The many pieces of the puzzle: Enhancing Public Health Surveillance of Arboviral illness through collaborations:

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Disclosures

No financial or commercial interests relevant to this presentation exist.

The findings and conclusions in this presentation are those of the author(s) and do not necessarily represent the views of the Arizona Department of Health Services.
Imported Cases of Dengue Reported, Arizona
Total Confirmed and Probable, 1998-2012
Distribution of *Aedes aegypti* in the United States, 2001

Current status

- Positive

CDC
Dengue Potential in Arizona?

- **1. Eggs**
- **2. Larvae**
- **3. Pupae**
- **4. Adult**

**Viraemia**
- 3 - 12 days (Average 4 - 5)

**Extrinsic incubation period**
- 8 - 10 days

**Incubation period**
- 3 - 12 days (Average 4 - 5)

**Terrestrial**

**Aquatic**
UA Vector Collaborations

- Use BG-sentinel adult traps and oviposition traps for monitoring presence/absence and collecting *Ae. aegypti* eggs.
- University of Arizona Entomology will conduct:
  - Age-related gene expression analyses
  - Estimate the age structure of the wild caught *Ae. aegypti* populations in Border sites.
Rational

- If longevity is the limiting factor, understanding more about the conditions that increase longevity would allow public health professionals to monitor and control *Ae. aegypti* activity in those habitats.
- A baseline survey to determine which parameters are limiting emergence in these areas will allow public health officials to refine their vector surveillance program to monitor for changes in that parameter.
Lessons learned during Dengue Outbreaks in the US, 2001-2011

- **3 Key Recommendations**
- Involve Clinical and Laboratory Community Promptly
- Provide Accurate Information
- Engage Affected Community in Vector Control, Case Identification, and Case Reporting

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