Public Health & Climate Change

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Health Impacts of Climate Change

- ✓ Increased heat waves and shifts in urban air quality
- ✓ Vector born diseases
- ✓ Range and seasonality of infectious diseases
- ✓ Rising sea levels and extreme weather events = dislocation, environmental refugees = global security issue
- ✓ Threatened food supply, release of toxins into environment
- ✓ Decrease in water quality

Heatwaves

- Greater risk for heat stroke
- Vulnerable populations & health inequalities
- Shifts in ground level ozone

Social Networks & Illness

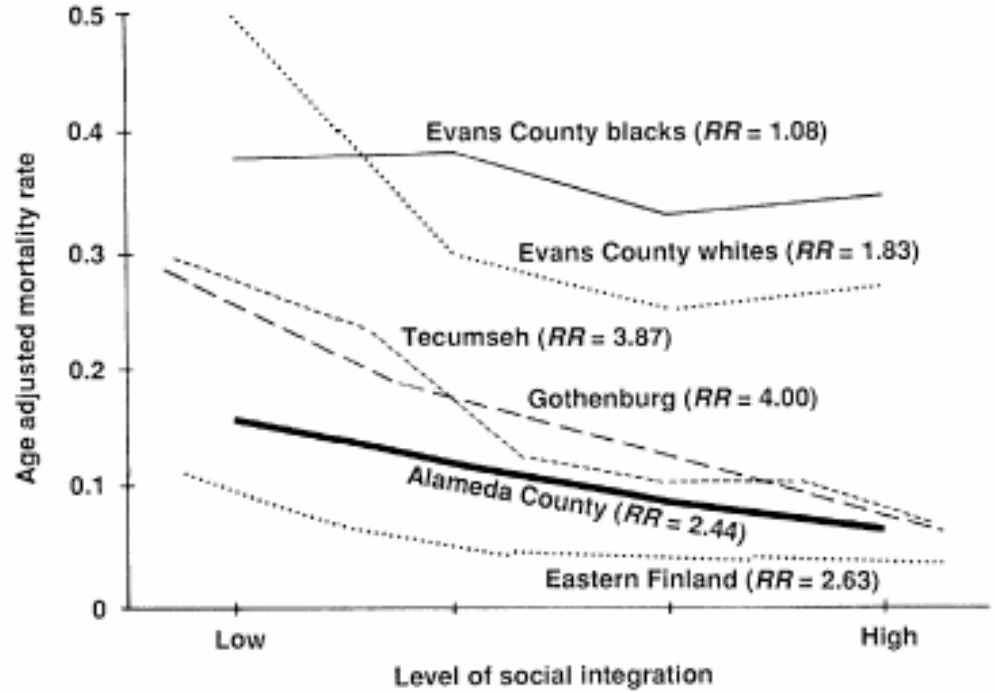

Fig. 1. Level of social integration and age-adjusted mortality for males in five prospective studies. *RR*, the relative risk ratio of mortality at the lowest versus highest level of social integration.

Social network measures:

Marriage, contact with friends and family, church membership and formal/ informal memberships

9 year prospective study

Berkman and Syme in

House et al 1988.

Vector Born Disease

- Dengue, malaria, west nile virus, others
- Differential exposure on a global level
- Some unexpected byproducts - spraying may cause chronic disease, drug resistance

Extreme Weather Events

- Injuries and death
- Long term psychological problems
- Increased infectious disease
- Contaminated water supplies

What is the current state of adaptation measures and what are the impediments to developing more effective policies?

Adaptation Measures

Health outcome	Legislative	Technical	Edu-cational	Cultural and Behavioural
Thermal	Building guidelines	Housing, public buildings, urban planning to reduce heat island effects, air conditioning	Early warning systems	Clothing, siesta
Vector-borne diseases		Vector control, Vaccination, impregnated bednets. Sustainable surveillance, prevention and control programs	Health education	Water Storage practices
Water borne diseases	Watershed protection laws Water quality regulation	Genetic/molecular screening of pathogens. Improved water treatment (e.g., filters). Improved sanitation (e.g., latrines)	Boil water alerts	Washing hands and other hygiene behavior. Use of pit latrines

Source: Watson et al, 2001: 261.

Adaptation Measures

- Federal versus city-level
- Existing:
  - Heat warning systems
  - Insurance industry
  - Research on emergency management

Political Freeze

- Lack of recognition of CC as a reality
- Institutional fragmentation
- Complexity of problems
- Scientific norms prohibiting false positives slow assertive policy recommendations (Myhr & Traavik 2004)
- Difficulty creating a public/scientific/political dialogue about health impacts (Kovats et al. 2005)

Scientific Uncertainty

- Range of potential extreme weather events that are difficult to calculate
- Difficulty linking projections with specific illness outcomes
- Characteristics of scientific pursuits themselves; consequent need for cross-disciplinary collaborations

How is the situation changing?

Public Concern

- Lack of scientific consensus leads to public contention
- Usually about mitigation, not adaptation
- “Framing” - process through which social movements reorient experiences and events of constituents into a new interpretive schema
- That is changing…

Climate Justice Framework

- 10 points developed in “The Climate Justice Declaration”
- Main foci: accountability of polluters, the participation of affected people in policy-making and inclusion of inequalities in *planning for climate change health outcomes* (Cordova et al. 2005).

Just Adaptation?

- Paavola & Adger (2005) - how to make adaptation fair?
  - 1) avoid dangerous climate change
  - 2) forward looking responsibility
  - 3) putting the most vulnerable first
  - 4) equal participation of all

Overlapping w/ Scientific Findings

- ✓ Urgency regarding interventions
- ✓ Importance of health inequalities in US and globally

Opportunity for “Destabilization”

- Policy-making a cyclical process of scientific study, resultant interpretation of science, & political decisions that act on it (Brown et al. 2006)
- “destabilization…must be formed at a moment when change is possible, when people are producing different meanings in many other areas of life” (Haraway 1989: 303)

Complexity of Problem

- Norgaard (2005)- “collectively seeing complex systems”:
  - 1) building global circulation models w/ basic physical principles,
  - 2) integrating models that were built to understand economic and ecological systems separately,
  - 3) assessments reports for scientists and policymakers,
  - 4) network of scientists advancing scholarship/models based on each other’s work