

CDC PUBLIC HEALTH GRAND ROUNDS

Building Local Response Capacity to Protect Families from Emerging Health Threats



April 16, 2019



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

Continuing Education Information

Continuing education: www.cdc.gov/getce

- After creating a TCEO account, click the “Search Courses” tab on the left and use “Public Health Grand Rounds” as a keyword search.
- All PHGR sessions eligible for CE should display, select the link for today’s session and then Continue button. [Course Access Code is PHGR10](#).
- CE expires May 20, 2019 for live and June 16, 2021 for Web On Demand courses.
- Issues regarding CE and CDC Grand Rounds, email: tceo@cdc.gov

CDC, our planners, presenters, and their spouses/partners wish to disclose they have no financial interests or other relationships with manufacturers of commercial products, suppliers of commercial services, or commercial supporters. Planners have reviewed content to ensure there is no bias. Content will not include any discussion of the unlabeled use of a product or a product under investigational use. CDC did not accept commercial support for this continuing education activity.

Today's Speakers and Contributors



**Christine Kosmos,
RN, BSN, MS**

- Oscar Alleyne
- Jade Anderson
- John Anderton
- Lillian Ansley
- Wanda Barfield
- Eric Carbone



**Muntu Davis,
MD, MPH**

- Tom Clark
- Amanda Cohn
- Paula Eriksen
- Brenda Holmes
- Peggy Honein
- Princess Ladson



**Roberta DeBiasi,
MD, MS**

- Blanca Lapointe
- Luis Luque
- Steve Mann
- Stacey Martin
- Alicia May
- Kate Noelte



**Nicole Fehrenbach,
MPP**

- Anita Patel
- Kara Polen
- Angie Robertson
- Stuart Shapira
- Nga Vuong
- Michelle Walker

Acknowledgments

- D.C. and Maryland Departments of Health, Division of Infectious Diseases Epidemiology

CDC PUBLIC HEALTH GRAND ROUNDS

Building Local Response Capacity to Protect Families from Emerging Health Threats



April 16, 2019



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

CDC's Role in State, Local, Tribal, and Territorial Public Health Preparedness and Response



Christine Kosmos, RN, BSN, MS

Director

Division of State and Local Readiness
Center for Preparedness and Response, CDC



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



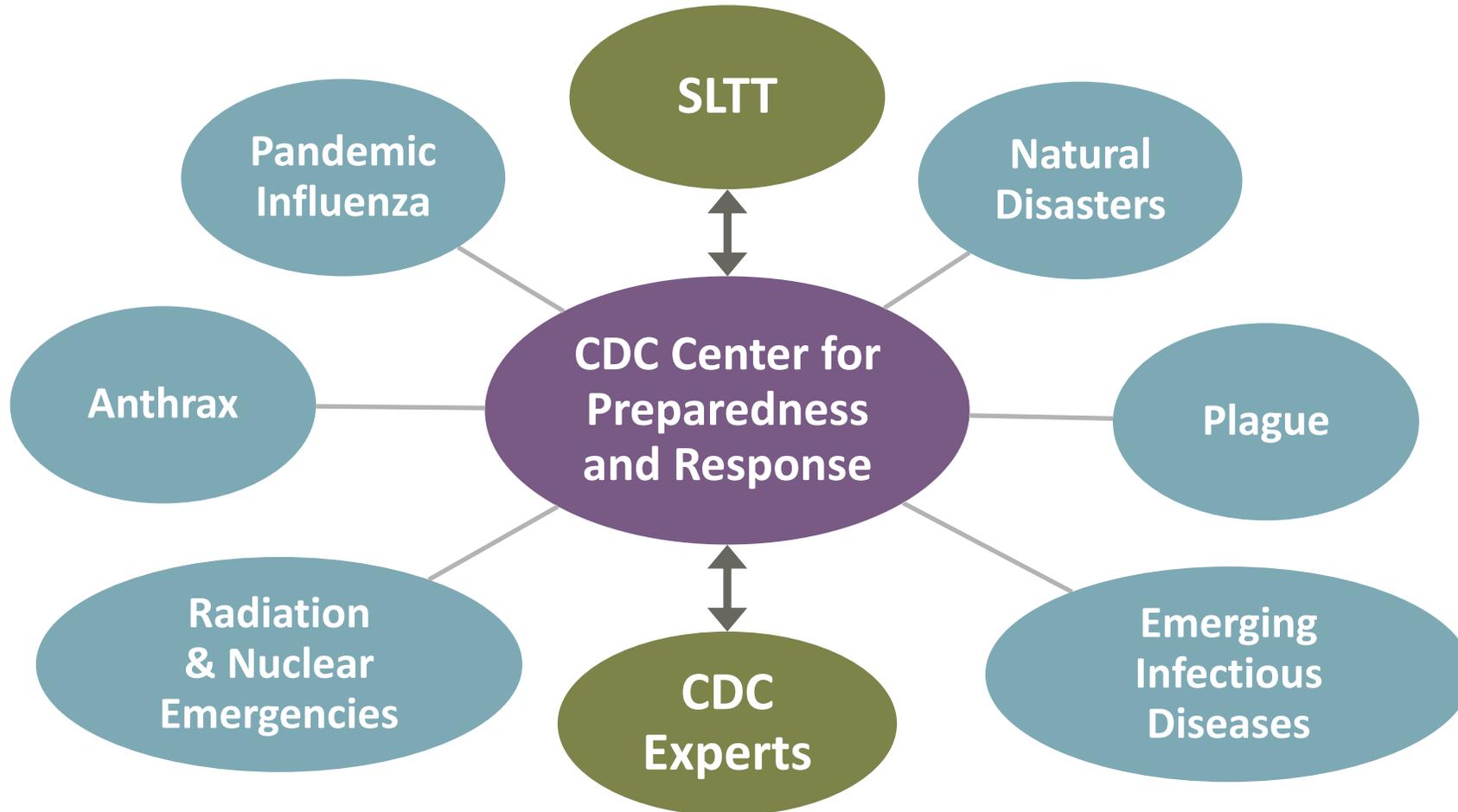
Public Health Emergency Preparedness (PHEP) Program

- **Evolution of the PHEP Program**
 - Events of 9/11 exposed the lack of readiness at the state and local level for response to intentional threats
- **Intent of the PHEP program is to ensure state and local public health agencies are prepared and ready to respond to any event that threatens the health and safety of their community**
 - PHEP builds state, local, tribal, and territorial (SLTT) preparedness and response capability



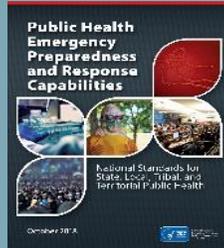
New York City, September 2001

CDC Public Health Response Framework



SLTT: State, Local, Tribal, and Territorial Public Health Departments

Public Health Emergency Preparedness (PHEP) Program Operations



**Public Health Preparedness
Capabilities: National Standards**



**Threat-Specific
Planning**



**PHEP Cooperative
Agreement Funding**



**Response Assistance for
Public Health Emergencies**

Select PHEP Program Accomplishments

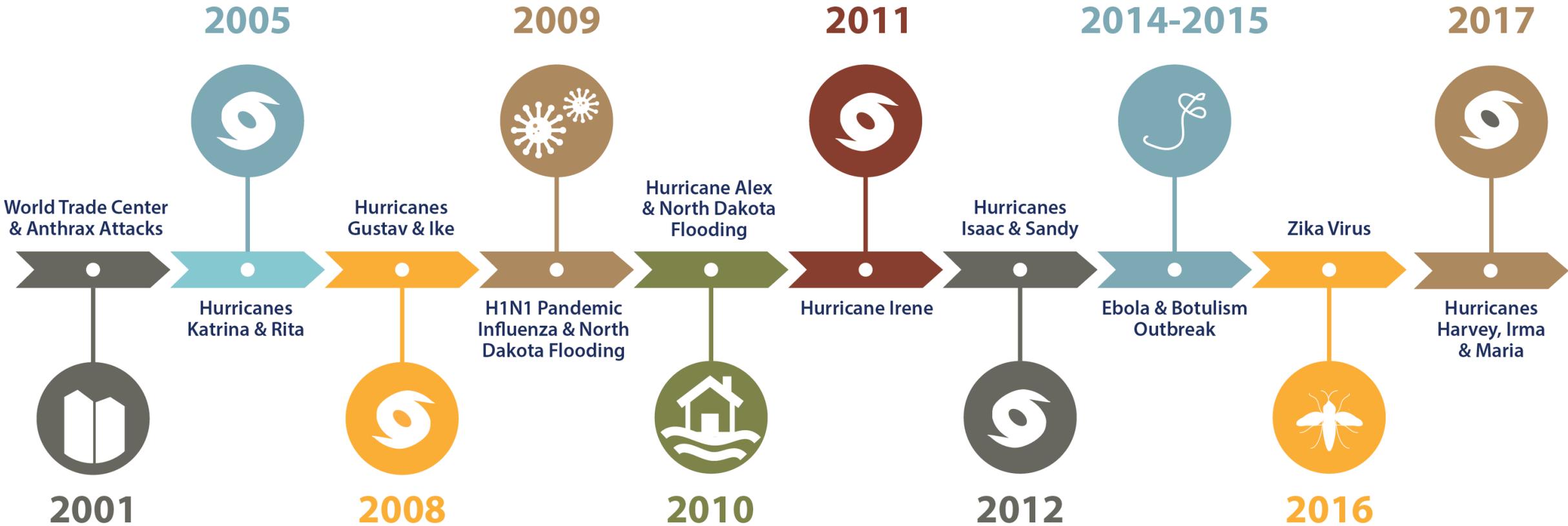


	PHEP Capability Standard	SLTT Demonstration of Capability
	Developed Public Health Emergency Management expertise	Trained public health first responders in incident command and public health response
	Adopted national standards for Incident Management	Standardized, scalable response systems that can effectively manage public health response and ensure coordination with other response partners in the community
	Increased capacity for Rapid Threat Detection	Network of public health labs capable of rapidly detecting and characterizing biological and chemical threats
	Improved capacity for Medical Countermeasure Dispensing and Distribution	Delivery of lifesaving medicines and medical supplies during an emergency
	Improved Risk Communication to the Affected Population	Deliver credible information to the public regarding self-protective measures, thereby reducing risk to families and communities

PHEP: Public Health Emergency Preparedness

SLTT: State, local, tribal, and territorial public health

Snapshot of National CDC Responses



*Not shown above: Frequent small scale responses

Other CDC Programs and Resources Available To Support Preparedness and Response

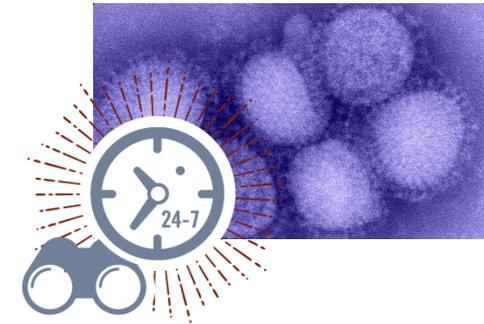
Children's Preparedness Unit



Reproductive Health Emergency Preparedness Training Course



Pandemic Influenza Planning, Preparedness, and Response



NIOSH Emergency Preparedness and Response: Worker Resources



Emergency Partners Information Connection



Clinical Outreach and Communication Activity



Response Support

➤ **State Coordination Task Force (SCTF)**

- State, local, and territorial coordination
- National partner communication
- Connect jurisdictions with CDC subject-matter experts

➤ **Public Health Crisis Response Cooperative Agreement**

- Mechanism to expedite CDC emergency funding to impacted jurisdictions



2014–2015 Ebola Virus Disease Response Examples

Active Monitoring

26,000+



travelers
monitored
since 2014

Hospital Readiness

Secured
personal
protective
equipment to
provide for



250
days

of patient
care

Funding

Approximately
\$165M
of PHEP Ebola
supplemental funding



PPE: Personal protective equipment

PHEP: Public Health Emergency Preparedness

Zika Virus Disease Response



Community Training to Decrease Mosquito Breeding Sites



More than 8,000 ZPK Delivered to Puerto Rico



Zika Prototype Prevention Kit (ZPK)

For More Information



State and Local Readiness

www.cdc.gov/cpr/readiness

Protecting Families from Emerging Health Threats

Local Public Health Emergency Preparedness and Response Activities



Muntu Davis, MD, MPH

County Health Officer

Los Angeles County Department of Public Health

Presentation Outline

- **Our mission**
- **Public health practice**
- **Woolsey wildfire**
- **Public health actions to protect and educate families**

Four core activities that summarize public health practice – how we do our work

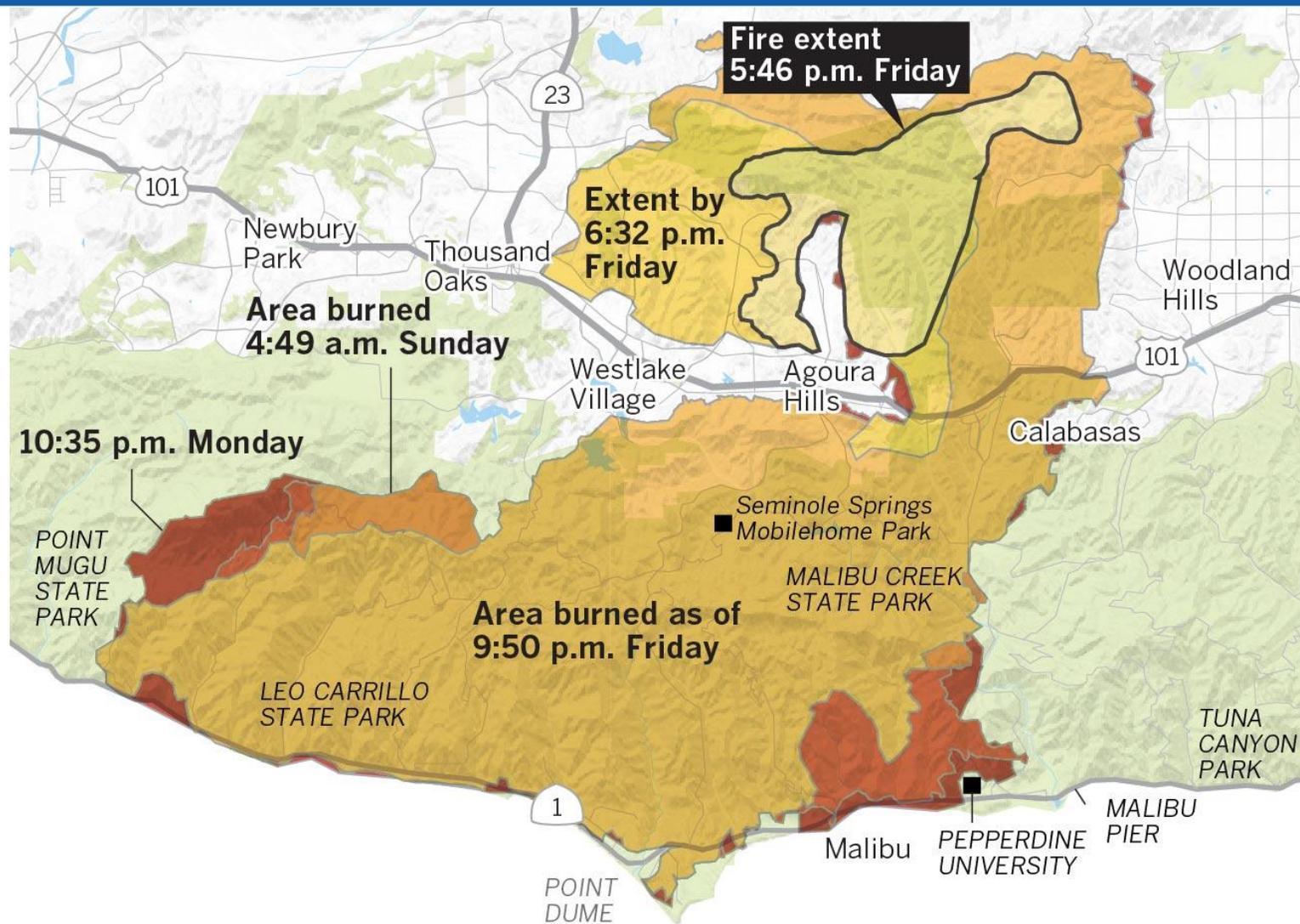
- 1. Surveillance** → The 5 Ws
(**W**hat, **W**ho, **W**here, **W**hen, **W**hy?)
- 2. Disease Control & Prevention** → How to interrupt and prevent the spread and reduce risk of illness
- 3. Communication** → Messages to the 3 Ps
(**P**roviders, **P**ublic, and **P**olicymakers)
- 4. Resource Coordination** → Work with others to effectively manage all of the above

The work is directed and supported by staff with diverse set of skills, expertise, and training

- **Administrative Support Workers**
- **Community Workers**
- **Doctors**
- **Epidemiologists**
- **Environmental Health Specialists**
- **Health Educators**
- **Information Technology Specialists**
- **Occupational Health Specialist**
- **Operations Support Workers**
- **Public Health Nurses**
- **Public Health Investigators**
- **Microbiologists**
- **Nutritionists**
- **Researchers**
- **Veterinarians**

On November 8, 2018, the Woolsey fire ignited and burned in Ventura and Los Angeles Counties for 13 days before containment

Here's where the Woolsey fire burned through the hills of Southern California in the first few days...



... a total of 96,949 acres burned.

Evacuees filled shelters, stayed with friends and family and awaited news of their homes while 3,242 responders worked to gain control



Structures Damaged: 364



Structures Destroyed: 1,643

Public Health surveillance started at the beginning of the fire and with the response to it. Some examples include...

- ✓ Unhealthy air quality in areas around and downwind of the fire



- ✓ Evacuees gathering, potentially staying, in locations not designed to safely meet basic daily needs

- ✓ Risk of perishable food in affected homes and restaurants spoiling



- ✓ Planned (and unplanned) power shutoffs, impact on treated water systems



**After determining the 5 Ws
(Who, What, When, Where, and Why?),
we, at the public health department, determined
what actions were needed to protect
health and the environment**

Public Health communicated with the 3 Ps about actions needed to protect health and the environment

✓ Unhealthy air quality



➤ **Public**

- Wildfire Smoke Advisory
 - Who is at greatest risk?
 - How to protect yourself
 - Use and safety of masks
 - Limit outdoor activities (for public and schools)
 - Where to get updates

➤ **Policymakers**

- Limit outdoor activities of field staff
- Mask Guidance to Protect from Wildfire Smoke or Ash
 - Answered questions about the use of N95 respirators* during wildfires

*N95 Respirators: a respiratory protective device designed to achieve a very close facial fit and to filter at least 95% of airborne particles. They are not designed for children or people with facial hair because a proper fit cannot be achieved for them.

3Ps: Providers, Public, and Policymakers

Public Health communicated with the 3 Ps about actions needed to protect health and the environment

➤ **Public**

- Offered immunizations
 - ❑ Influenza (flu) at shelters (fires occurred mid-flu season)
 - ❑ Tetanus booster at Disaster Recovery Centers
- Health Fact Sheets
 - ❑ Returning Home After...
 - ❑ Mental Health & Stress after an Emergency



➤ **Policymakers**

- DPH Environmental Health inspected each shelter to assess for environmental and food safety concerns
- DPH coordinated with other government agencies inside the response structure
- Resources needed for mental health impacts

Some actions done in coordination and in collaboration with other departments

➤ **Public**

- Health Fact Sheets
 - ❑ Cleaning Smoke & Soot
 - ❑ Water Storage Tank Disinfection
 - ❑ Food Safety After a Power Outage
 - ❑ Mental Health & Stress after an Emergency
(with Dept of Mental Health)
 - ❑ Swimming Pools After a Fire
(with Public Works and Vector Control)
- Trash and Fire Debris Removal
(with Public Works)

➤ **Policymakers**

- Health Officer Order prohibiting the unsafe removal, transport, and disposal of fire debris

➤ **Providers**

- Joint Health Advisory: Identifying and Managing the Mental Health Impacts of the Woolsey Fire on Residents and First Responders
(with Dept of Mental Health)



Some lessons learned...

➤ **People need and want to know...**

- What to expect
- What they can do
- Where to get help

➤ **Policymakers need and want to know...**

- What to expect
- What they can do
- Where their constituents can get help

➤ **The key is to coordinate and collaborate with others**

- Avoids confusion
- No one entity can do or know it all
- Helps families recover and rebuild faster

Partnering with Health Professionals to Respond Locally



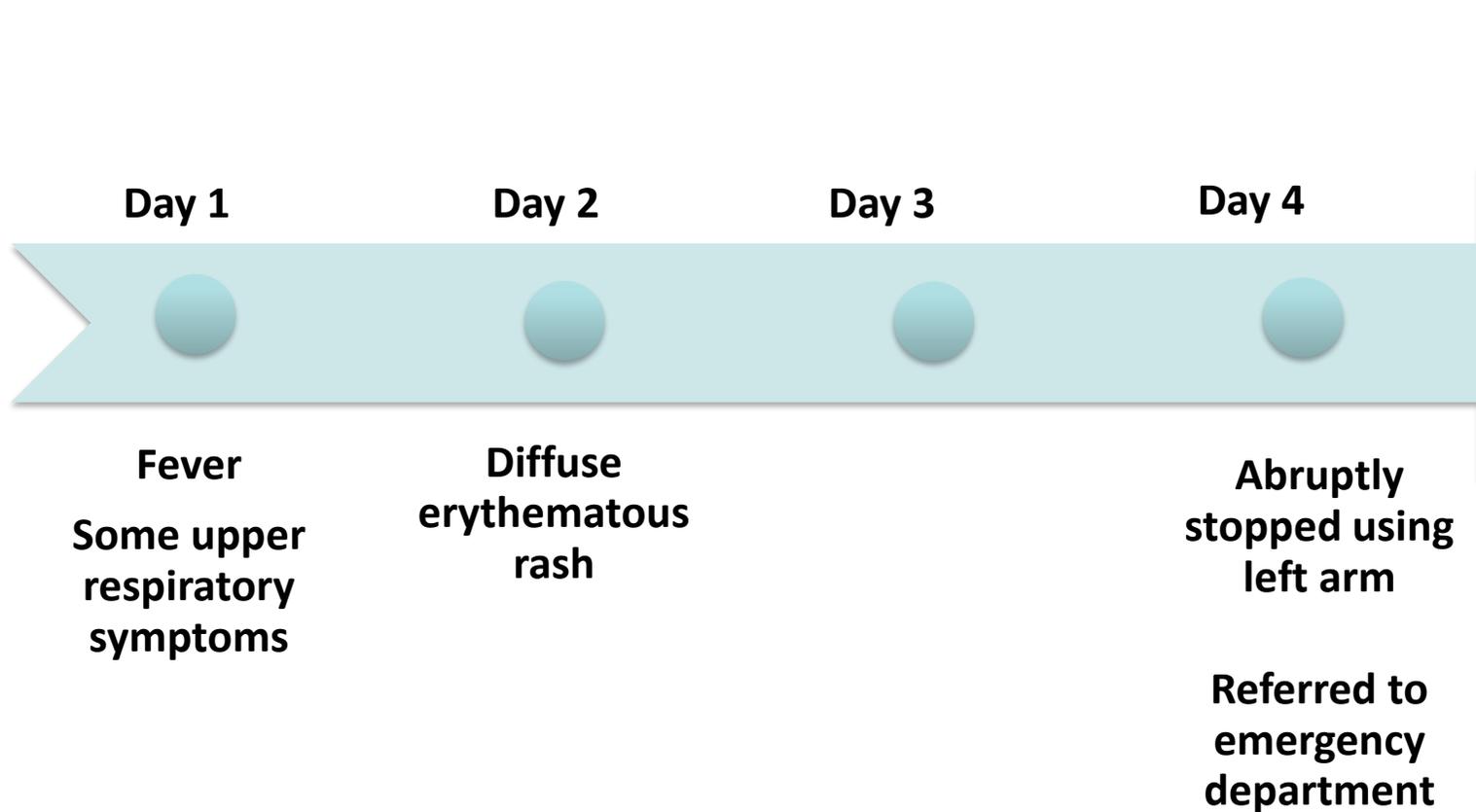
Roberta DeBiasi, MD, MS

*Chief, Division of Pediatric Infectious Diseases
Children's National Health System (CNHS)*

*Professor, Pediatrics, Microbiology, Immunology and Tropical Medicine
George Washington University School of Medicine, Washington, DC*

Meet “Sam”

6-month-old boy presenting to emergency department



Sam's Physical Exam, Laboratory and Diagnostics



Impression: Cervical polyradiculitis and enhancing focal lesion within the mid-left cervical spinal cord (e.g., inflammation in his spinal cord, on the left side, in the neck region)

CDC Acute Flaccid Myelitis (AFM) Case Definition

Acute onset flaccid limb weakness

AND

Confirmed AFM Case

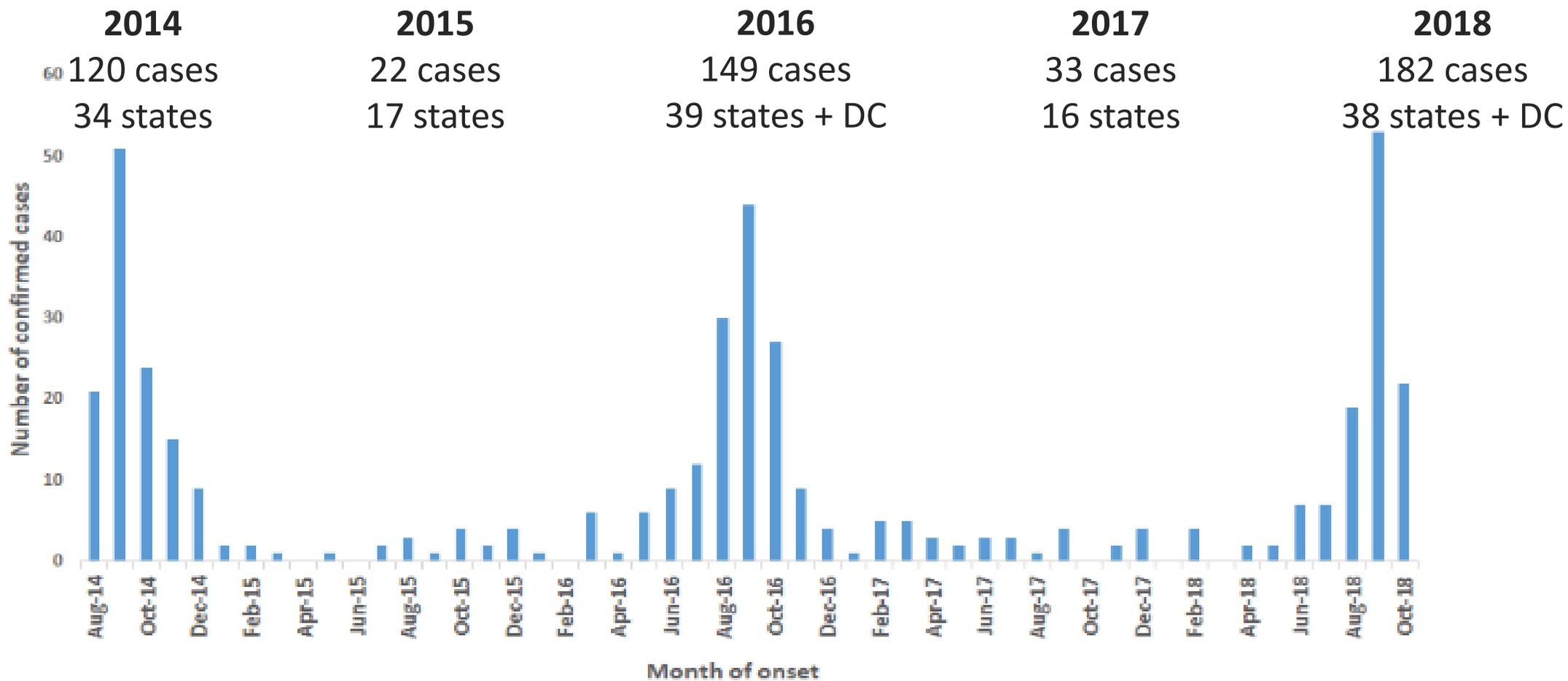
MRI findings of spinal cord lesion largely restricted to gray matter and spanning one or more spinal segments

OR

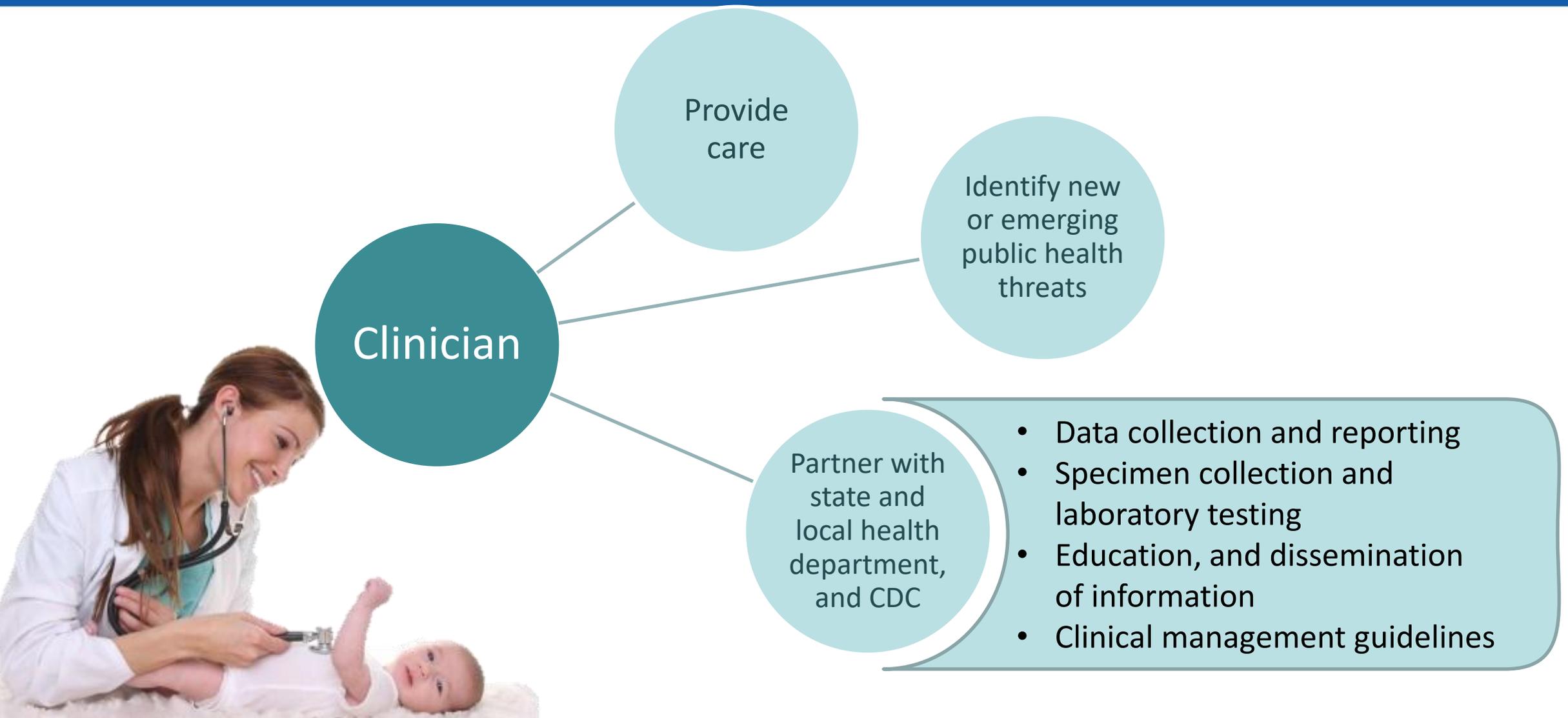
Probable AFM Case

Cerebrospinal fluid (CSF) with pleocytosis (>5 cells/mm³)

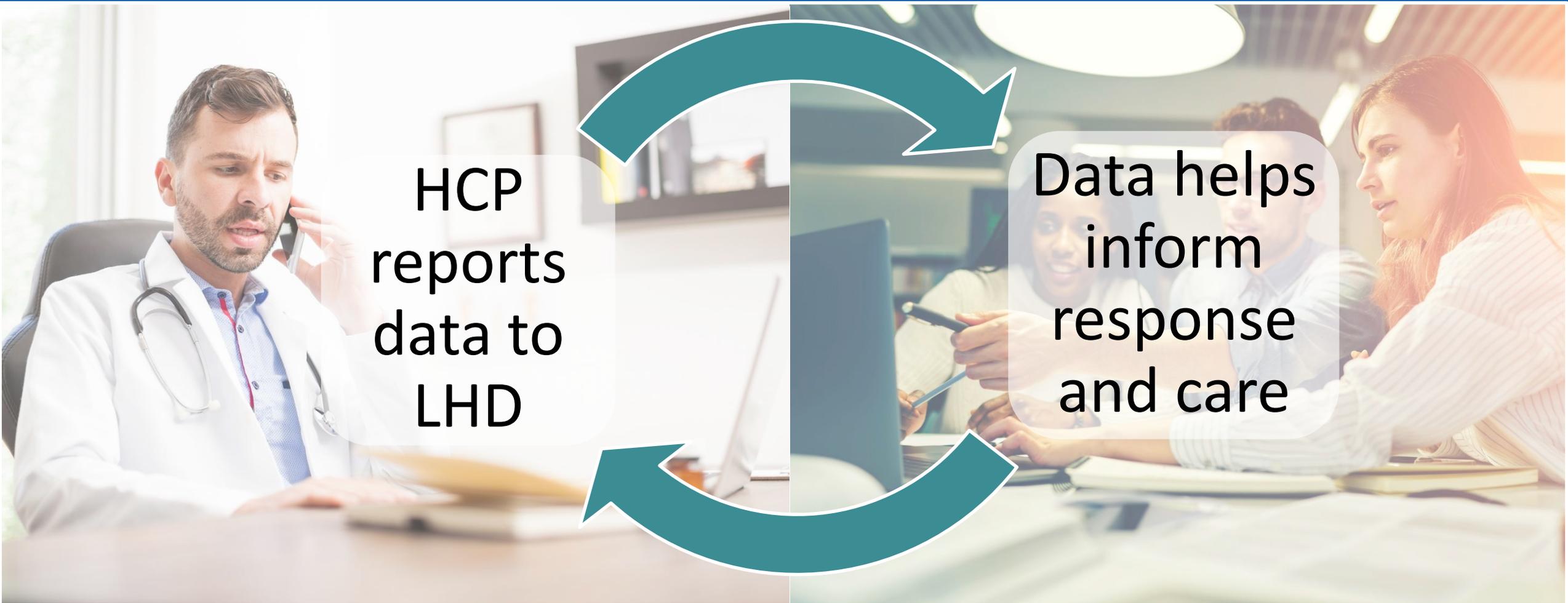
Confirmed U.S. AFM Cases Reported to CDC by Month of Onset



Clinician's Role in a Local Public Health Emergency



Clinical and Public Health Communication and Collaboration



HCP: Healthcare provider

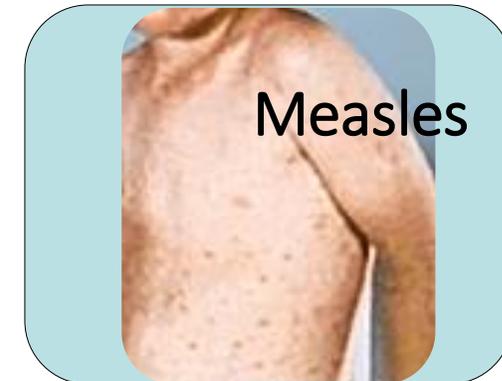
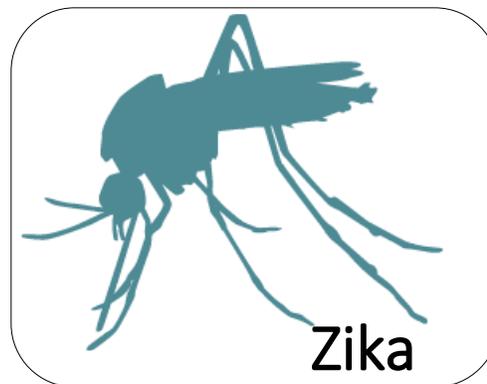
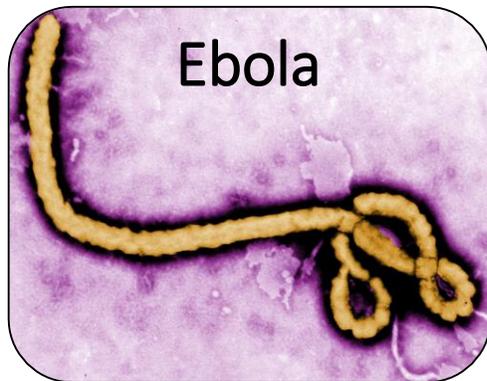
LHD: Local health department

Public Health Data: What Clinicians Need

- **CDC and local health department (LHD) websites “For Providers”**
 - Updated epidemiologic data and guidelines to inform care
- **Clinician Outreach and Communication Activity (COCA) calls/webinars**
- **Local Health Department:**
 - Clear communication regarding available testing and how to request
 - Specific guidelines for **who**, **when**, and **how** to request testing
 - Electronic mechanisms for requests, approval, and communication
 - Hotline numbers to reach key LHD personnel 24/7
- **Conference calls between healthcare provider and LHD, and when indicated, CDC**

Strategies for Local Health Departments (LHD): Clinical Engagement

- **Develop relationship between LHD and clinician *prior* to health care emergency**
- **Develop single point, infallible LHD contact strategy**
- **Develop agreed upon non-redundant communication plan between institution and LHD for health care emergency events before they occur**



Sam: An Update

Respiratory

- **Multiplex RT-PCR: negative**

Serum

- **WNV IgG/IgM: negative**
- **Enterovirus PCR: negative**

Cerebrospinal Fluid

- **Bacterial culture: negative**
- **Meningitis/Encephalitis Multiplex PCR Panel (including Enterovirus and HSV): negative**



Stool culture (CNHS)
Enterovirus +I

Stool molecular (CDC)
+ for Enterovirus A71

Power of a Close Relationship between Clinicians and LHD

- **LHD epidemiologic data assisted clinician in diagnosis, including a less common emerging disease**
- **Clinician could:**
 - Easily and efficiently provide clinical specimens and data to LHD
 - Provide LHD clinical nuances and follow-up data for registries and databases
 - Partner with LHD and CDC to refine clinical practice guidelines
- **Partnership enhanced patient care and provider education**

Activating Local Partnerships to Respond to Emerging Threats to Families



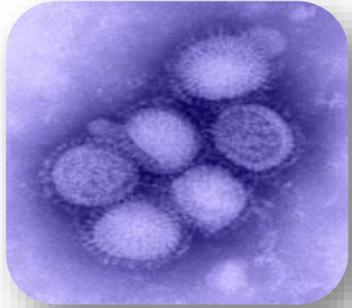
Nicole Fehrenbach, MPP

Deputy Director

Division of Congenital and Developmental Disorders

National Center on Birth Defects and Developmental Disabilities

Families: Uniquely Vulnerable to Emergencies



**H1N1
Influenza**



Wildfires



**Lead in
Drinking
Water**



Families



Zika

When An Emergency Hits



Families

When An Emergency Hits

Local Health
Departments

State &
Territorial
Health
Departments

Federal
Agencies



Families

When An Emergency Hits



When An Emergency Hits



Forging Local Partnerships During Zika Response



Community Partnerships During Zika Response



TAKE A FLIGHT TO

Saturday, April 22, 2017
Children's Safety Village | 12:00-3:00 PM
910 Fairville Rd., Orlando, FL 32808

Zika Prevention Land

YOUR JOURNEY INCLUDES:

- Zika Prevention Kits
- Pregnancy & HIV Testing
- Children Activity Stations
- Informational Sessions
(Offered in English, Spanish & Creole)
- Food & Beverage

To register, visit:
www.zikaprevention.eventbrite.com

Don't forget a picture with Molina's cool cat Dr. Cleo!



Clinical Partnerships During Zika Response

➤ **Provider outreach:**

- Zika testing guidelines
- Insurance coverage
- Test results to providers

➤ **Partnering with clinical organizations:**

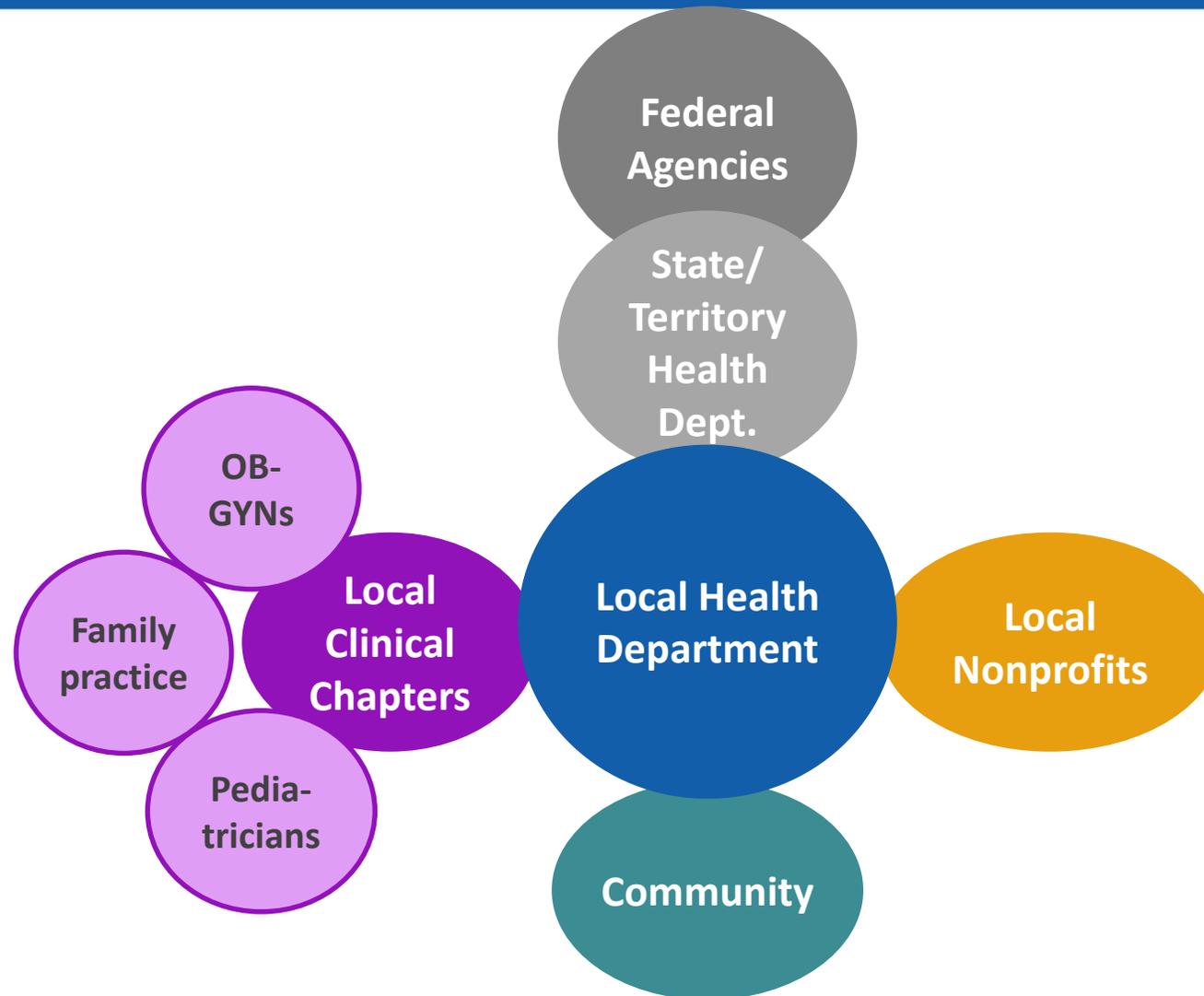
- Use existing materials
- Facilitate outreach and education to local membership



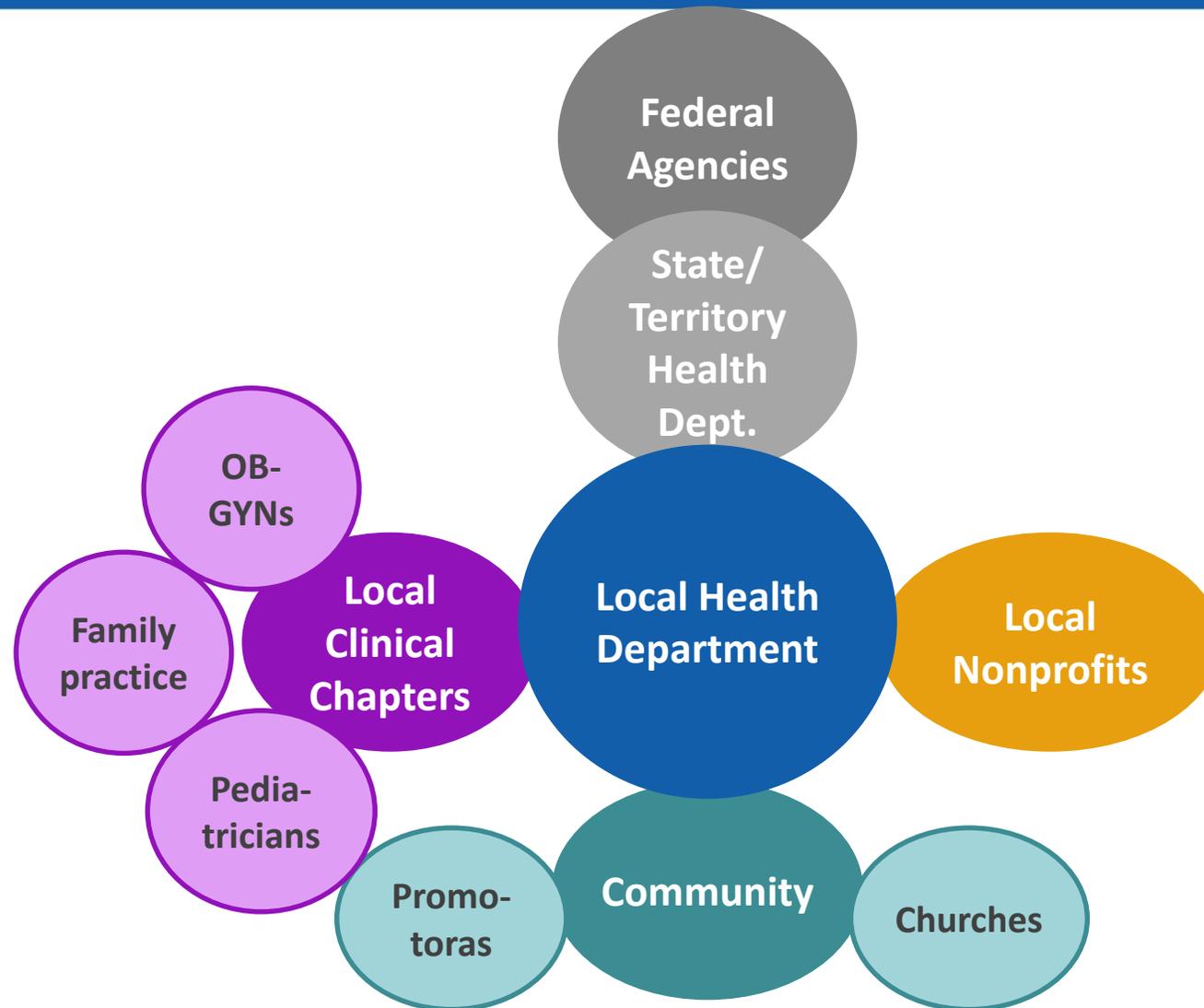
Building Networks: Local Health Departments



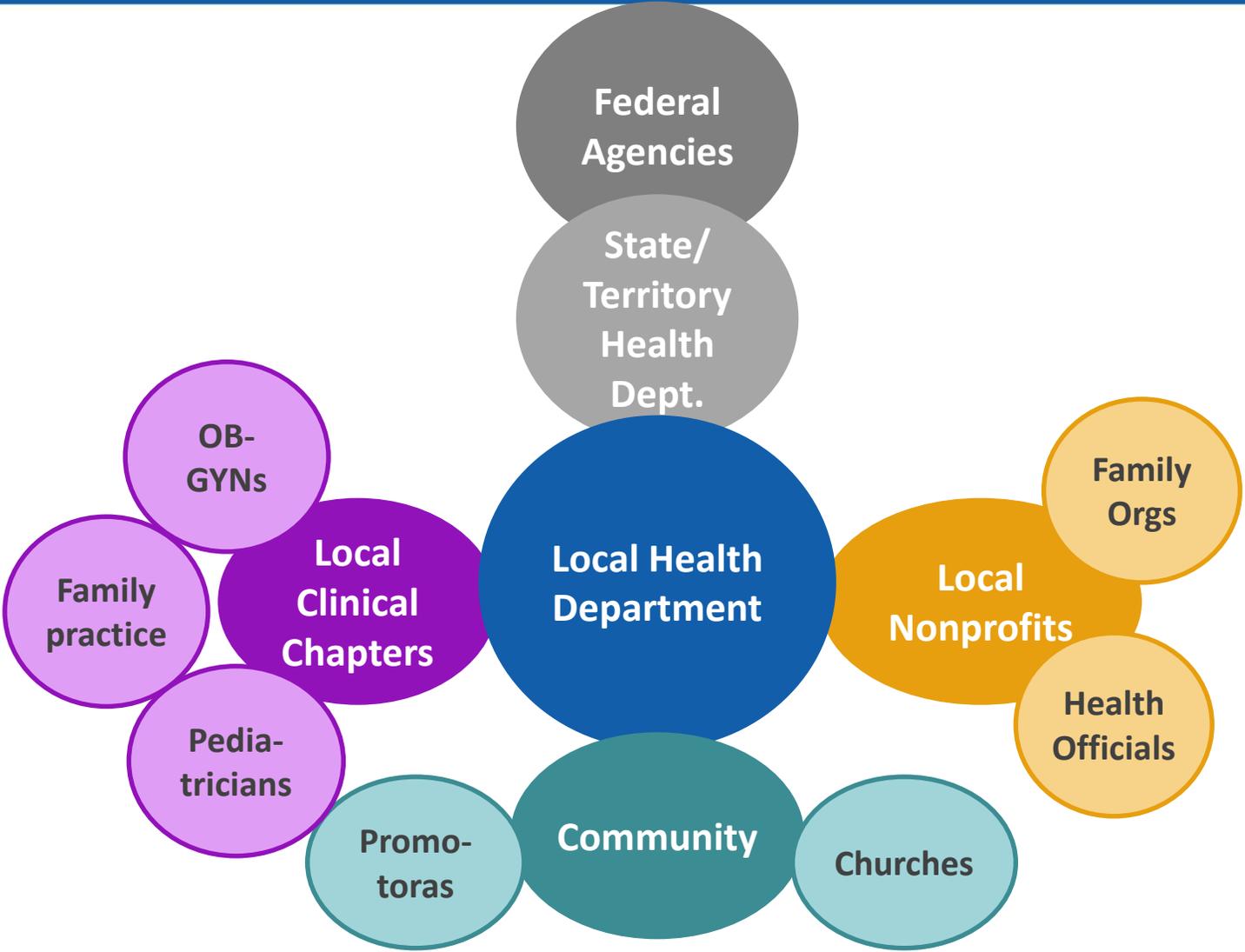
Building Networks: Providers



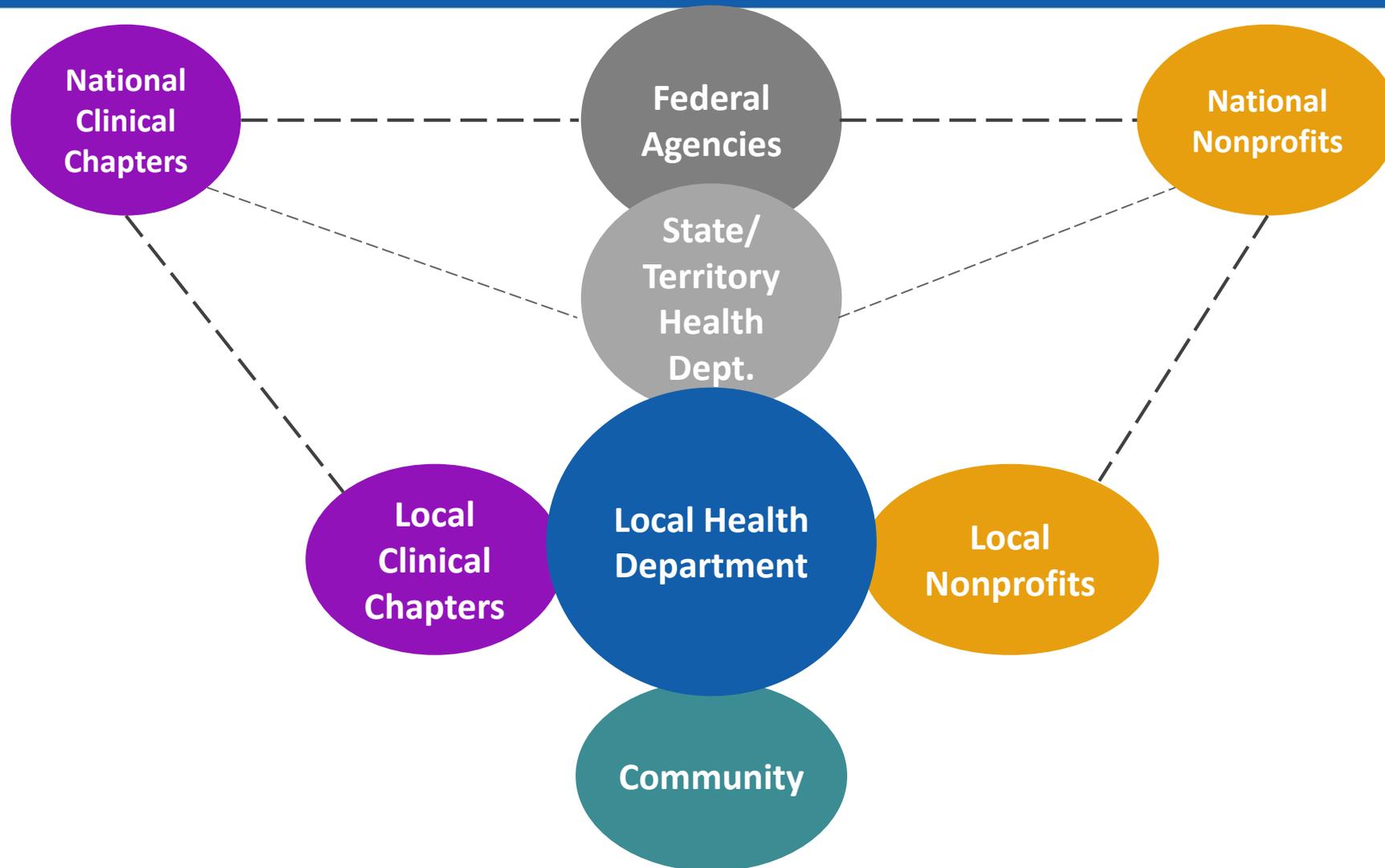
Building Networks: Community



Building Networks: Organizations Working with Families and Maternal and Child Health



Multi-Directional Communication



Impact: Local Field Support during 2016 Zika Response

KEY ACCOMPLISHMENTS				
				
National Partners Engaged	Jurisdictions Received Support	Families Referred	Providers Contacted	Zika Virus Tests Provided to Pregnant Women
12	30	>400	>5,000	>40,000

Strategies for Building Local Response Capacity

**Leverage existing
resources**

- **PHEP funds**
- **Coordinate with
CDC's Division of
State and
Local Response**

Strategies for Building Local Response Capacity

Leverage existing resources

- PHEP funds
- Coordinate with CDC's Division of State and Local Response

Use public health data to inform response

- Use 5 Ws to understand breadth and scope of emergency
- Apply 3Ps from surveillance data to inform recommendations

Strategies for Building Local Response Capacity

Leverage existing resources

- PHEP funds
- Coordinate with CDC's Division of State and Local Response

Use public health data to inform response

- Use 5 Ws to understand breadth and scope of emergency
- Apply 3Ps from surveillance data to inform recommendations

Engage with LHD and clinicians in advance

- Develop relationship between LHD and clinician now
- Develop single contact
- Give clear guidance for clinicians and providers during emergency

Strategies for Building Local Response Capacity

Leverage existing resources

- PHEP funds
- Coordinate with CDC's Division of State and Local Response

Use public health data to inform response

- Use 5 Ws to understand breadth and scope of emergency
- Apply 3Ps from surveillance data to inform recommendations

Engage with LHD and clinicians in advance

- Develop relationship between LHD and clinician now
- Develop single contact
- Give clear guidance for clinicians and providers during emergency

Coordinate at local and national levels

- Connect with local chapters of clinical, and community-based organizations to amplify messaging to broad networks

Building Local Response Capacity for Emerging Threats to Families



CDC PUBLIC HEALTH GRAND ROUNDS

Building Local Response Capacity to Protect Families from Emerging Health Threats



April 16, 2019



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