

Opportunities for Strengthening Public Health Security and Preparedness

Arthropod Vectored Diseases



Principal Public Health Threats Come from 4 Scenarios

| Threat Severity Rank | Old* Vector | New **Vector |
|----------------------|-------------|--------------|
| Old* Pathogen | 1 | 3 |
| New** Pathogen | 2 | 4 |

Note: Severity Rank - 1 = Lowest threat, island-specific response may be sufficient; 4 = Greatest threat, regional response required. Threat and likelihood are inversely related.

*Old Pathogen/Vector is one previously experienced in the region

** New Pathogen/Vector may be completely new to the region or may be a new strain or biotype



Aedes aegypti



To meet all of these contingencies, need a regional strategy

- ▶ Island-Specific Vector/Pathogen Management Programs: front line defense but separate strategies are probably needed for preparing for each of the 4 threat scenarios
- ▶ A system of inter-island communications and a coordinating body
- ▶ Predetermined regional SOP with management measures becoming increasingly aggressive as the problem increases in threat severity
- ▶ Much more complicated problem than is typically found in vector management programs. To deal with it, we will need a well developed regional strategy.



Aedes polynesiensis



Without a regional strategy, we're very exposed

- ▶ There have been many studies over the years proposing various strategies. Some of these are quite good.
- ▶ It should be possible to adopt the basic ideas of these strategies into a regionally-accepted approach that is subject to continual revision as experience warrants.
- ▶ Given that last point, the initial strategy need not be perfect.
- ▶ This should be a high priority item.



Aedes albopictus