Dengue Fever: Shifting Systems in a Reemerging Global Disease

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Presentation by Liz Davis
Mentored by Dr. Nina H. Fefferman
The goal of this project will be to contribute to the wealth of knowledge on dengue fever by asking, and answering, questions that have not yet been considered, especially pertaining to changing circumstances during an outbreak.
What is Dengue?

- Tropical febrile disease with four serotypes, spread by *Aedes aegypti* mosquitoes
- Incubation of 3-14 days
- 40% of the world’s population lives in areas at risk
- Infection by a second serotype can lead to dengue hemorrhagic fever
- About 50 million cases per year and endemic in about 100 countries
Also spreads chikungunya and yellow fever
Lays eggs in left out containers, old tires
Eggs viable for up to a year when dry
What are the Contributing Factors?

- Poor water supply
- Presence of left-out water containers
- Tropical Location
- Culture?
- Vector Population
- Human population density
- Warm, wet climates
- Poor trash-collecting services
- Knowledge of Dengue

Factors:

- Poverty?
- Vector Control Efforts
- Use of mosquito deterrents

Impact on Dengue Cases:

- El Niño?
Questions to be Answered

- How does human behavior change once disease is observed in neighbors or the family?

- What is the best use of limited resources to minimize a dengue outbreak? How does that best use change (if at all) once an outbreak has already begun?

More questions to come...
2. Ibid.
Thanks for Listening!