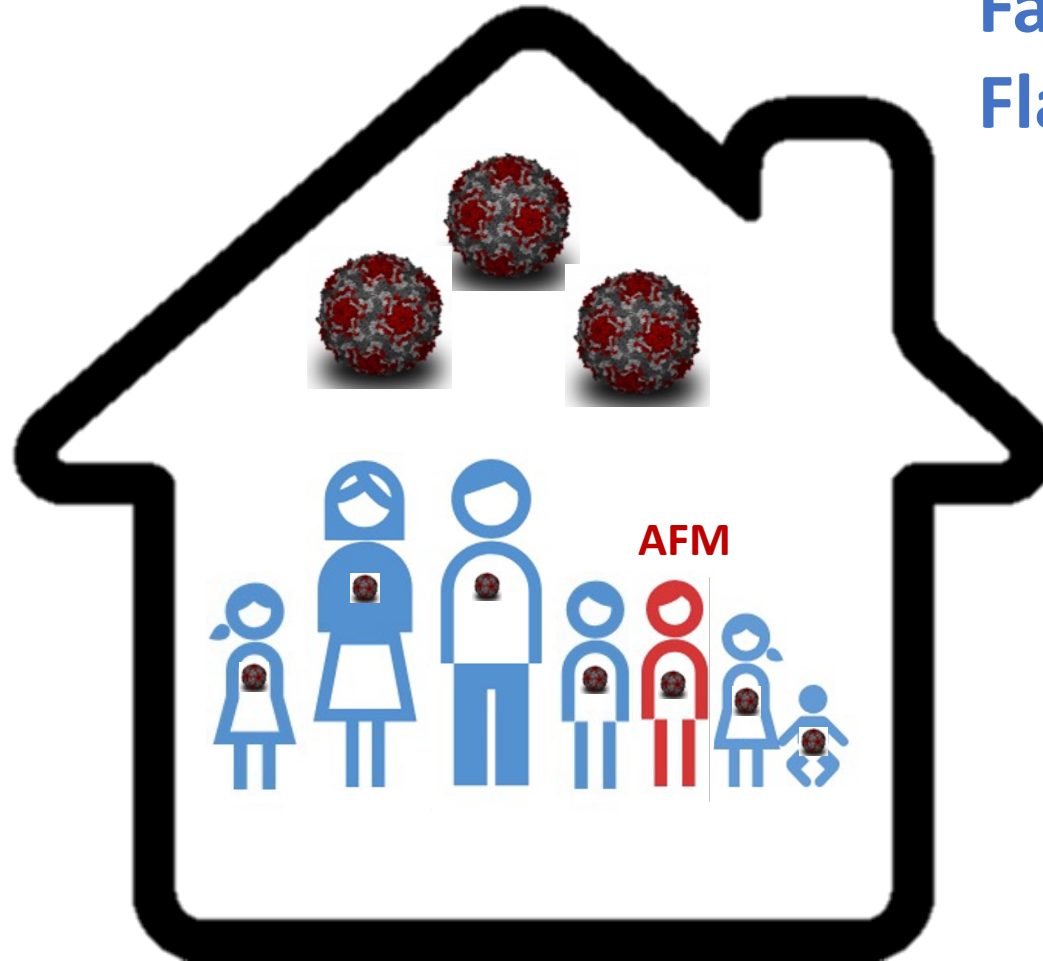
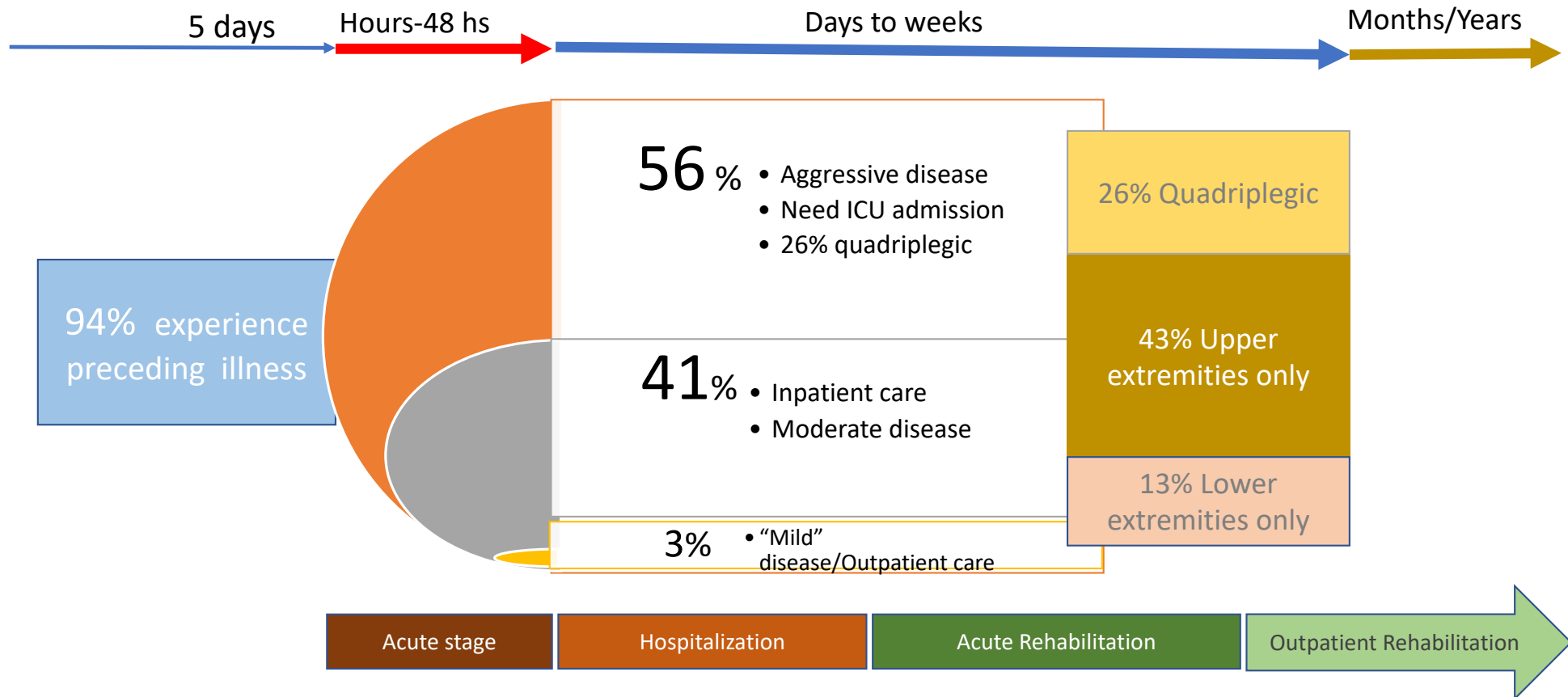


## Factors in Acute Flaccid Myelitis

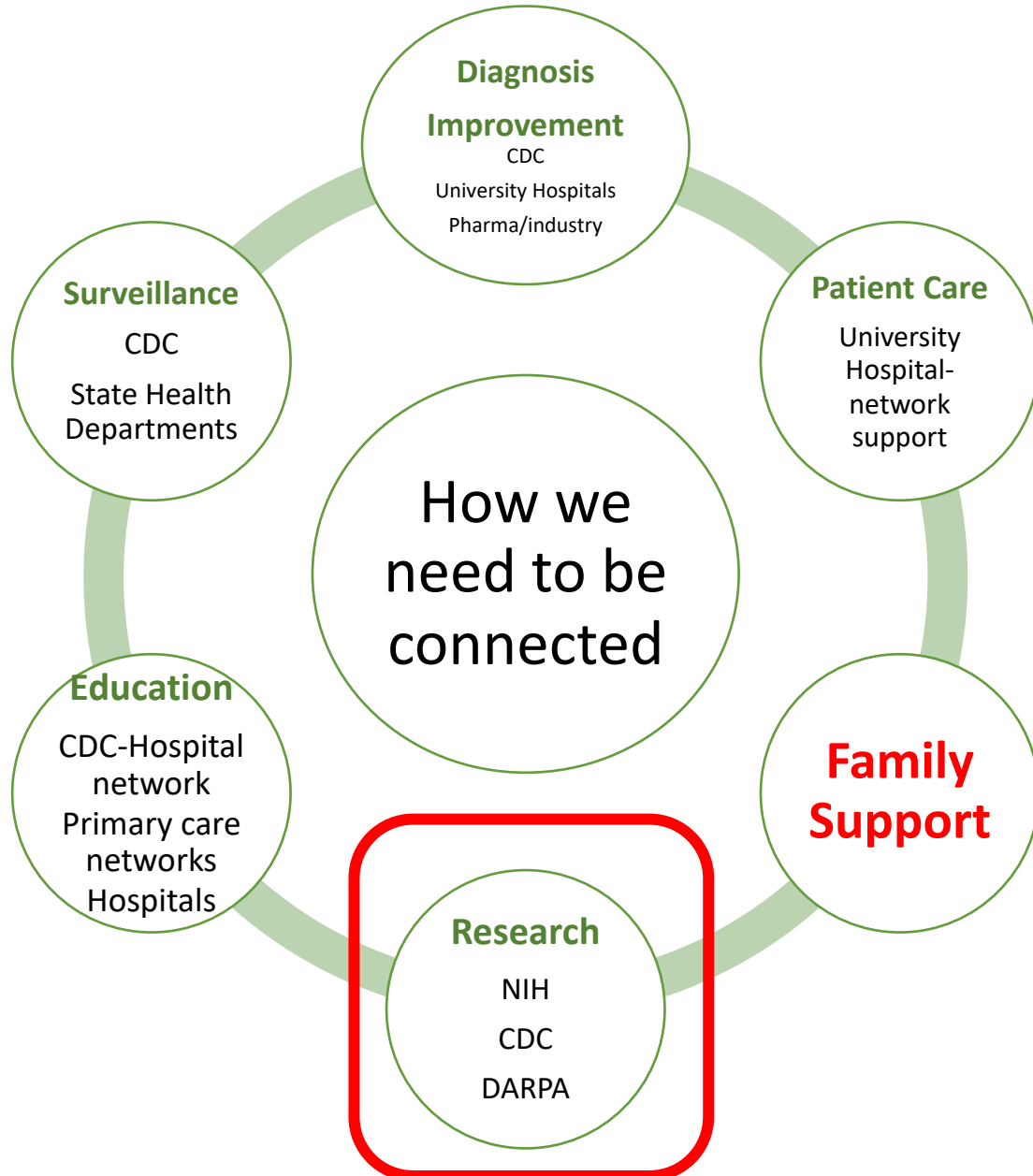


After many members of a household are affected by infectious symptoms only one subject is affected by AFM

# The Clinical Profile of Acute Flaccid Myelitis 2018



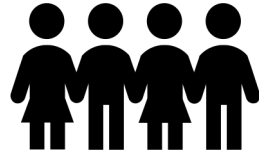
# ...there is a long road in front of us for understanding AFM



## What do we need to learn about AFM?

- What is the role of viruses in pathogenesis?
- How the immune system is involved in AFM?
- How to improve diagnosis?
- Factors associated with prognosis and outcomes
- Strategies to improve diagnosis
- Strategies to improve treatments and outcomes
- Development of preventive measures and possible vaccines

# AFM Research Studies for better understanding of the disease



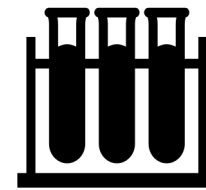
Acute Flaccid Myelitis Cases Recruited Nationally through network of clinicians and via families



Clinical Characterization and Sub Classification of heterogeneous AFM



**Host genetic** sequencing of AFM cases and families to identify susceptibility genes



Enterovirus antibody profiles and identification of host genetic regions of control



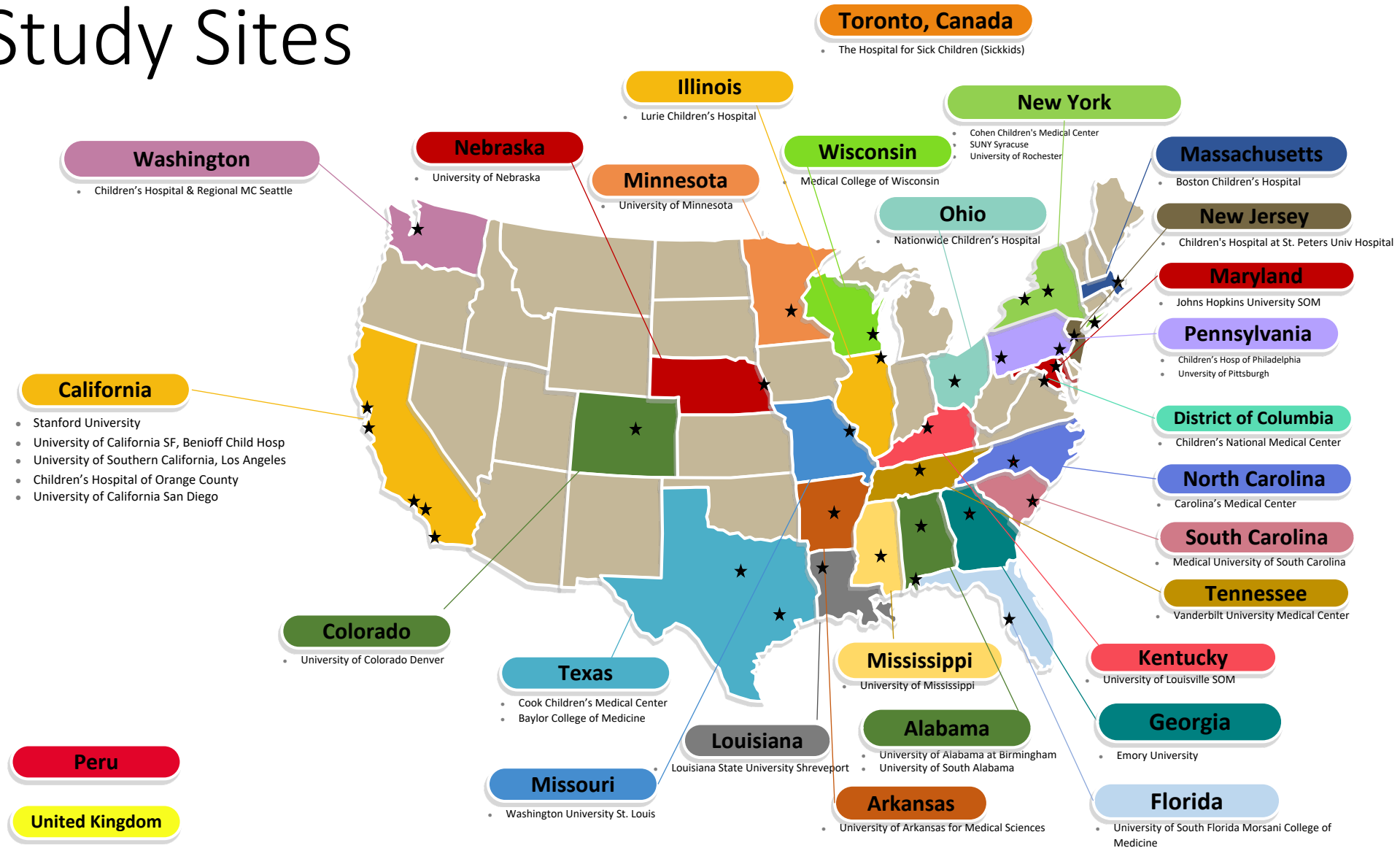
# NIH Natural History Study of AFM

## DMID #19-0005

**A PROSPECTIVE STUDY OF ACUTE FLACCID MYELITIS (AFM) TO DEFINE NATURAL HISTORY,  
RISK FACTORS, AND PATHOGENETIC MECHANISMS**



# NIAID Acute Flaccid Myelitis Natural History Study Sites



# Group 1 (AFM Cases)

## Inclusion and Exclusion Criteria

### Inclusion Criteria:

- Signed informed consent from parent(s) or legal guardian(s), and assent from participant if indicated
- Onset of flaccid limb weakness involving one or more extremities suggestive of possible, probable, or confirmed AFM within previous 30 days
- MRI of spinal cord that has been or will be obtained clinically
- Age < 18 years
- Weight  $\geq$  7.8 kg
- Agrees to Future Use of Specimens

### Exclusion Criteria:

- Known condition other than AFM causing the flaccid limb weakness
- Any condition that, in the opinion of the investigator, would place the subject at an unacceptable injury risk or that may interfere with successful study completion

*Note: Subjects enrolling in Group 1 may subsequently be determined by the Protocol Adjudication Committee to not have AFM. This assessment will not occur in real time. If a subject is deemed to have AFM, they will be classified as Group 1A cases (possible, probable, or confirmed AFM cases). If a subject is deemed to not have AFM, they will be classified as Group 1B cases (non-AFM cases) and analyzed accordingly.*

# Group 2 (controls)

## Inclusion and Exclusion Criteria

### Inclusion Criteria:

- Signed informed consent from parent(s) or legal guardian(s), and assent from participant if indicated
- Residing household contact of a child enrolled in Group 1 of this study within previous 30 days
- Weight  $\geq$  6.0 kg
- Agrees to Future Use of Specimens

### Exclusion Criteria:

- Flaccid limb weakness involving one or more extremities
- Any condition that, in the opinion of the investigator, would place the subject at an unacceptable injury risk or that may interfere with successful study completion

*Note: If a subject enrolled in Group 2 subsequently develops findings suggestive of AFM, they may be asked if they would like to enroll into Group 1 of the study and be followed and analyzed accordingly.*

# AFM Host Genetic Study

## How to contact us for participation:

Priya Duggal, Professor of  
Epidemiology,  
Johns Hopkins University  
School of Public Health

email: [pduggal@jhu.edu](mailto:pduggal@jhu.edu)

- **Goals:**
  - We will genetically sequence all the cases and their parents and siblings to identify host genetic variants that may explain AFM.
  - We are trying to understand why just one child in a family presents with acute flaccid myelitis.
  - We compare the DNA of the case to their family members and to other cases.
  - We hope this provides some direction for prevention or intervention strategies.
- **What we need:**
  - Consent to participate
  - A brief questionnaire detailing the child's illness and family history
  - Saliva specimen (spit in tube) on case and family members sent to your home via mail.
  - Permission for medical record release of imaging and records for our clinical team to review.
- **115 cases and families enrolled**