What's Next? – Ture Carlson

a. One approach – what is happening now
   i. Zika
   ii. Yellow fever
   iii. CHIK
   iv. Rift Valley
   v. Dengue

b. Globalization

c. What is happening, besides Zika?
   i. Yellow fever in Angola
      1. Big outbreak
         a. Imported cases elsewhere
         b. Some local transmission in other areas
         c. In Angola
            i. 6000 suspected cases
            ii. 884 confirmed
            iii. 400+ deaths
      2. Shortage of vaccine
         a. Finally got ~88% of population vaccination
         b. Lots of issues
            i. Product lost in transport
            ii. Reduced dose size – gives temporary immunity
            iii. Global supply deplete
            iv. Fake vaccination cards
      3. Brazil
         a. First case onset 12/18/16
         b. Over 400 suspected cases
         c. Largest outbreak since 2000
         d. Why – deforestation?
   ii. Chikungunya
      1. Large numbers of cases in South and Central America
      2. Outbreak in Pakistan 2017
      3. Outbreak in India 2016
   iii. Rift Valley
      1. Small outbreak in areas of Africa
      2. Virus found in body fluids for months
   iv. Dengue
      1. Hawaii 2015-2016
      2. Americas
      3. Annually, 390 million cases (WHO)
      4. Vaccine is now in use in a few areas
   v. Malaria
      1. Venezuela
a. Political chaos  
b. Surge in malaria  

2. Cuba  
a. 2017  
b. 10 confirmed cases  
c. Good mosquito control  
d. A “new” viruses - Mayaro  
   i. Dengue-like  
   ii. Alphavirus  
   iii. Isolated in 1954  
   iv. Animal reservoirs  
e. Lots of possibilities out there  
f. Mosquitoes are also on the move