June 7, 2012

Global Health R&D and the Hidden Burden of Neglected Tropical Disease in Texas

Summary and Cross-Cutting Themes of the Day

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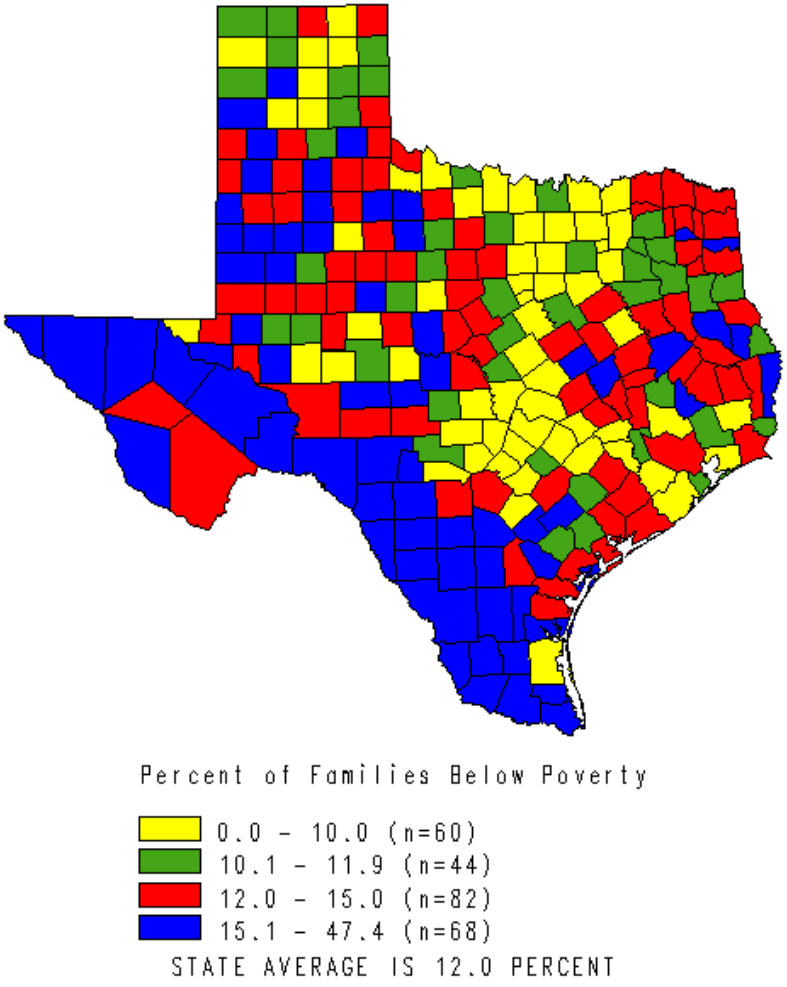
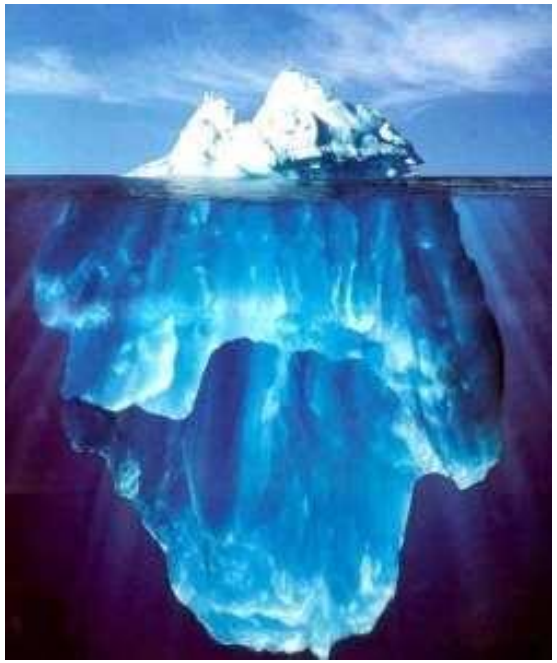
Plenary 1

- Joe McCormick
  - We do not pay attention unless the disease “hits our shores”
  - We have learned it is not enough to simply hit our shores.
  - If it’s striking U.S. impoverished populations (or people of color?).
  - Diseases of the “other America” will not be noticed?
    - Diabetes and TB
    - Chagas disease
    - Cutaneous leishmaniasis



Panel 1: Neglected Parasitic Infections

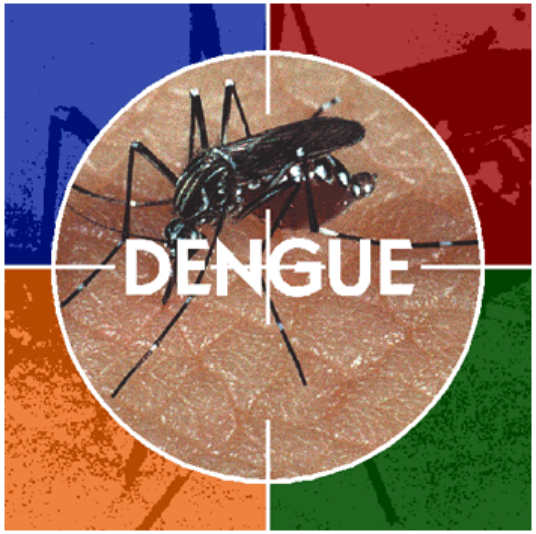
- "Tip of the iceberg"
  - Chagas and leishmaniasis
  - Widespread in dogs
  - Widespread in other animal reservoirs
  - Insect vectors are widespread
  - Maternal child transmission
  - Blood transfusion
- No active public health surveillance
  - No burden assessments
- Modes of transmission minimally assessed
- Minimal local and state lab capacity for diagnostic testing
- Available drugs developed in the Jurassic era
- Vector control strategies?



Adult *Rhodnius prolixus*, a kissing bug.
WHO/TDR/Stammers

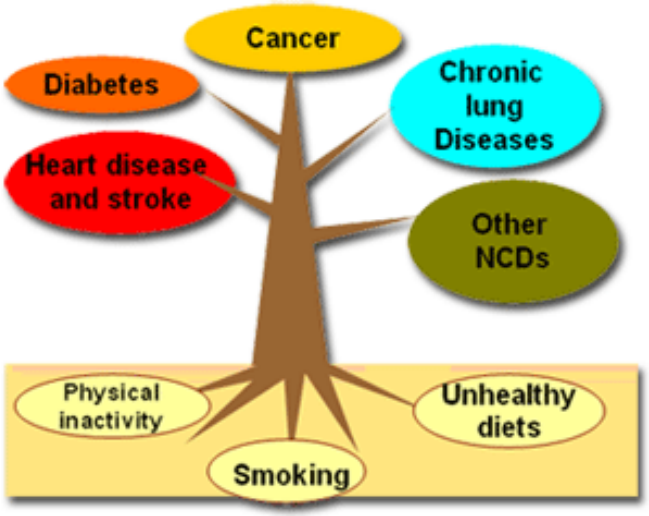
Panel 2: Neglected Viral Infections

- Dengue
  - Urban areas – not just a disease of the poor
  - High seroprevalence of dengue in South Texas
  - Emergence of dengue in Houston
    - Perfect storm in Houston
    - Outbreaks in May and June
    - **Is it a game changer?**
      - **Is border infectious disease program still relevant**
      - **Risk of hemorrhagic fever?**
      - **Vaccinating Houston?**
  - Endemic in Caribbean/Pacific Islands
  - Changes needed – Much the same as those needed for Chagas/Leish
  - Surveillance
    - Improve clinical awareness
    - Improve case management
    - Data to improve prevention
    - Prevent local DENV transmission
  - Diagnostics
  - Disease burden data – cyclical disease



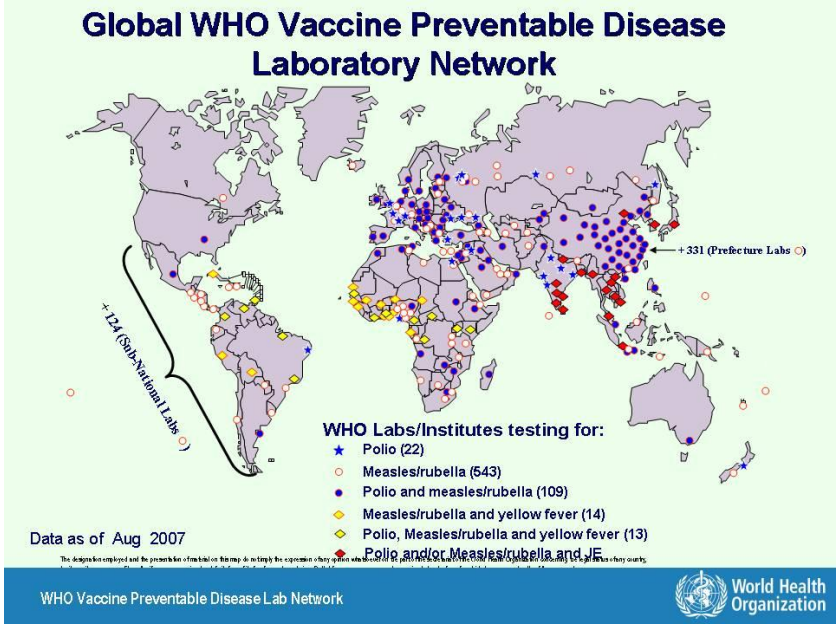
Panel 2.1. Neglected CNCDs

- TB and diabetes
  - 5,000 TB patients on both sides of the border
  - 30% of TB cases have diabetes as the primary risk
  - Mexicans vs. other populations
  - Mechanistic studies
- Should we be looking at the NTDs together with CNCDs – Chagas, leish, NCC, dengue?



Plenary 2

- Jon Andrus,MD
  - Capacity development for embracing new technologies
  - Folding in the policy process for introducing new vaccines
  - Making the investment case – do we need to show that Chagas, Leish, Dengue interventions are cost-saving?
  - Laboratory networks like we have in Latin America?

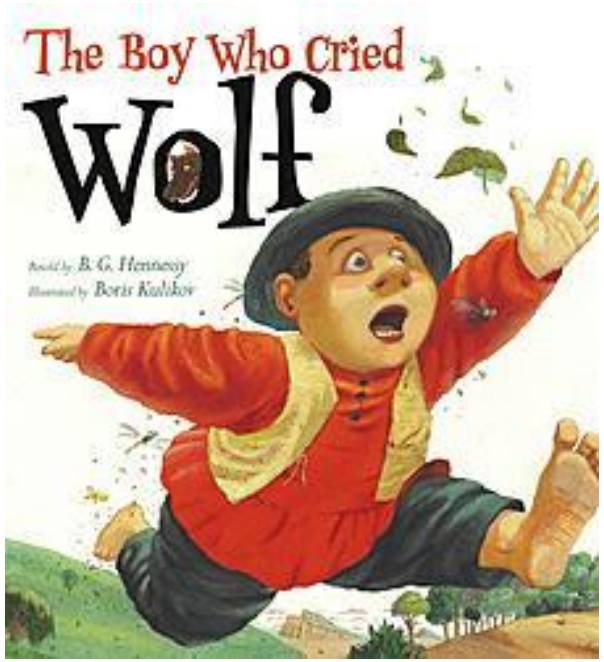


R&D Panel

- Needs are pervasive
  - Lack of appropriate animal models of disease
  - Expertise in pathogens, vertebrate host, vectors
  - Labs with special containment
- Translating into products
  - Lots of candidates, money, and long timelines
- Models to make the investment case – closing the gap between technology innovation and market needs
  - Push vs. Pull Technologies
  - Products are cost savings
  - Hidden economic benefits

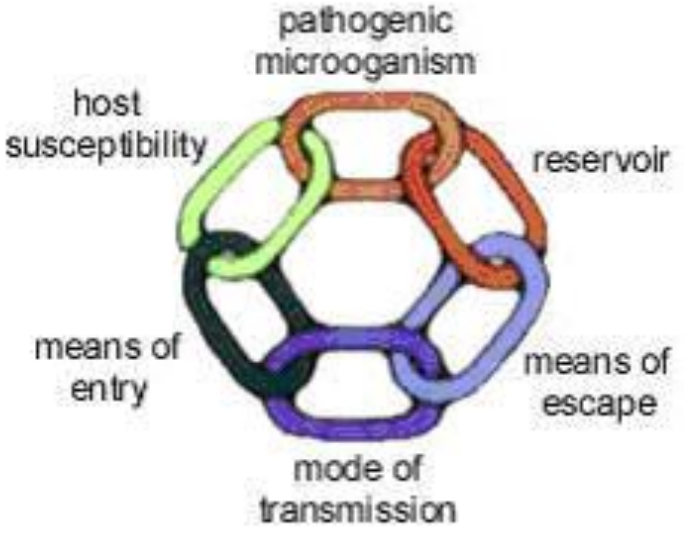
Cross Cutting Theme 1: Embarking on public health studies

- Lost emphasis on public health in the scientific community
  - We need hard data for surveillance
  - Otherwise we're crying wolf
  - Who is going to do this?
  - Academic, Local, State, Federal?
  - Where can we obtain funding?
- "Twinning opportunities" with local universities in South Texas
  - UTPA
  - THE MEPI MODEL
  - Partnering with CDC, State, Local health agencies



Cross cutting theme 2: Transmission

- For Chagas and Leish inadequate data on the ecology of transmission
  - Vectors
  - Animal Reservoirs
  - Dogs
- Dengue risk map



Cross cutting theme 3: The public health laboratory

- Urgent need for capacity building
- Minimal local and state lab capacity for diagnostic testing
  - Chagas
  - Leishmaniasis
  - Dengue

Cross cutting theme 4: New Generation of Control Tools

- Need for new products
  - New drugs
  - New vaccines
  - New diagnostics
  - New vector control agents & strategies
- Products for non-lethal diseases
- Marketplace has failed
- Cost-saving
- Role of NIH and BMGF?
- New Foundation?

Cross Cutting Theme 5: Economic Downturn

- Who is going to do the public health surveillance?
  - Lost state and local public health capacity
  - Budget cuts at the CDC
- R&D downturn
  - NIAID success rate 10%
  - NIMHD?
  - Pending sequestration
- South Texas opportunities to set up simple and straightforward studies

Cross Cutting Theme 6: Getting the word out

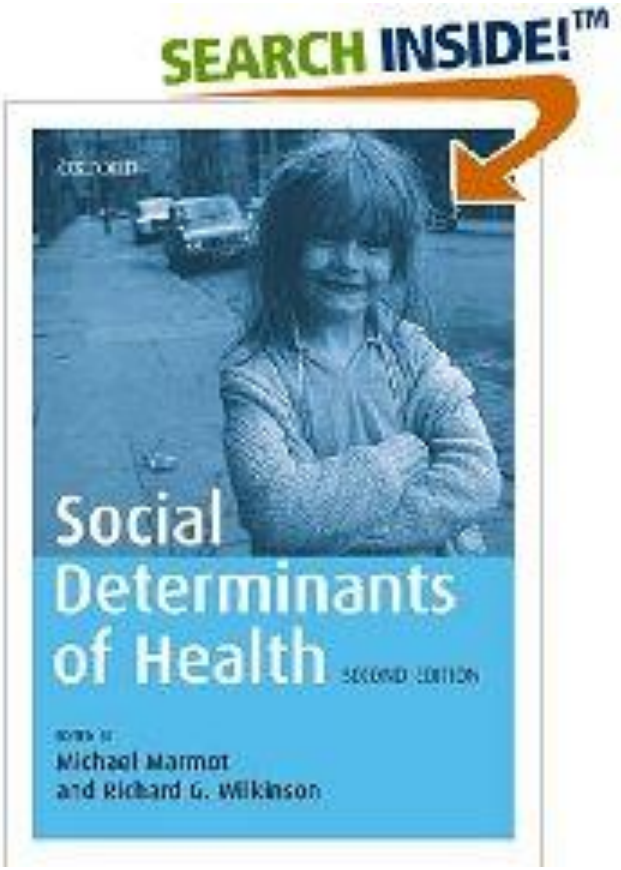
- Scientists not trained to speak to the public
- How do we get people to care about NTDs in U.S. affecting Hispanic populations and other people of color

Cross cutting theme 7: Education physicians and other health care providers

- Diseases
  - Chagas
  - Leishmaniasis
  - Dengue
- Lack of clinical recognition
- Lack of clinical management

Cross cutting theme 8: Social determinants of health

- Equity and justice
- What is it about poverty?
- What else should we be concerned about?
- Community commitment
- Monitoring

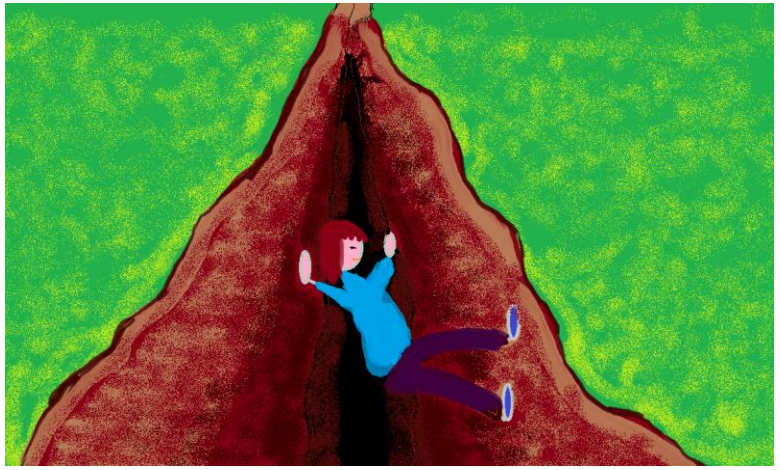


Cross cutting theme 9: Linking public health with public policy

- Where do we go with shaping public policy?
  - Chagas
  - Leishmaniasis
  - Dengue
  - NTDs with CNCDs?
- And linking it with the urgent public healt needs outlined above
- Importance of political commitment
- Linking global health with U.S. health disparities
- Engaging the Texas congressional delegation?
- Which caucus?
  - NTD-Malaria?
  - Black and Hispanic?

Cross cutting theme 10:
Are NTDs in U.S. falling through the cracks?

- Not global health
- Not affecting Reston, Virginia
- Affecting neglected minority populations living in poverty in the U.S.
- The “bottom 46 million”



Next steps

- Is the concept of NTDs in U.S. transformational?
  - Turning global health R&D on U.S. health disparities
  - Falling through the cracks?
- Create a “white paper” on the major themes and outlines of needs and next steps?
- Viewpoint in the peer-reviewed litera
- Op-ed?
- Visits on the Hill?
- Engaging the electronic media?

THANK YOU

- Research!America
- American Society of Tropical Medicine and Hygiene
- Baylor College of Medicine
- Sabin Vaccine Institute & Texas Children's Hospital Center for Vaccine Development