





# Climate Change Impacts on Health

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# Goal for today – ???



- Can we use health data to make informed decisions about adapting to climate change?
  - Can we employ our competent systems for reporting disease, tracking hospital/ED visits, etc., to inform the public of direct impacts?
  - Are the indirect health effects of greater importance than the direct effects we measure?
  - Can we develop a system to track the broader health impacts of climate change?

# Context



*“To grab public interest, link climate change to health”*

- Really?
  - Name a candidate elected on a ph agenda.
  - Was “public health” mentioned at debate?
- Really! Informed policy requires data.

- Leadership for climate change in PH
  - CDC's role waned 10-years ago
  - Now fund RI Health and Climate Change Project
    - \$250K/yr for 4 years to create a **PLAN!**
- RI Climate Change Commission
  - Failed to meet the first year
  - Tardy on 3/2012 reporting deadline.
  - Bill to move Commission was vetoed

# Climate Change Prediction



Increased temp/drought, rain/flooding, storminess/sea level rise.

Example: Increased **average** temp, later frosts, weaker winter freezes creates:

- More disease vectors (ticks, mosquitoes)
  - Extended season and geographic range
- More pollen, pests, algae, and pathogens
- Impacts food production, wildlife – how?

# More WLN/EEE



This year, 518 WLN cases in Texas

+ WLN/EEE in RI mosquito pools, 3 cases

Reschedule outdoor events

Cancel evening recreation programs

# Context – other diseases



## RI WLN/EEE Cases

2001 – 1	2004 – 0	2008 – 1	2011 - 1
2002 – 0	2005 – 1	2009 – 0	2012 - ?
2003 – 7	2006 – 0	2010 – 0	

Tick-borne: Babesiosis – 76; Lyme - 202

*No camping, no scouts, eradicate deer, close parks?*

STDs: Chlamydia – 3346

*No dances, cancel prom?*



# Data for decisions



- **Competent disease reporting system**
  - Accurately track serious EEE/WNV
  - Identify emerging diseases: dengue, malaria
  - Lyme and other tick-borne
- **Non-systematic approach to indirect impacts.**
  - Linking pesticide exposures to health occurs when the person knows they were exposed, goes to a physician, and calls Poison Control.
  - Impacts of rescheduling sporting events: advocates for sports programs credit them with decreasing crime, obesity, improve mental/physical health

# More Extreme Heat



- More air quality alert days,
  - We can link cardiovascular/respiratory death/hospitalization to air quality in LA, not RI
- More air quality alerts lasting several days
  - Impacts may be easier to measure
- Increased number and/or severity of heat alert days
  - People die during heat waves

# Chicago heat wave- 1995



- 700 excess deaths
- Major risk factors
  - Age, bedridden, shut-ins, top floor apt
- Major protective factors
  - Air conditioning: home or lobby equivalent
  - Having a friend or relative in Chicago
- Climate change adaptation requires identifying/responding to those at risk

# Conclusion



- Public health has competent system for quantifying major health/disease trends
- Will we be able to track impacts of climate change that fall outside of this system?
- How can we work together to do this?



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