

PUBLIC HEALTH UPDATE

Eric C. McDonald, MD, MPH, FACEP

*Medical Director, Epidemiology and Immunizations
Services, Public Health Services*

County of San Diego Health and Human Services Agency

**Annual SoCal APIC Meeting
28 September 2018**





I have no relevant financial relationships with any commercial supporters.

Unlabeled/Investigational products and/or services will not be mentioned in this talk.



- **To provide an overview of investigations by epidemiology staff and current status of infectious disease issues in San Diego County**

TOPICS

Influenza

MERS-CoV

Aedes-borne Diseases

Hepatitis A

Ebola

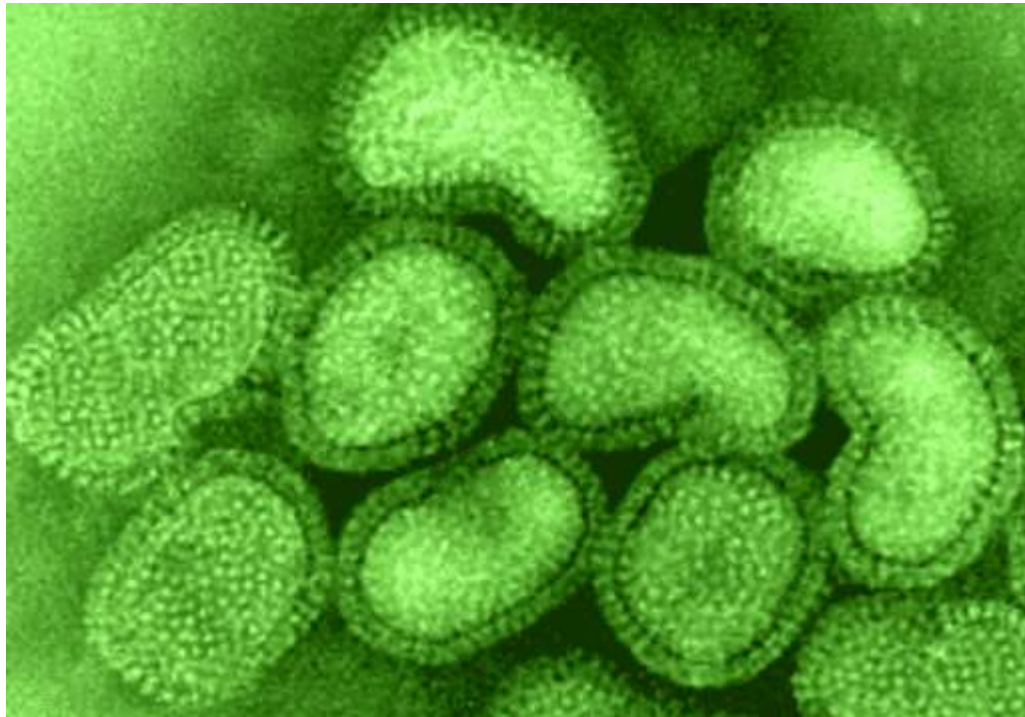
Meningococcal Disease

Measles



LIVE WELL
SAN DIEGO

Influenza



LIVE WELL
SAN DIEGO



“Widespread”

“Record Setting”

“Worst season in years”

“Hard Hitting”

“DEADLY”

“SEVERE SEASON”



“The United States 2017–18 influenza season was a **high severity** season...”

June 7, 2018

Morbidity & Mortality Weekly Report
Centers for Disease Control and Prevention





The severity of influenza disease in the United States can vary widely and is determined by a number of factors including:

- Characteristics of circulating viruses [Virus]
- Timing of the season [Timing]
- Effectiveness of the vaccine [Vaccine]
- How many people got vaccinated [Immunity]

INFLUENZA SEASON 2017/18



LIVE WELL
SAN DIEGO

20,833

TOTAL REPORTED
INFLUENZA CASES



342

DEATHS



320

ICU CASES



117

CONFIRMED
OUTBREAKS



INFLUENZA TYPE, 2017/18



LIVE WELL
SAN DIEGO

Flu Type	Flu Sub-type/Strain	Count	Percentage
Flu A	Influenza A	13,128	66.2%
	Influenza A (H3) Seasonal	593	
	Influenza A (H1N1)pdm09	62	
Flu B	Influenza B	6,811	33.0%
	Influenza B/Yamagata	42	
	Influenza B/Victoria	19	
Flu A/B	Influenza A/B	178	0.8%

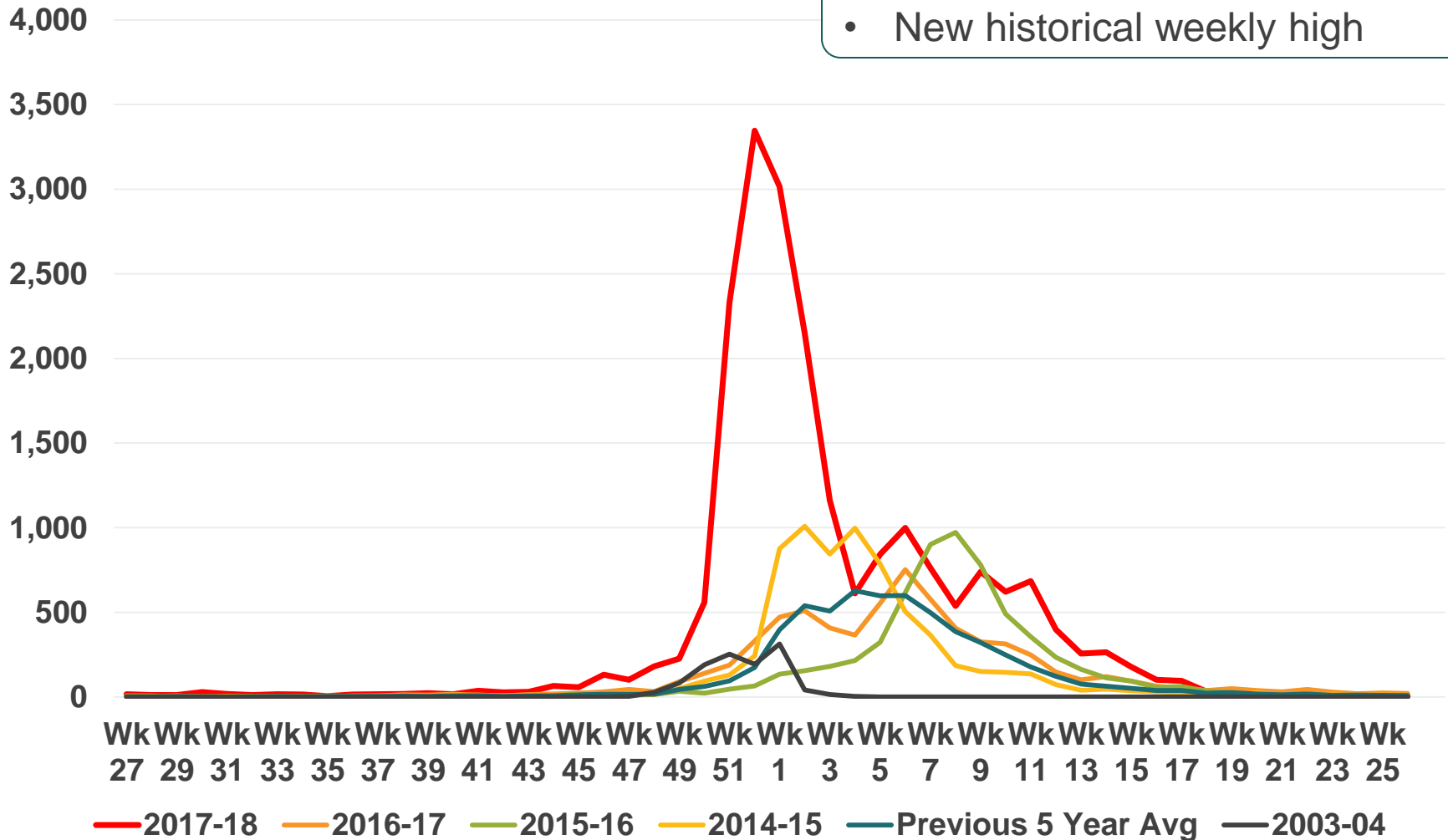
N = 20,833

WEEKLY CASES BY SEASON



Cases

- Earlier season in 2017/18
- New historical weekly high

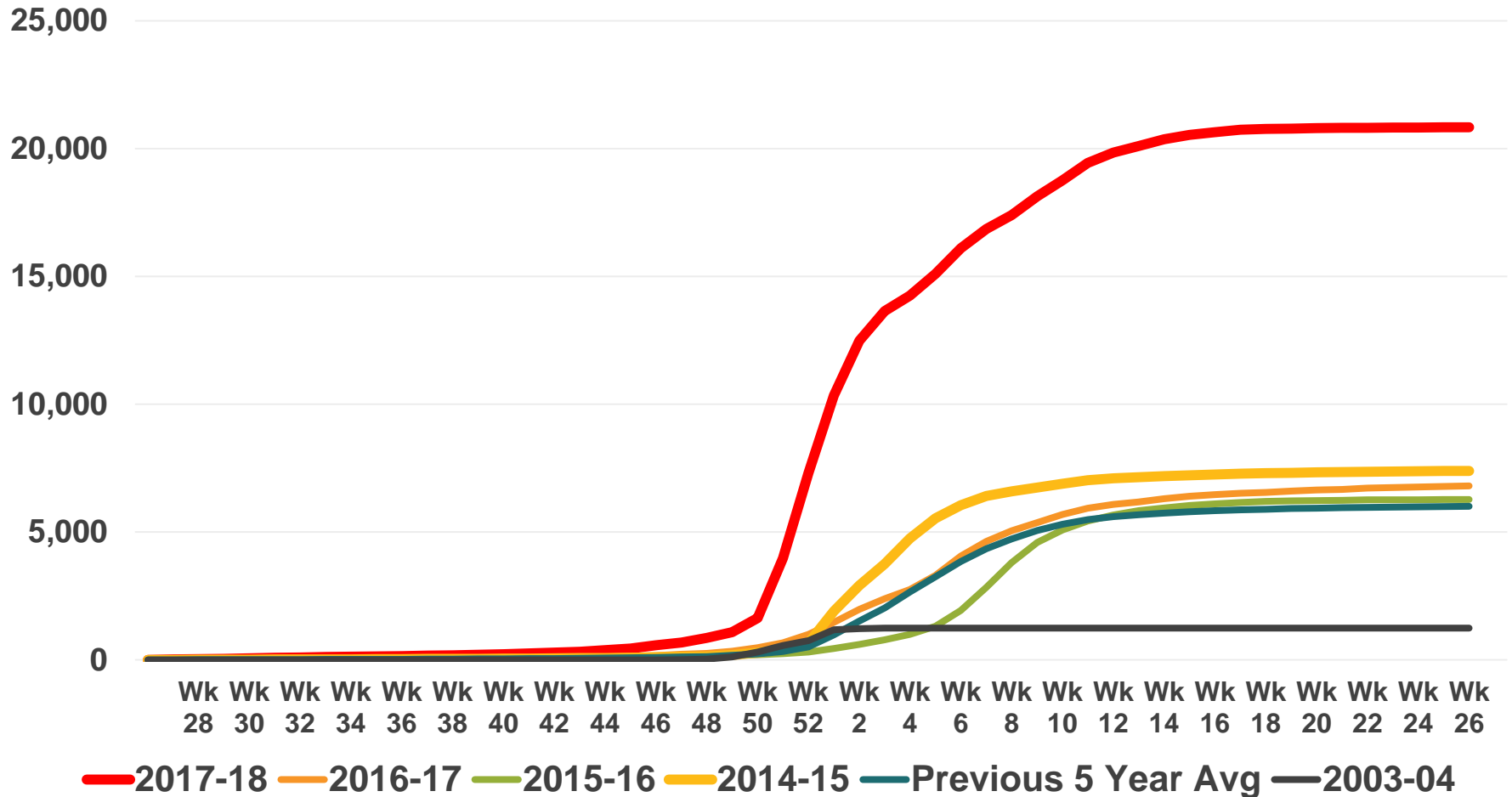


CUMULATIVE CASES BY SEASON



LIVE WELL
SAN DIEGO

Cases

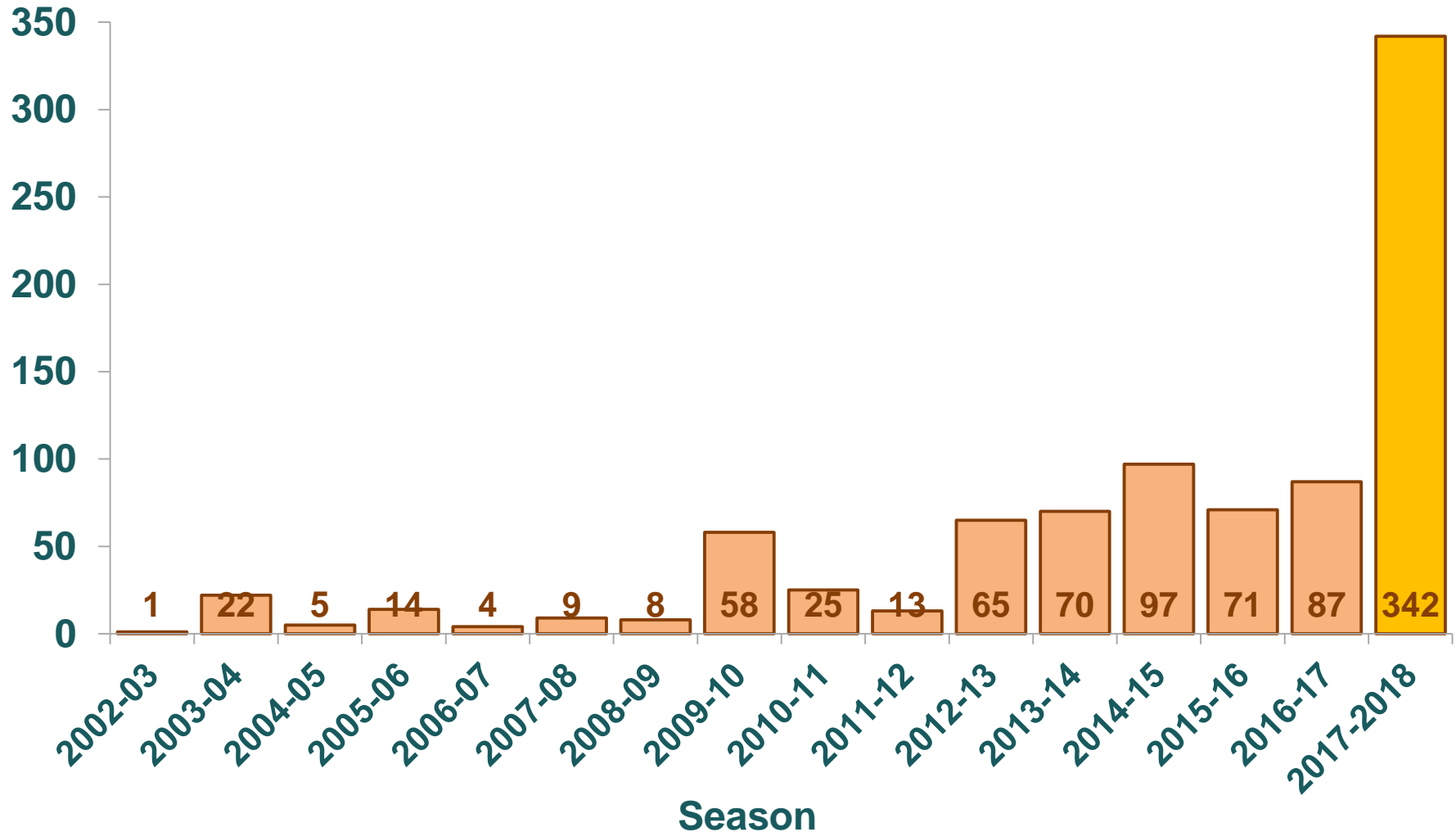


FLU DEATHS BY SEASON



LIVE WELL
SAN DIEGO

Deaths



INFLUENZA DEATHS, 2017/2018



LIVE WELL
SAN DIEGO

342

Deaths

96%

Had underlying health conditions

11

Average days
between positive
influenza
lab result and death

26%

Residents of a skilled
nursing or long term
health facility

33%

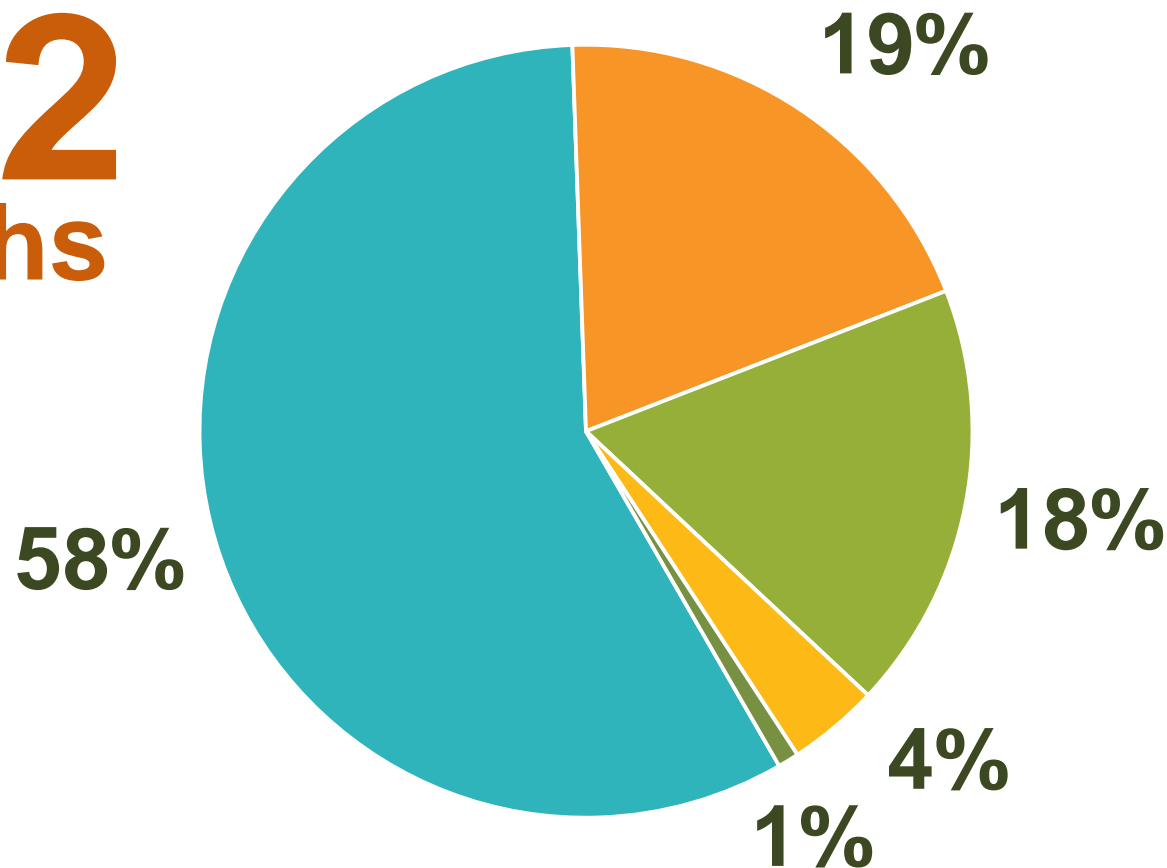
Known to
be
vaccinated

INFLUENZA DEATHS BY VIRUS TYPE, 2017/2018



LIVE WELL
SAN DIEGO

342
Deaths



■ Influenza A ■ Influenza B ■ Influenza A/H3
■ Influenza A/B ■ Influenza H1N1

INFLUENZA DEATHS, 2017/2018



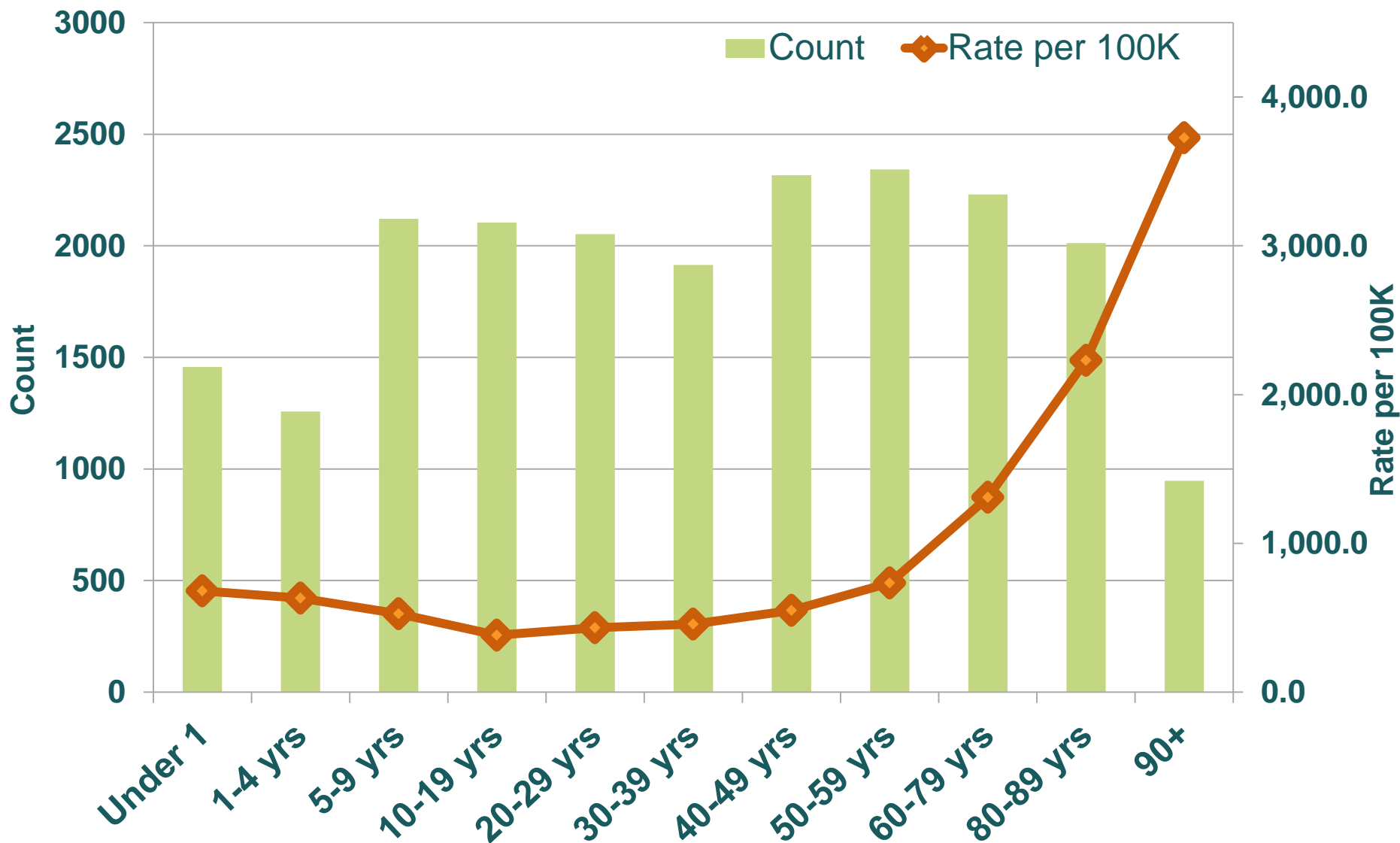
UNDERLYING CONDITION	COUNT	PERCENT
HEART DISEASE	106	31%
COPD	86	25%
HTN	66	19%
ALZH/DEMENTIA	60	18%
DIABETES	59	18%
RENAL DISEASE	40	12%
AFIB	39	11%
OTHER CONDITION	33	10%
CANCER	28	8%
ASTHMA	5	1%
LIVER DISEASE	4	1%
STROKE	5	1%
TOTAL DEATHS	342	100%

FLU CASES BY AGE GROUP

2017/2018 Number & Age Specific Incident Rate



LIVE WELL
SAN DIEGO



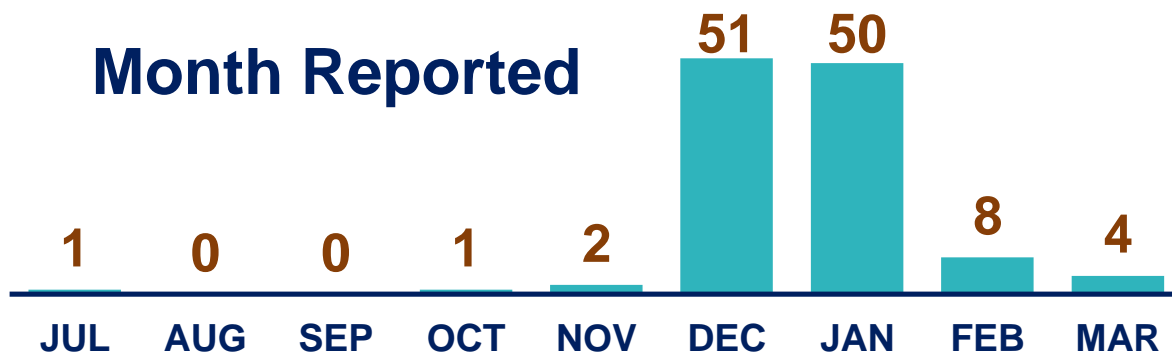
INFLUENZA OUTBREAKS



LIVE WELL
SAN DIEGO



Month Reported



117

Confirmed
outbreaks

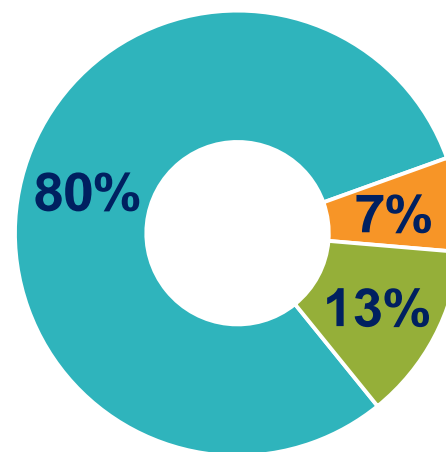
1,655

Total cases

14.1

Average cases
per outbreak

Influenza Type



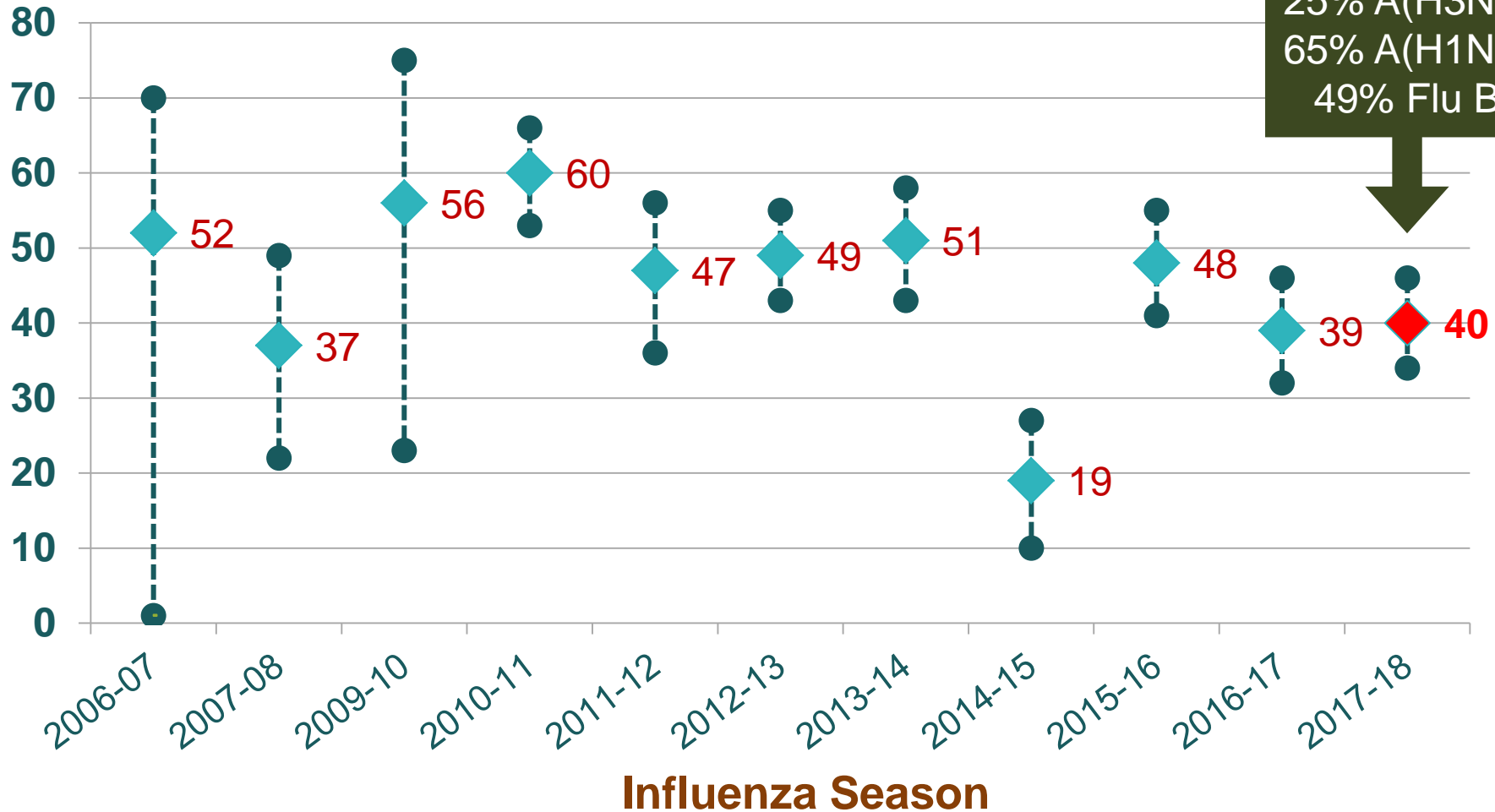
■ Flu A ■ Flu B ■ Unknown Type

ESTIMATED VACCINE EFFECTIVENESS BY SEASON



LIVE WELL
SAN DIEGO

Percent



Note: estimated effectiveness for preventing medically attended, laboratory-confirmed influenza virus infection.

Source: CDC

Flu Forecast



LIVE WELL
SAN DIEGO

CURRENT UPDATE

Reported Cases Since July 1, 2018



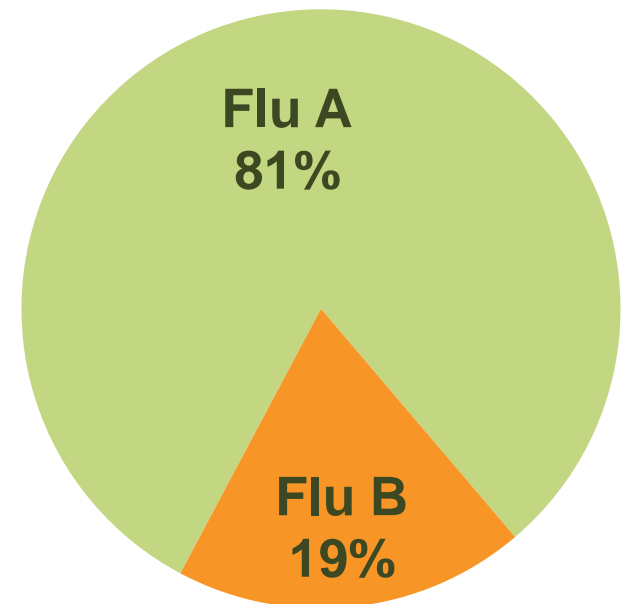
LIVE WELL
SAN DIEGO

48 TOTAL REPORTED
INFLUENZA CASES

0 DEATHS

0 OUTBREAKS

Cases by Flu Type
N=48



Preliminary Results

Data Source: Reported Influenza Case Reports

Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch, 9/22/2018

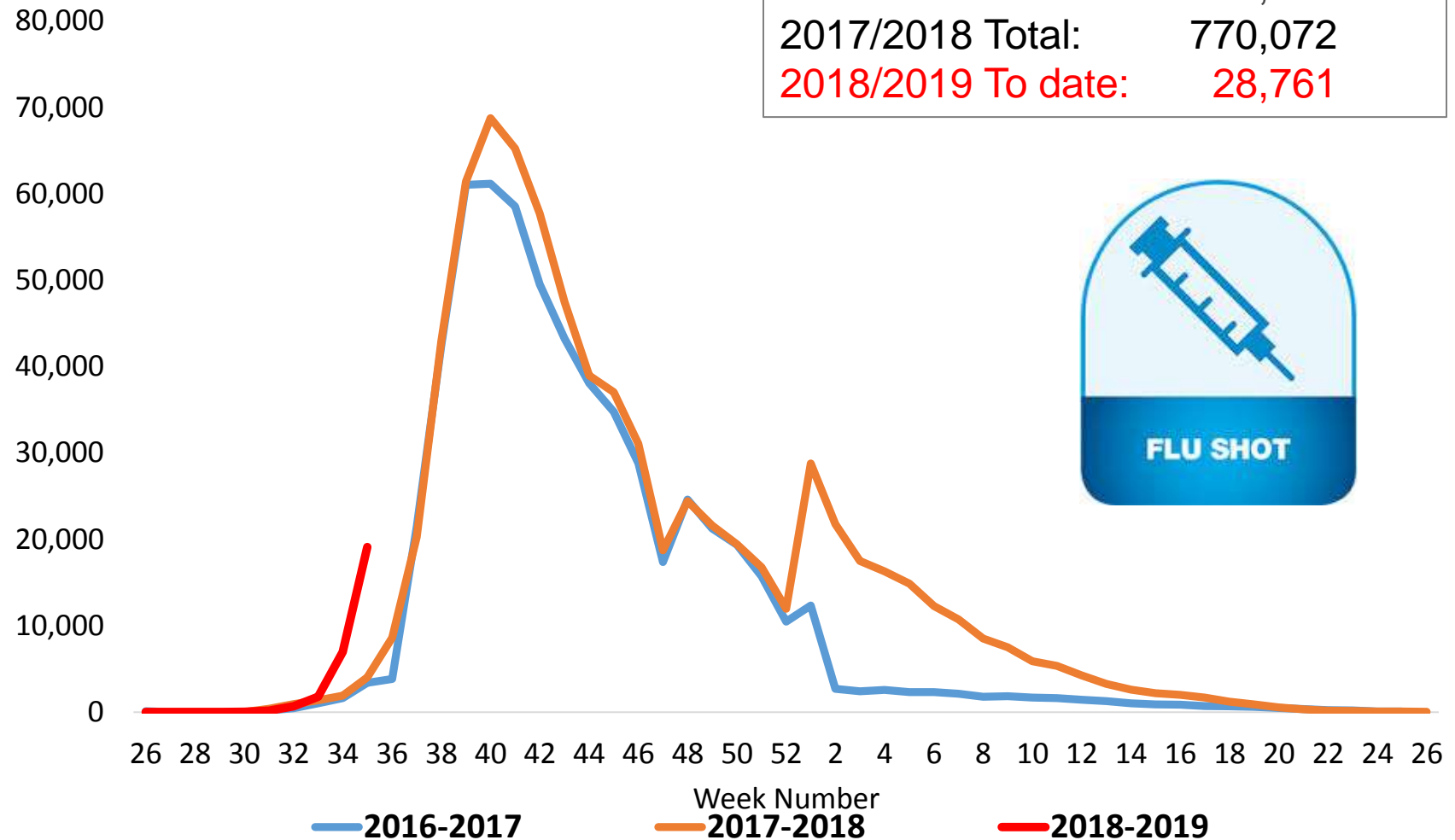
INFLUENZA VACCINES ADMINISTERED



 **LIVE WELL
SAN DIEGO**

Vaccines Administered

2016/2017 Total: 601,251
2017/2018 Total: 770,072
2018/2019 To date: 28,761





WHAT CAN YOU DO?

- **Consider testing for novel influenza in patients with travel history, avian or swine contacts**
- **Remember influenza causes disease year-round in San Diego**
- **Report ALL positive flu cases to Epidemiology Program**
- **Sign up for Flu Watch**
(EISB (619) 692-8499 or EpiDiv.HHSA@sdcounty.ca.gov)
- **Promote early immunization of staff to be consistent with health officer order “vaccinate or mask” Nov 1- March 31**
- **Promote flu immunizations to patients, especially those at risk for increased morbidity**

SURVEILLANCE REPORTS



LIVE WELL
SAN DIEGO

- **Influenza Watch** report posted and emailed weekly
- On the web at: www.sdepi.org
- Information used in HHSA reports and press releases



The purpose of the weekly *Influenza Watch* is to summarize current influenza surveillance in San Diego County. This summary report reflects the 2016-17 season data.

Report
Page 1: Overview
Page 2: Virus C
Pages 3-7: Trend
Page 7: Report

COUNTY NEWSCENTER

DIRECT TO YOU FROM THE COUNTY OF SAN DIEGO

2016-17

Highlights

- High volume of influenza detections reported
- Predominantly an influenza A season
- Influenza A/H3 was the main influenza A subtype circulating
- High number of influenza-related deaths, including 2 pediatric deaths
- Majority of deaths were 65 years of age or older, with underlying conditions

Season Summary

6,810
Total Cases

108
ICU Cases

87
Deaths

35
Outbreaks

Virus Characteristics

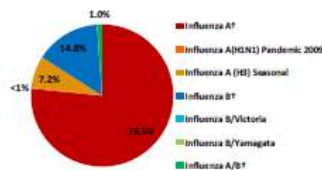


Table 1. Influenza Surveillance Indicators

Surveillance Indicator	FY 2016-17	FY 2015-16	Prior 3-FY Average*
Influenza detections reported (all types)*	6,810	6,279	5,933
Number of influenza-related deaths reported	87	68	78
Number of severe influenza (death and/or ICU) cases	165	153	135
Number of confirmed influenza outbreaks	35	15	43


FY=Fiscal year is July 1-June 30

* Includes FYs 2015-16, 2014-15, and 2013-14.



Epidemiology and Immunization Services Branch
(619) 692-8499 EpiDiv.HHSA@sdcounty.ca.gov





COUNTY OF SAN DIEGO
NEWS RELEASE
FOR IMMEDIATE RELEASE

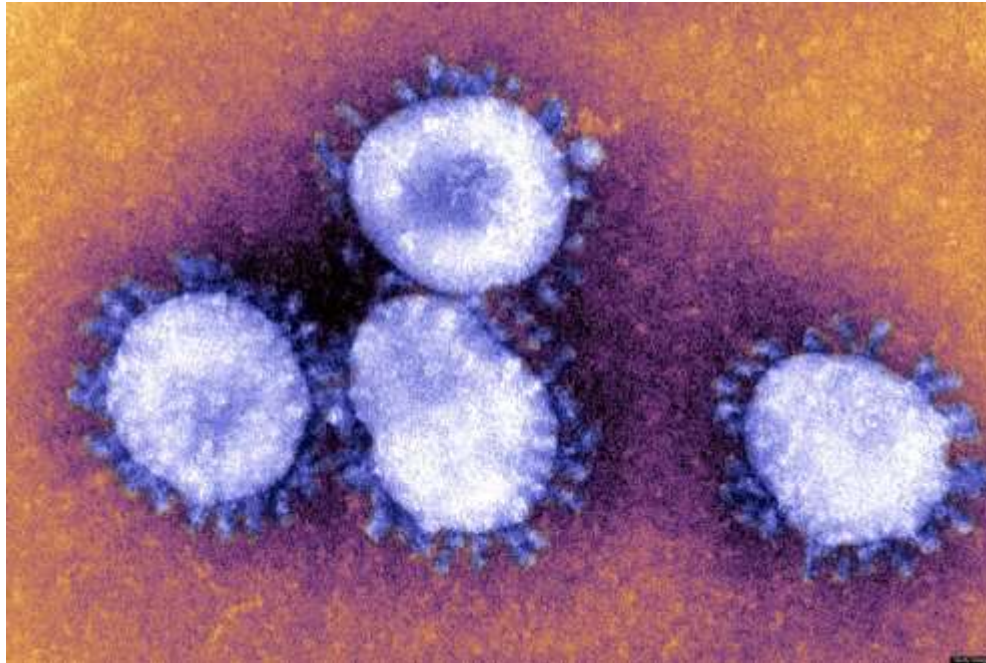
COT

FLU SHOTS ENCOURAGED FOR THOSE AT RISK FOR FLU COMPLICATIONS
Flu Vaccine Available at County Health Facilities

The San Diego County Health and Human Services Agency (HHSA) urges people who are at risk for complications from the flu to get the annual flu vaccine.

"Everyone in the at-risk groups should get a flu shot; it's the best way to help protect against getting

MERS-COV



LIVE WELL
SAN DIEGO

CURRENT STATUS



LIVE WELL
SAN DIEGO



Health Events: Epi-week 39, 2018
أحداث الأسبوع الوبائي 39 لعام 2018 م

Report Status: Final
Last Update: 27/09/2018
حالة التقرير: نهائي
آخر تحديث: 27/09/2018

Date	Event Type	Event#	Description	الوصف
التاريخ	نوع الحدث	رقم الحدث		
24/09/2018	Update تحديث	18 - 1753	MERS in Afeef city: 50-year-old male in Afeef city, Riyadh region Contact with camels: No Case classification: Primary, community acquired Current status: Deceased	متلازمة الشرق الأوسط التنفسية من مدينة عفيف: رجل يبلغ 50 عامًا من مدينة عفيف، منطقة الرياض مخالطة للإبل: لا تصنيف الحالة: أولية، مكتسبة في المجتمع حالة المريض: توفي

CURRENT
CASES

KSA
9/24/18

GLOBAL TOTAL
CONFIRMED

2,243

GLOBAL
DEATHS

795

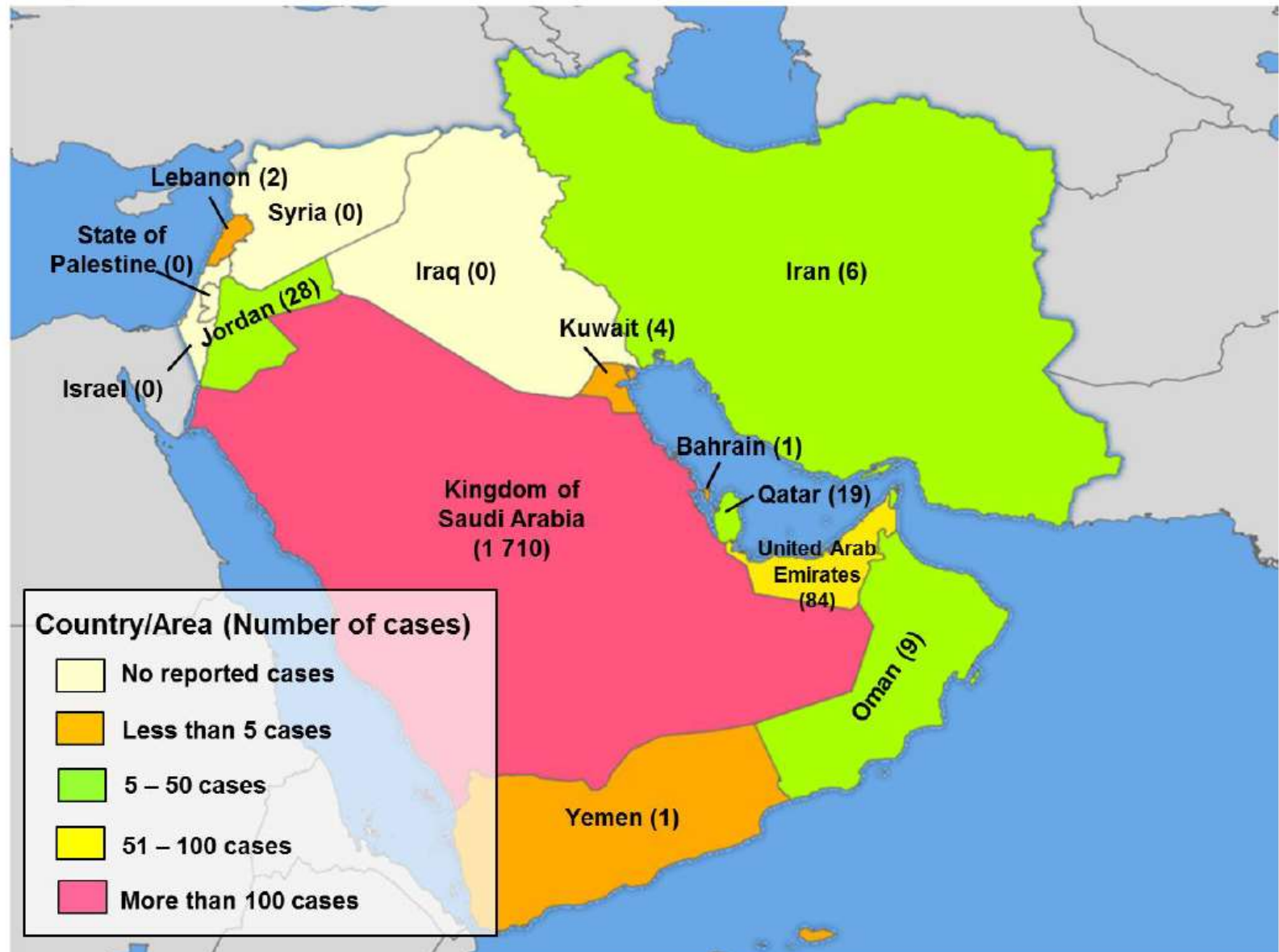
مركز القيادة والتحكم
Command & Control Center



Cumulative number of cases of Middle East Respiratory Syndrome since 2012 in affected areas (as of September 13, 2017)

(For current unaffected areas with cases reported previously, please refer to the World Health Organization's website

<http://www.who.int/emergencies/mers-cov/map-1-september-2017.png>)



Source: GHK CHP. Downloaded 9/20/17 from:

http://www.chp.gov.hk/files/pdf/distribution_of_mers_cases_en.pdf

Middle East respiratory syndrome coronavirus (MERS-CoV) – United Kingdom of Great Britain and Northern Ireland

Disease outbreak news

31 August 2018

On 22 August 2018, the International Health Regulations (IHR 2005) National Focal Point for the United Kingdom of Great Britain and Northern Ireland notified WHO about a laboratory-confirmed Middle East respiratory syndrome coronavirus (MERS-CoV) infection. The patient is a resident of the Kingdom of Saudi Arabia who was visiting the United Kingdom of Great Britain and Northern Ireland.

The patient is a male aged between 80-89 years with underlying chronic medical conditions. He had no history of recent travel or contact with sick patients in the Kingdom of Saudi Arabia, but had history of direct contact with camels before the onset of symptoms.

On 16 August, while symptomatic, the patient travelled by aircraft from the Kingdom of Saudi Arabia to Manchester in the United Kingdom of Great Britain and Northern Ireland and then to Leeds by car. He received treatment while in isolation in Leeds before being transferred to a specialist infectious disease facility in Liverpool. The patient's condition has improved and he continues to be in isolation.

Laboratory testing was performed by Public Health England (PHE) Birmingham laboratory and the results were positive for MERS-CoV; these results were confirmed by the national reference laboratory.

This is the fifth case of MERS-CoV diagnosed in the United Kingdom of Great Britain and Northern Ireland, with the four previous cases diagnosed in 2012 and 2013.

Case of imported MERS reported in Republic of Korea

Media release

9 September 2018 -- The Republic of Korea has officially reported an imported case of Middle East Respiratory Syndrome (MERS). This is the first case seen in the country since the end of an outbreak in 2015.

The case is a 61-year-old male who had travelled to Kuwait for business between 16 August and 6 September. He was hospitalized with fever, diarrhoea and respiratory symptoms shortly after returning to the Republic of Korea and is currently receiving treatment in isolation.

The Republic of Korea's National International Health Regulations Focal Point reported the case to the World Health Organization (WHO) on 8 September, the same day that it was laboratory-confirmed as MERS.

While this case is unusual, it is not unexpected that MERS will occasionally appear outside of the Middle East. The risk of spread can be minimised by the

**Republic of Korea
has reported a
case of MERS**





WHAT CAN YOU DO?

- **IDENTIFY ISOLATE INFORM**
- **OBTAIN A TRAVEL HISTORY EARLY IN EVALUATION**
 - Travel to affected area in last 2 weeks **(HAJJ!)**
 - Camel contact, healthcare contact
- **Be aware of the clinical spectrum of reported illness**
- **Inform Epidemiology Program to facilitate testing**
 - Three specimens needed (upper tract, lower tract, serum)
 - Specimens go to CDPH lab – 24 hour turn around
- **Counsel patients prior to travel to take precautions**



WHAT CAN YOU DO?

- **OBTAIN A TRAVEL HISTORY EARLY IN EVALUATION**
 - **Identify, isolate, inform**
- **Be aware of the clinical spectrum of reported illness**
- **Inform Epidemiology Program to facilitate testing**
 - **Three specimens needed (upper tract, lower tract, serum)**
 - **Specimens go to CDPH lab – 24 hour turn around**
- **Counsel patients prior to travel to take precautions**

***Aedes*-BORNE DISEASES**



LIVE WELL
SAN DIEGO

ZIKA

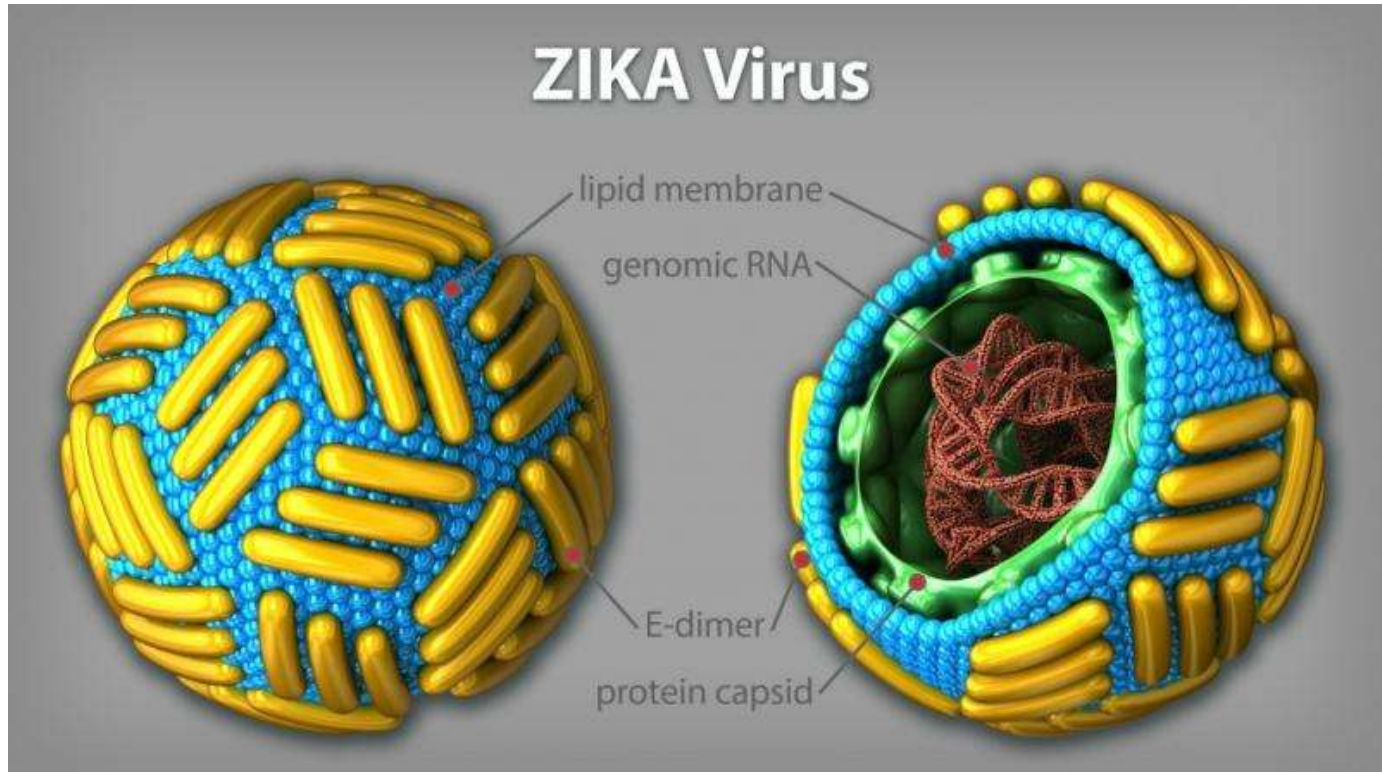
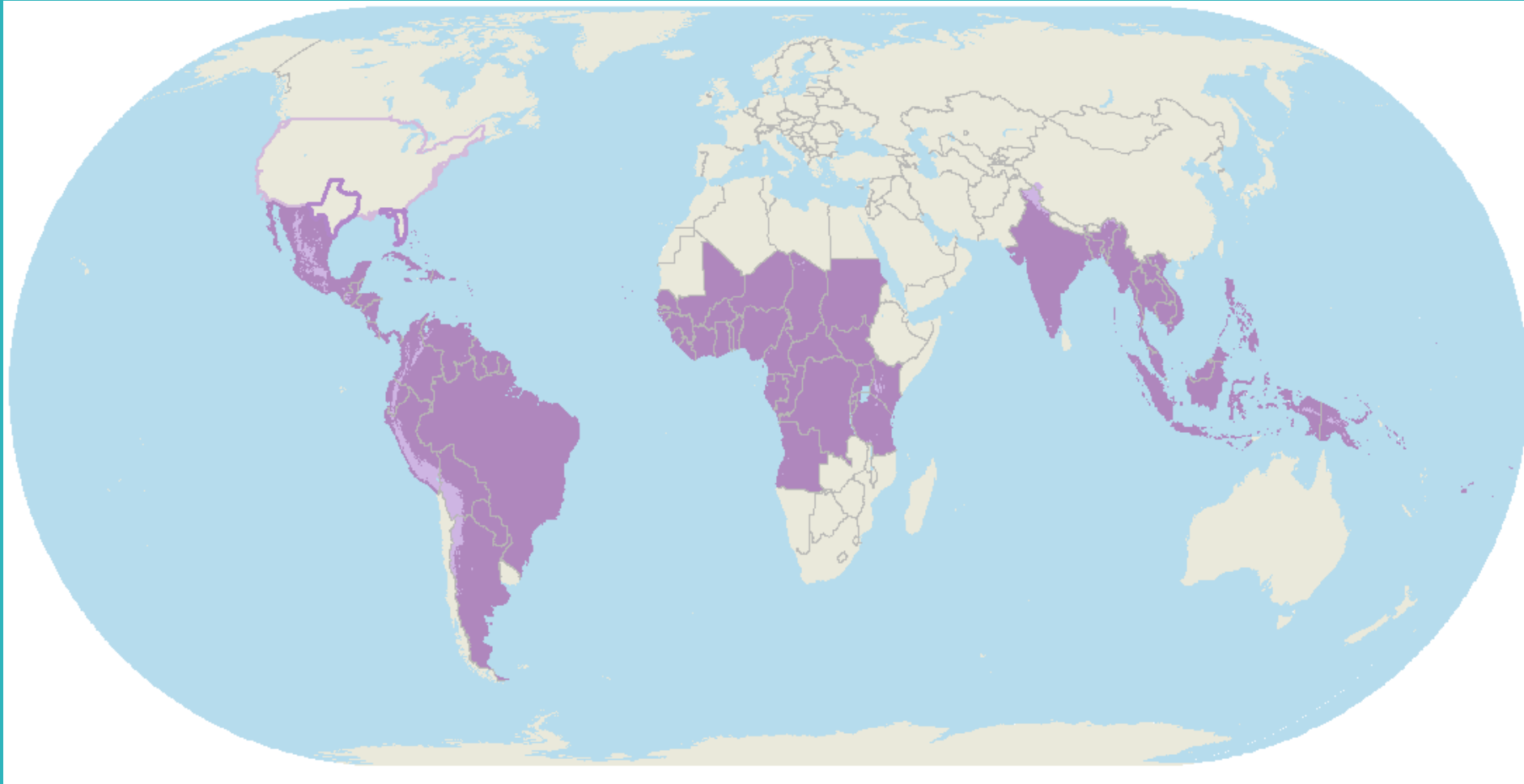


Image Credit: Getty Images



LIVE WELL
SAN DIEGO

Where is Zika now?



Source: CDC. Downloaded 3/22/17 from
<https://wwwnc.cdc.gov/travel/page/world-map-areas-with-zika>

AREAS WITH ZIKA RISK

Africa: Angola, Benin, Burkina-Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo Congo-Brazzaville), Côte d'Ivoire, Democratic Republic of the Congo (Congo-Kinshasa), Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Mali, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Sudan, Sudan, Tanzania, Togo, Uganda

Asia: Bangladesh, Burma (Myanmar), Cambodia, India, Indonesia, Laos, Malaysia, Maldives, Philippines, Singapore, Thailand, Vietnam

Caribbean: Anguilla, Antigua and Barbuda, Aruba, Barbados, Bonaire, British Virgin Islands, Cuba, Curaçao, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Martinique, Montserrat, Puerto Rico, Saba, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Vincent and the Grenadines, Sint Eustatius, Sint Maarten, Trinidad and Tobago, Turks and Caicos Islands, US Virgin Islands

North/Central/South America: Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Venezuela

Pacific Islands: Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga



AREAS WITH INTERRUPTED TRANSMISSION

American Samoa (4/17)
Bahamas (2/18)
Cayman Islands (7/17)
Cook Islands (3/17)
Guadeloupe (6/17)
French Polynesia (3/17)
Isla de Pascua, Chile (3/17)

Marshall Islands (1/18)
Martinique (6/17)
Micronesia (11/17)
New Caledonia (3/17)
Palau (11/17)
Saint Barthelemy (5/17)
Vanuata (3/17)

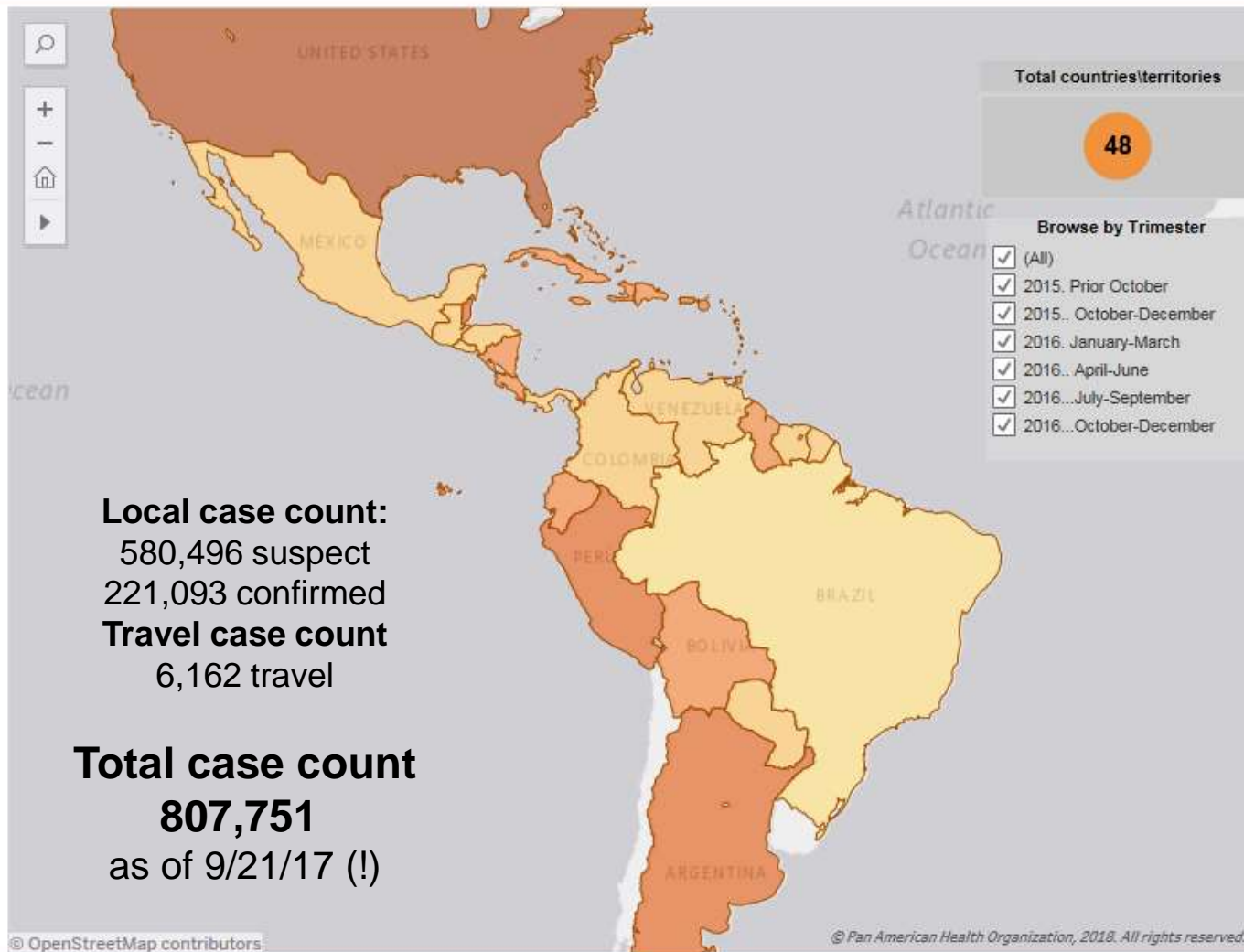


Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Travelers' Health

Countries and territories of the Americas with confirmed autochthonous cases
of Zika virus (vector-borne transmission), 2015-2017
- Data as of 21 December 2017 2:00 PM EST -

Anquilla
Antigua and Barbuda
Argentina
Aruba
Bahamas
Barbados
Belize
Bolivia
Bonaire, St. Eustatius and Saba
Brazil
British Virgin Islands
Cayman Islands
Colombia
Costa Rica
Cuba
Curacao
Dominica
Dominican Republic
Ecuador
El Salvador
French Guiana
Grenada
Guadeloupe
Guatemala
Guyana
Haiti
Honduras
Jamaica
Martinique
Mexico
Montserrat
Nicaragua
Panama
Paraguay
Peru
Puerto Rico
Saint Barthelemy
Saint Kitts and Nevis
Saint Lucia
Saint Martin
Saint Vincent and the Grenadi..
Sint Maarten
Suriname
Trinidad and Tobago
Turks and Caicos Islands
United States of America
United States Virgin Islands
Venezuela



Source: Cases reported by the IHR National Focal Points to the WHO IHR Regional Contact Point for the Americas and through the Ministry of Health websites, 2017.

Note: Further information regarding subnational geographic distribution of Zika virus cases is available on the Ministry of Health websites. For more details on country totals please visit Cumulative Cases table at http://ais.paho.org/phil/viz/ed_zika_cases.asp

Map Production: PAHO Health Emergencies Department (PHE) / Health Emergency Information & Risk Assessment (HIM); Updated as of 21 December 2017. Washington, D.C.

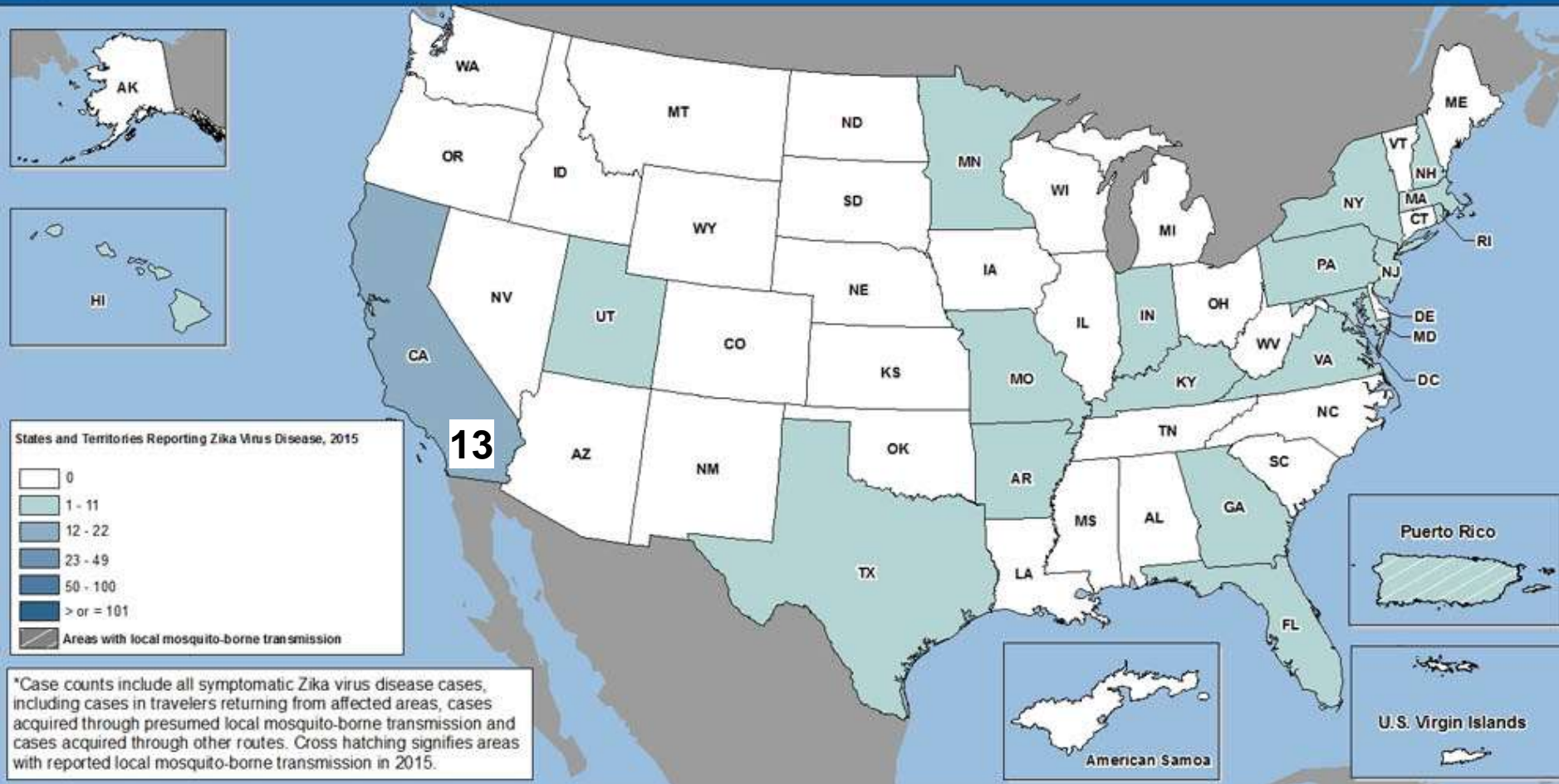
Suggested citation: Pan American Health Organization. *Countries and territories of the Americas with confirmed autochthonous cases of Zika virus (vector-borne transmission), 2015-2017*. Washington, D.C.

Source: PAHO. Downloaded 9/27/18 from http://ais.paho.org/phil/viz/ed_zika_countrymap.asp



Laboratory-confirmed symptomatic Zika virus disease cases* reported to ArboNET by states and territories— United States, 2015

SITUATION
AWARENESS
GIS



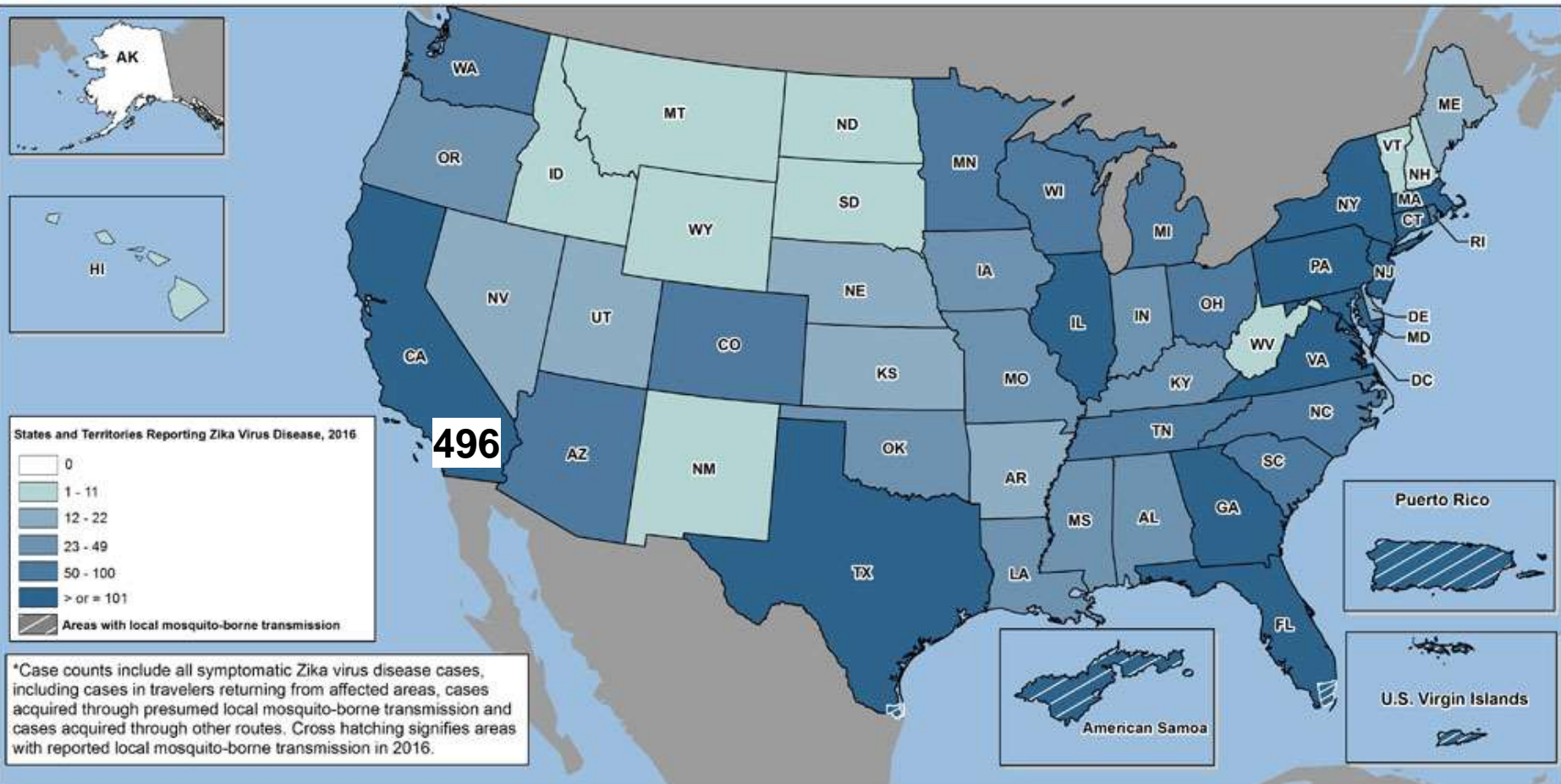
2015 Total : US States = 62 + 0 , US Territories = 10 + 0

Source: CDC. Downloaded 6/4/18 from:

<https://www.cdc.gov/zika/reporting/2015-case-counts.html>



Laboratory-confirmed symptomatic Zika virus disease cases* reported to ArboNET by states and territories— United States, 2016



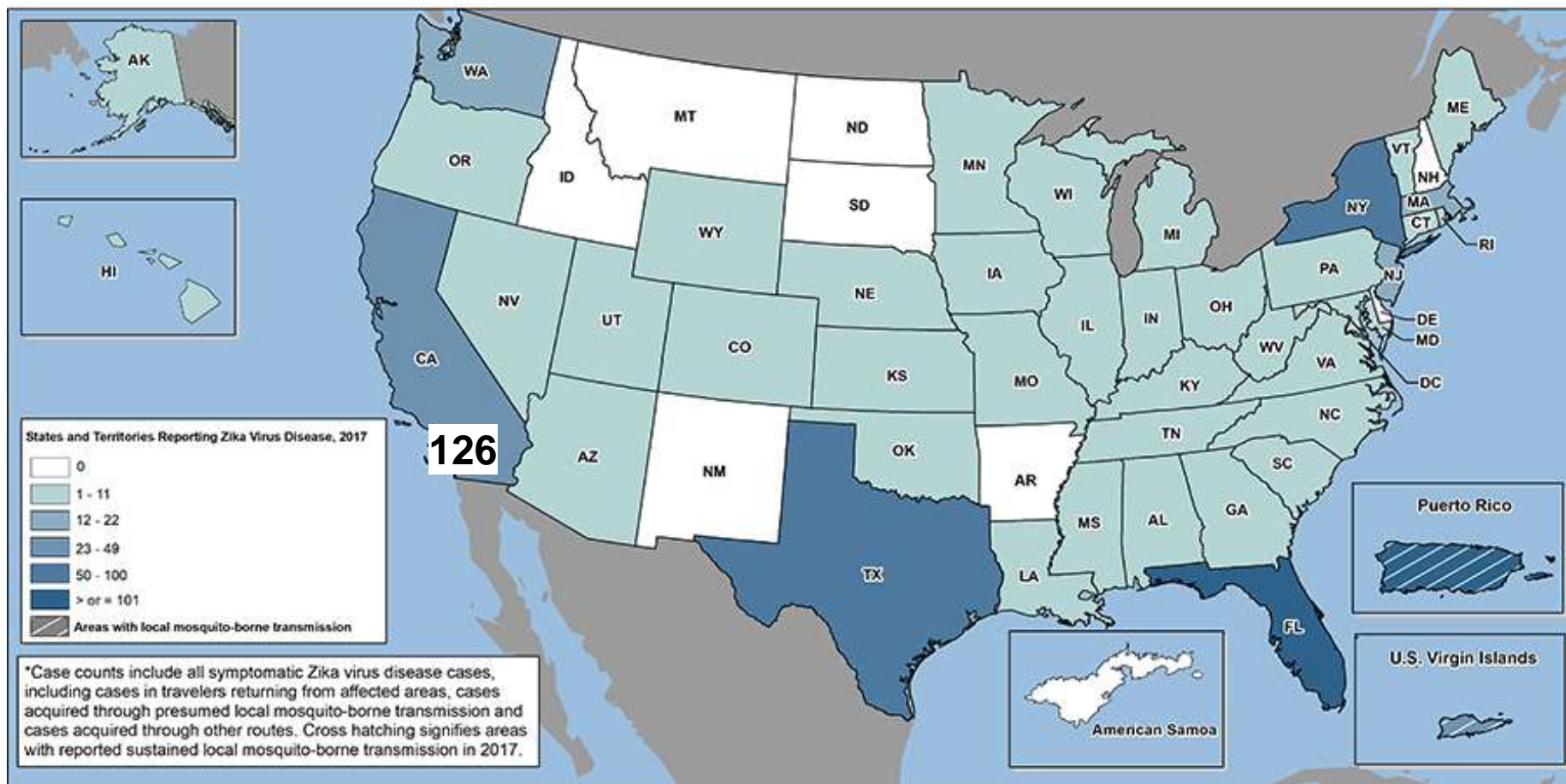
2016 Total : US States = 5,168 + 38 , US Territories = 36,512 + 325

Source: CDC. Downloaded 6/4/18 from:

<https://www.cdc.gov/zika/reporting/2016-case-counts.html>



Laboratory-confirmed symptomatic Zika virus disease cases* reported to ArboNET by states and territories— United States, 2017 (Provisional data as of July 3, 2018)



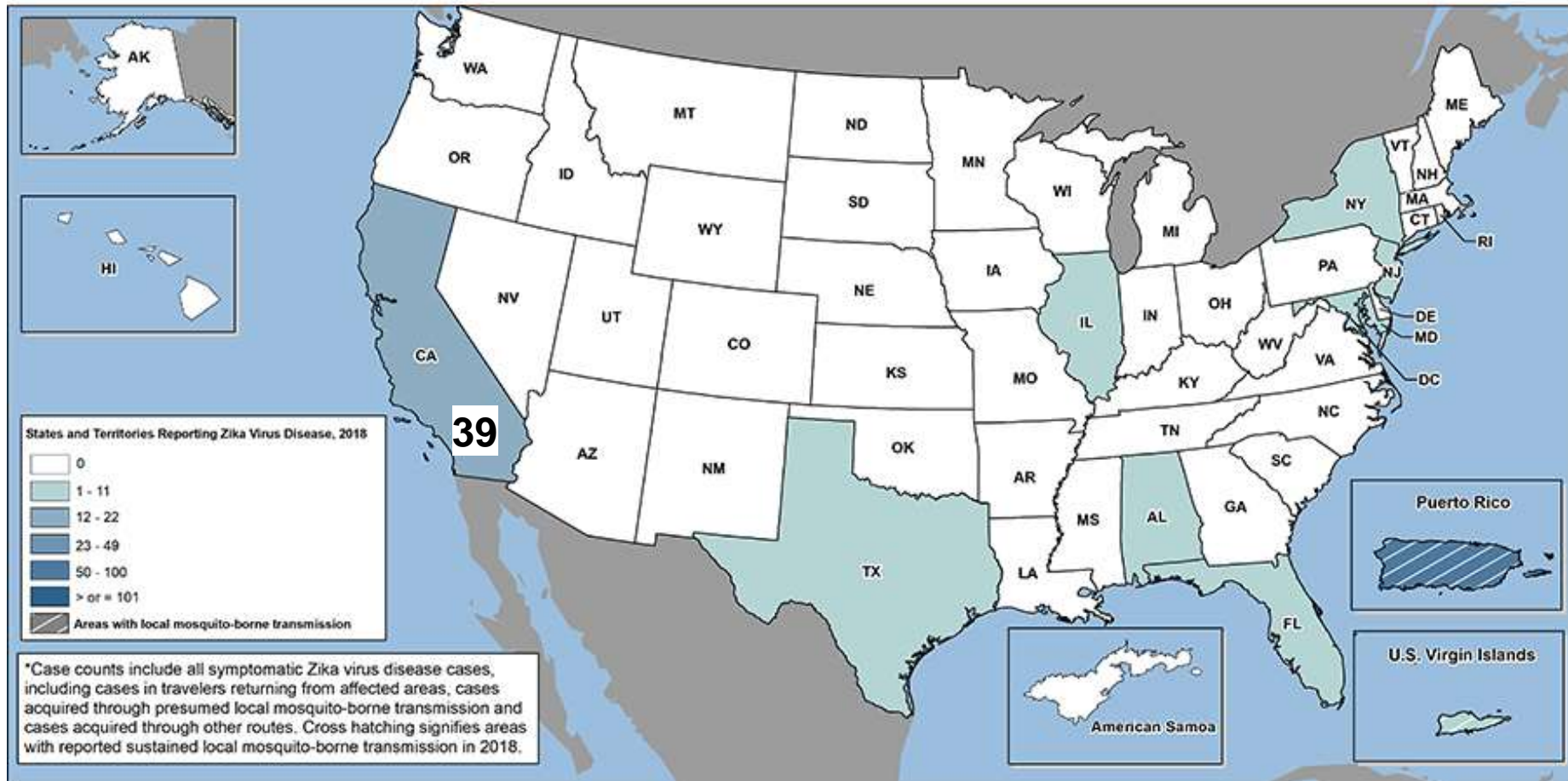
2017 Total as of 7/3/18: US States = 452 + 32 , US Territories = 666 + 6

Source: CDC. Downloaded 7/30/18 from:

<https://www.cdc.gov/zika/reporting/2017-case-counts.html>



Laboratory-confirmed symptomatic Zika virus disease cases* reported to ArboNET by states and territories— United States, 2018 (Provisional data as of July 3, 2018)

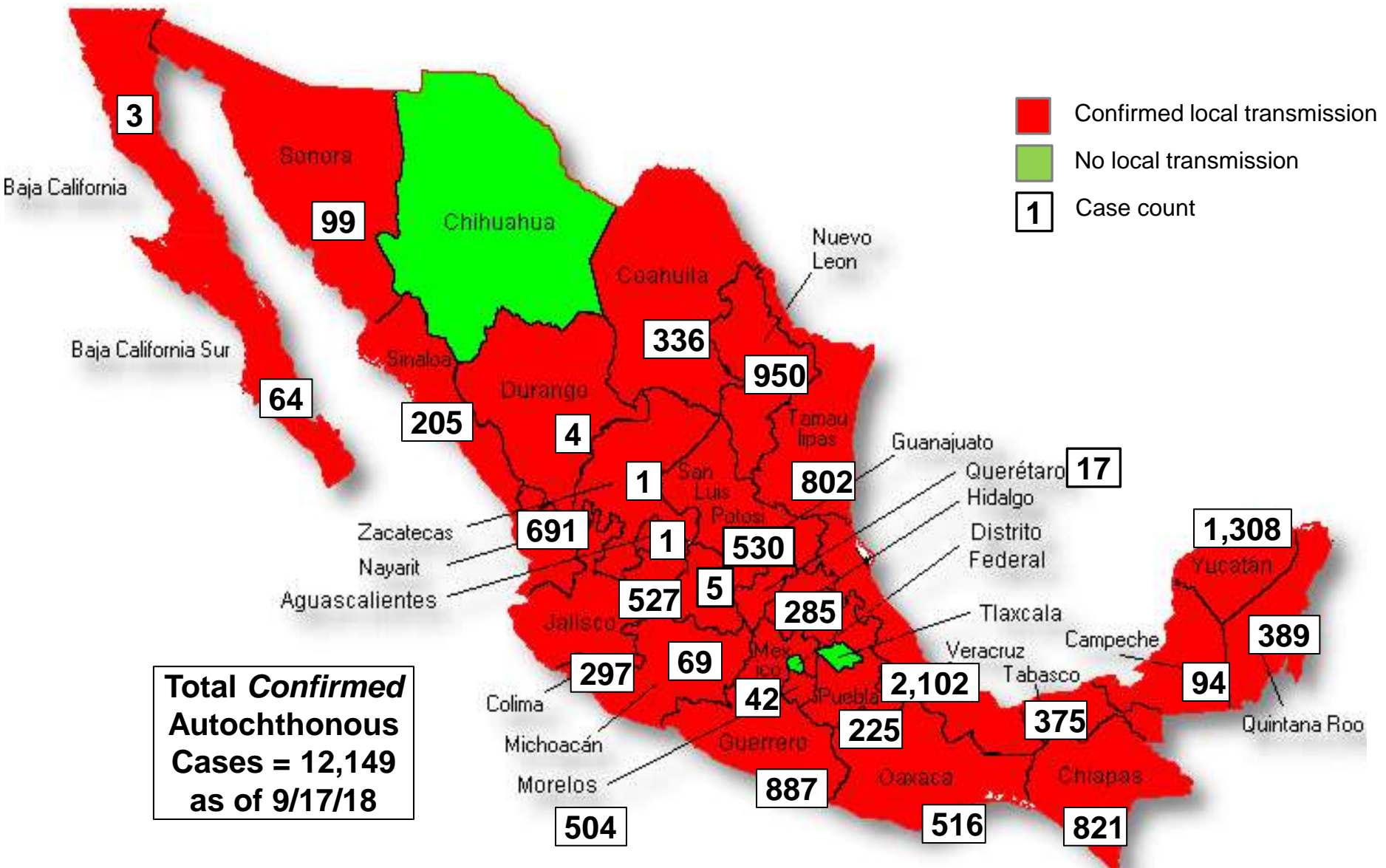


2018 Total as of 9/5/18: US States = 41 + 6 , US Territories = 82 + 0

Source: CDC. Downloaded 9/27/18 from:

<https://www.cdc.gov/zika/reporting/2018-case-counts.html>

Mexican States with Confirmed Local Transmission of Zika, 2015-2018

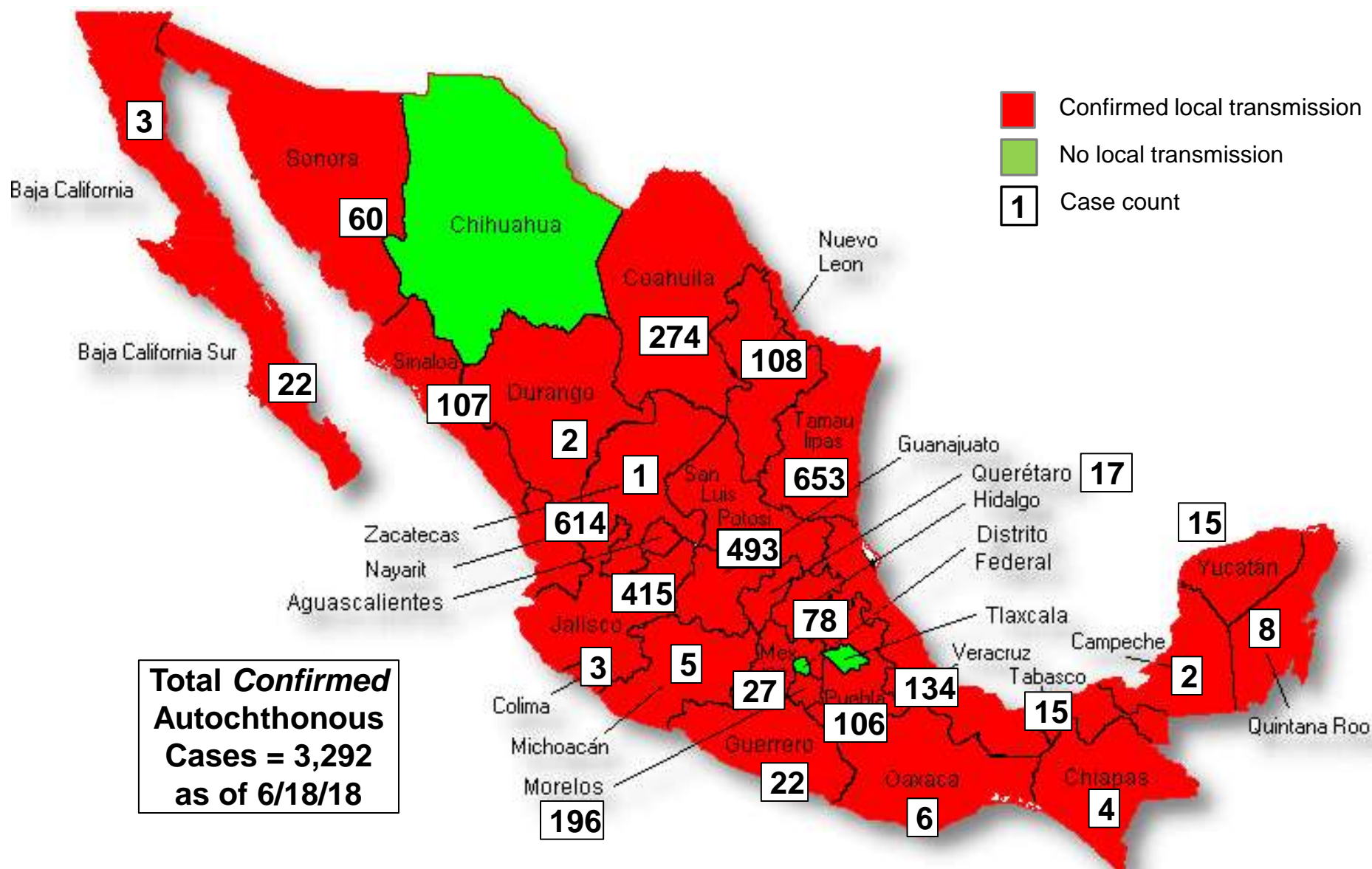


Map prepared on 9/26/18 using data from:

<https://www.gob.mx/salud/acciones-y-programas/zika-informacion-relevante>

and software on: <http://diymaps.net/>

Mexican States with Confirmed Local Transmission of Zika, 2017



Map prepared on 6/26/18 using data from:

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Mexican States with Confirmed Local Transmission of Zika, 2018



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and software on: <http://diymaps.net/>

Mexican States with Confirmed/Probable Cases of Dengue, 2016

Baja California
9 confirmed
242 probable

Incidence per 100,000 of confirmed cases			
	0.0		
	0.01	a	13.11
	13.12	a	26.17
	26.18	a	39.23
	39.24	a	52.30

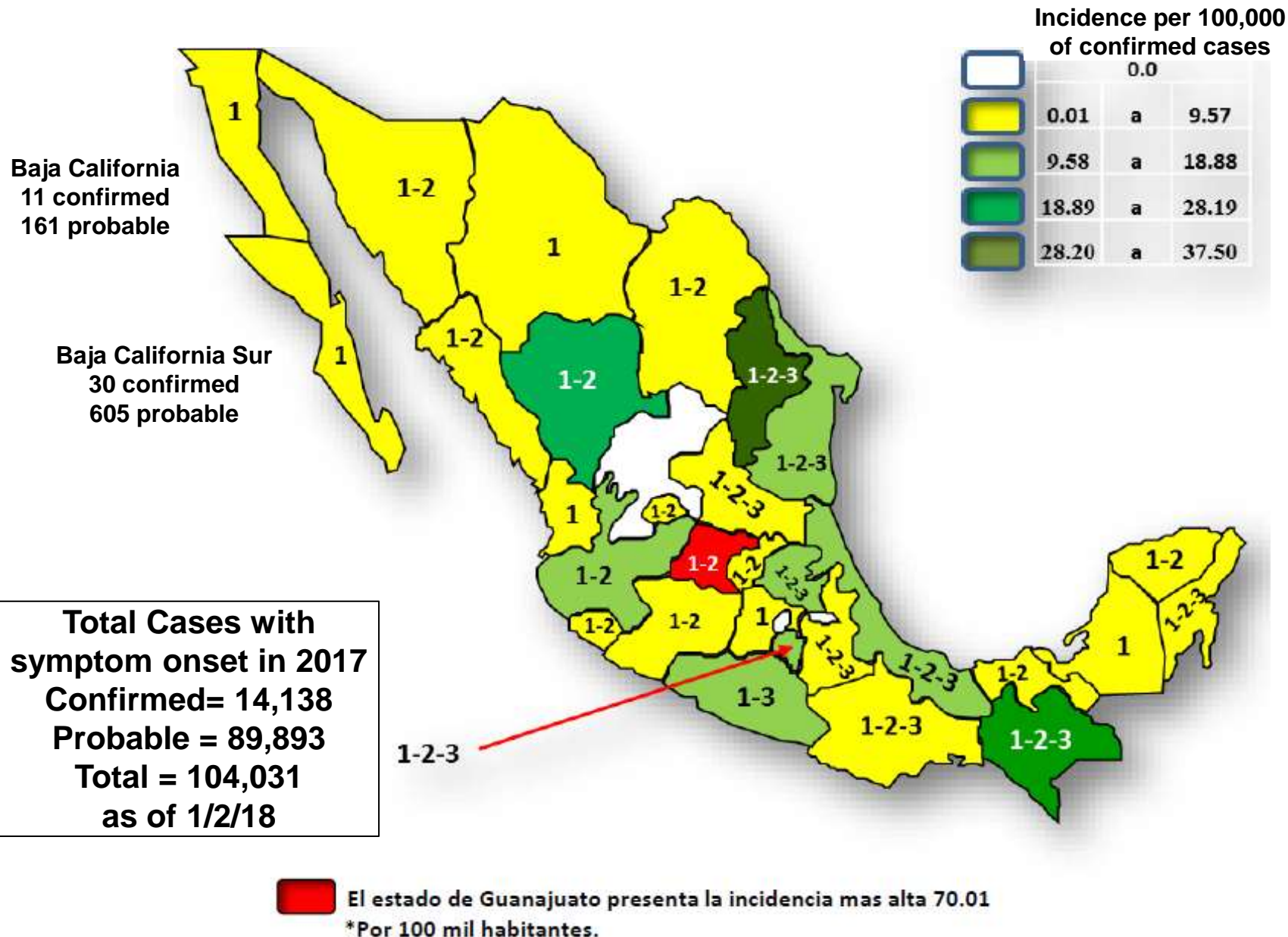
Total Cases
Confirmed= 17,795
Probable = 132,055
Total = 149,850
as of 1/30/17



Source: Secretaría de Salud. Map downloaded on 1/9/17:

<http://www.epidemiologia.salud.gob.mx/informes/2016/dengue-semanas.html>

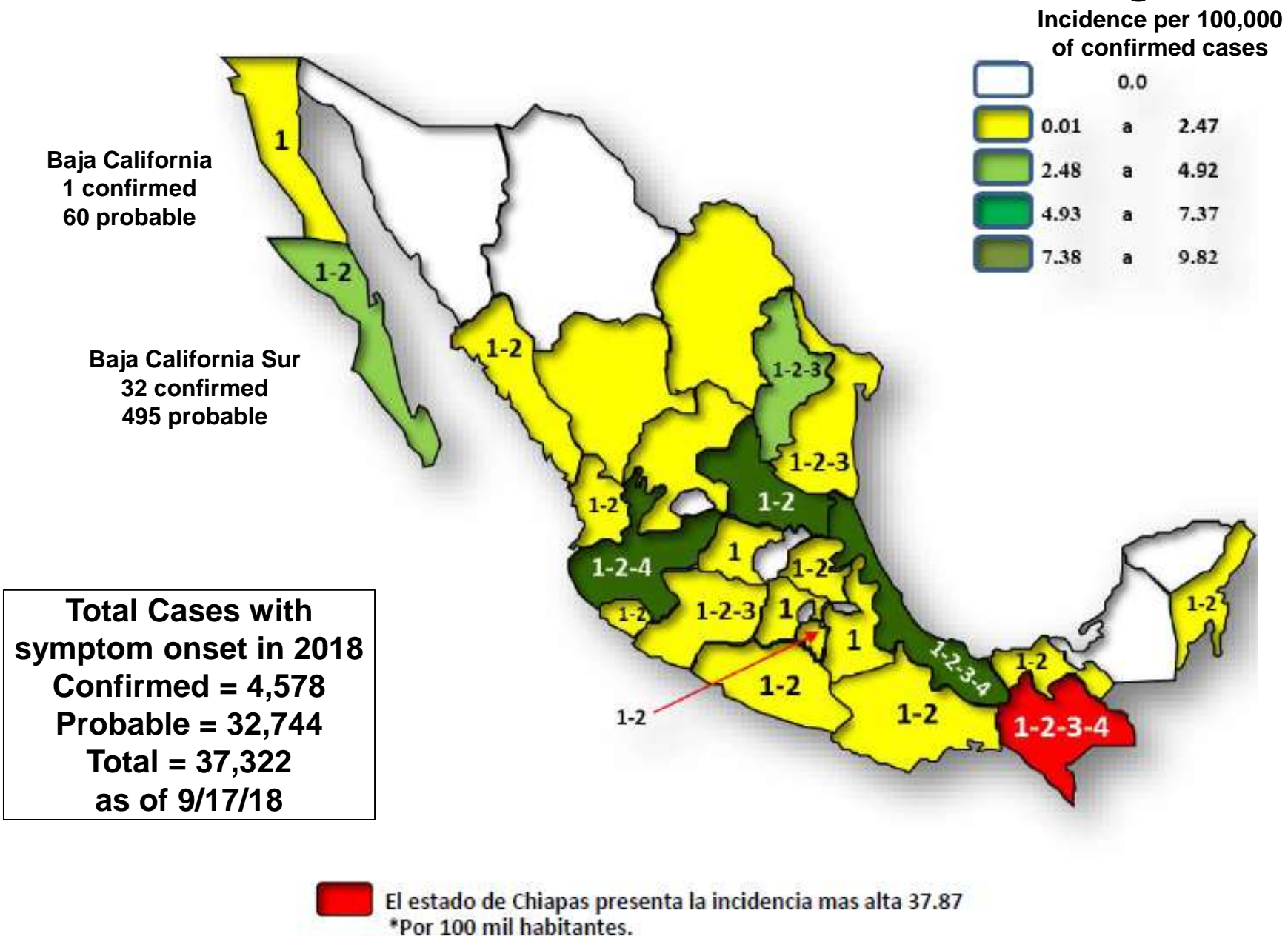
Mexican States with Confirmed/Probable Cases of Dengue, 2017



Source: Secretaría de Salud. Map downloaded on 1/29/18:

https://www.gob.mx/cms/uploads/attachment/file/285237/Pano_dengue_sem_52_2017.pdf

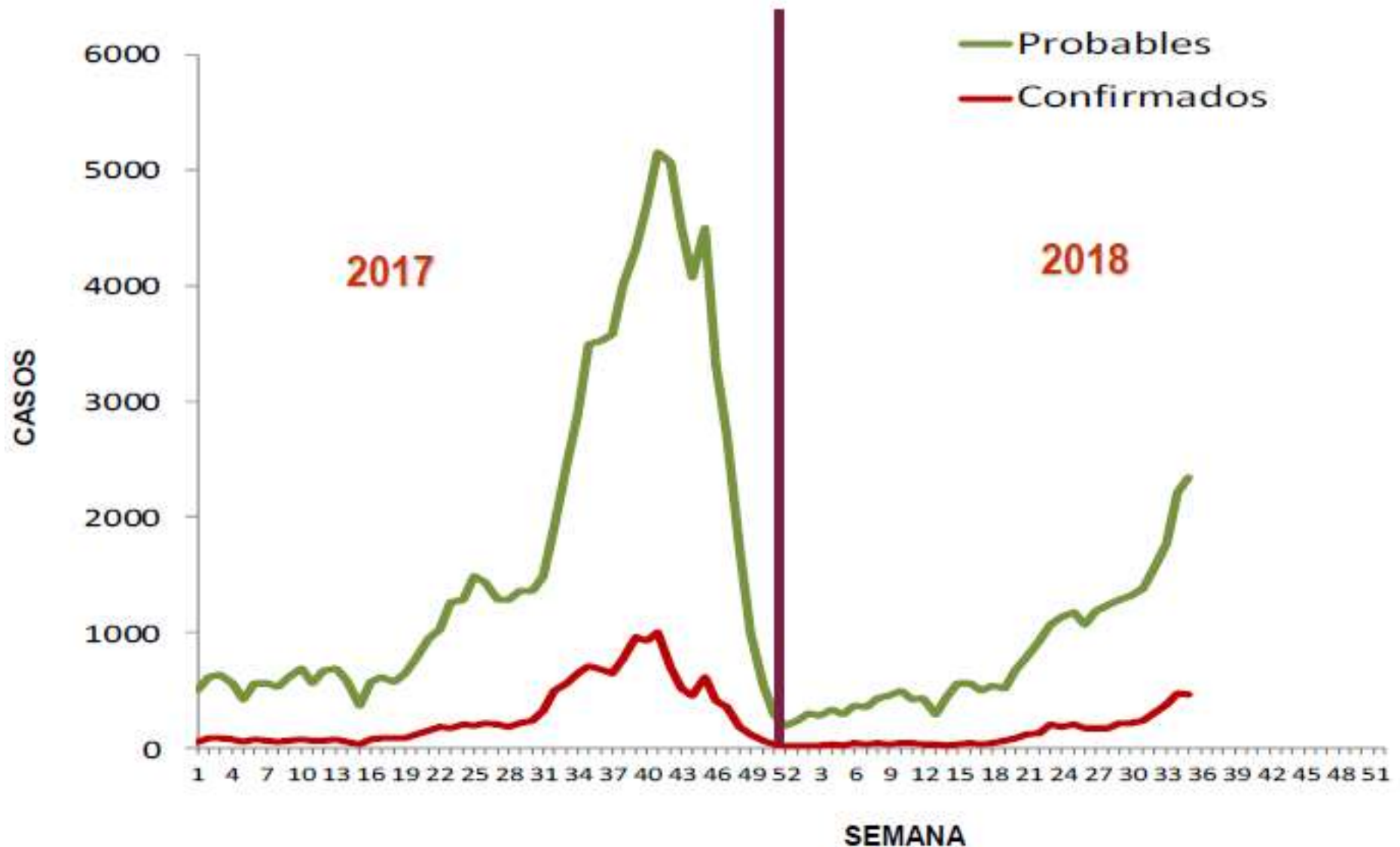
Mexican States with Confirmed/Probable Cases of Dengue, 2018



Source: Secretaría de Salud. Map downloaded on 9/26/18:

<https://www.gob.mx/salud/documentos/panorama-epidemiologico-de-dengue-2018-semana-epidemiologica-37>

Confirmed and Probable Dengue Cases in Mexico 2017, 2018 Epidemiology Curve by Week, Through Week 37



Source: Secretaría de Salud. Map downloaded on 9/26/18:

https://www.gob.mx/cms/uploads/attachment/file/391812/Pano_dengue_sem_37_2018.pdf

ZIKA REFERRALS IN SAN DIEGO 2015-18



- Total Zika referrals: **4,519 (985 in 2018)**
- Confirmed/Probable Zika cases: **109 (4 in 2018)**
- Confirmed cases in pregnant women: **15**
- Cases ruled out for Zika: **4,351**
- Cases pending lab results or submission: **25**
- Cases pending lab results in pregnant women: **2**
- Cases referred to Vector Control: **455**
- Other diagnoses made:
 - Dengue **35 (4 in 2018)**
 - Chikungunya **15 (4 in 2018)**

For more information contact:

Eric C. McDonald, MD, MPH, FACEP

Medical Director, Epidemiology and Immunizations Services
Public Health Services

County of San Diego Health and Human Services Agency

3851 Rosecrans Street (MS-P578)

San Diego, CA 92110

Phone: (619) 692-8436

Fax: (858) 715-6458

Email: eric.mcdonald@sdcounty.ca.gov