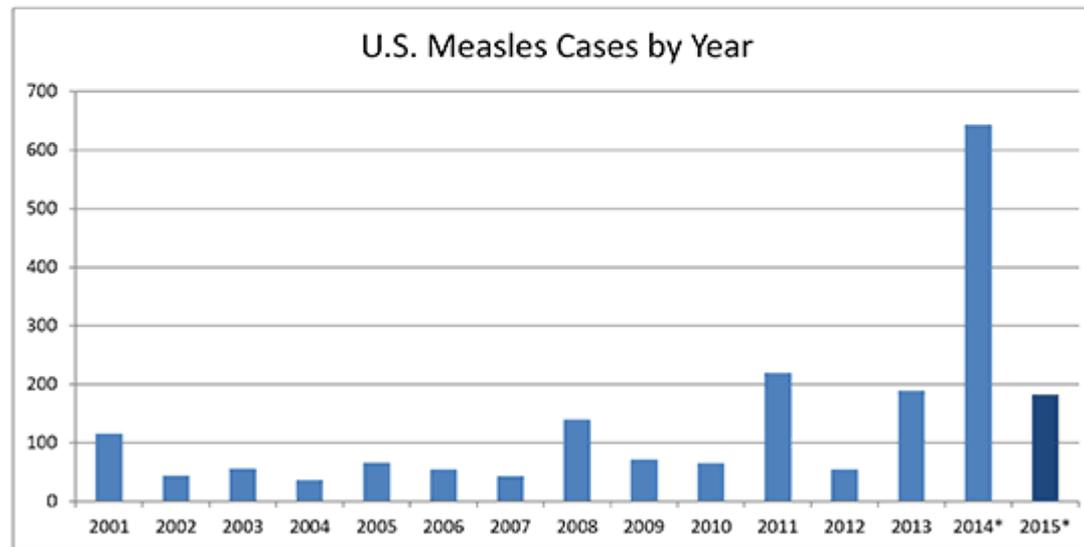
Cases

reported in 24 states and the District of Columbia: Alaska, Arizona, California, Colorado, Delaware, Florida, Georgia, Illinois, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Jersey, New York, Nevada, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, Utah, Virginia, Washington

5

Outbreaks

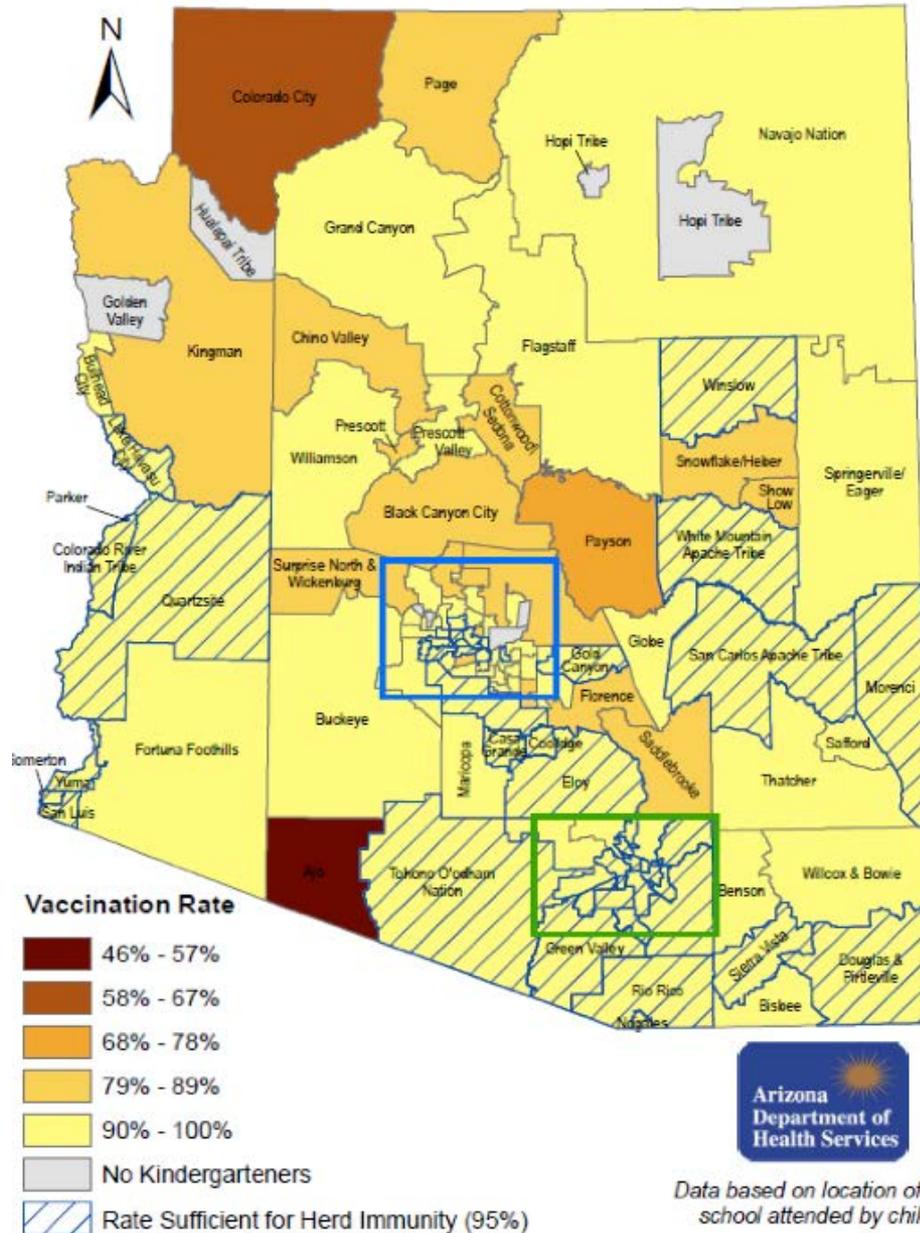
representing 81% of reported cases this year



*Provisional data reported to CDC's National Center for Immunization and Respiratory Diseases



MMR Vaccination Rate* of Kindergarteners by Primary Care Area, 2013/2014 School Year



*Vaccination coverage for 2 or more doses of measles, mumps, rubella (MMR) vaccine



Council Members

2:35-2:55 pm

DISCUSSION OF COUNCIL CONTINUATION



Health and Wellness for all Arizonans

Discussion of Council Continuation

- Priorities and objectives
- Council composition
- Scope and frequency of future meetings

Cara Christ

2:55 pm

CALL TO THE PUBLIC



Health and Wellness for all Arizonans

Cara Christ

3:00 pm

CLOSING REMARKS & ADJOURN



Health and Wellness for all Arizonans