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AHCJ 2015: Panel on Climate Change and Health: Why We'll Live Sicker on a Hotter Planet

Global warming's effects on human health will be profound. Climate change will cause more natural disasters like Katrina—hurricanes, floods, droughts and super storms—that will strain the health care system beyond the breaking point. Rising temperatures will also trigger spiraling rates of asthma and allergies from pollution, heatstroke-related deaths, increases in heart and lung disease, cancer, depression and even dementia, and spikes in outbreaks of infectious diseases like dengue hemorrhagic fever, Valley Fever, West Nile and hantavirus because of the spread of disease carrying bugs to newly warm habitats.

Key Takeaways:

--**Infectious Diseases:** Recent outbreaks of West Nile and Hantavirus pulmonary syndrome, in which thousands of visitors to Yosemite were exposed to this potential lethal illness, are just the tip of the iceberg. Lyme disease has migrated from the U.S.'s eastern seaboard to Canada. Valley Fever's incidence is rising because of higher temperatures, too. Dengue hemorrhagic fever is now endemic in parts of the U.S., including Florida and Texas. But the Centers for Disease Control and Prevention, working in concert with local health departments, and the Mexican Secretariat of Health, is taking steps to control this rising tide of contagions.

-- **Bad Air:** Pollution will get worse as the planet heats up, contributing to rising rates of asthma, allergies, respiratory ills, cancer, heart disease and dementia, and creating CO2 domes over cities. Worsening pollution stunts kids' lung growth, which impairs them for the rest of their lives. Think Beijing, Salt Lake City or California's Central Valley. Allergies will worsen, too, as the CO2 enriched air breeds more noxious allergens.

--**Heat Waves are Deadly.** More than 70,000 people died in the 2003 European heat wave and an additional 52,000 people died in the heat wave that gripped Russia in 2010. Here in the U.S., rising temperatures will contribute to deaths from heat strokes—150,000 American are projected to die in heat waves between now and the end of this century when triple digit temperatures will become the norm for months at a time across the southern tier. But we can learn from what innovative cities like Chicago and Philadelphia are doing to stave off the worst effects of sizzling temps.

--**The Aftermath of Natural Disasters:** Higher temperatures will cause more natural disasters like Katrina and Sandy—hurricanes, floods, droughts and super storms—that will strain the health care system beyond the breaking point, resulting in higher mortality rates, the spread of diseases, a worsening of chronic illnesses, and serious psychological reactions. After Hurricane Katrina, 13 out of 16 area hospitals were shuttered, some permanently, and virtually all area residents had no access to regular medical care. Probably every hospital administrator in the nation watched in horror as ambulances lined up outside of Bellevue, the nation's oldest hospital, and NYU's Langone Medical Center to evacuate patients in the middle of Superstorm Sandy because generators were flooded by the storm surges, leaving the hospitals without power.

--**Mental Distress:** The psychological fallout and the long term effects of disasters and displacement on children and adults. In the aftermath of Hurricane Katrina, rates of depression, suicide, PTSD, addiction and domestic abuse skyrocketed. Following a severe weather event, a significant part of the community—as many as one in five—suffer the debilitating effects of extreme stress, emotional injury and despair. The emotional and psychological toll of disasters can linger for months, even years, affecting whole families, the capacity for people to work and the wellbeing of the community. Higher rates of drug and alcohol misuse,

violence, family dissolution, and suicide are more likely to follow more extreme weather events. Evidence suggests drought and heat waves lead to higher rates of self-harm, suicide and violence.

--**Environmental Justice:** Climate change is an environmental justice issue because it is the poor and disenfranchised who feel its effects most keenly. We saw that with Superstorm Sandy, Hurricane Katrina and the lethal heat waves that gripped Chicago, Europe and Russia, claiming thousands of lives.

Background Resources:

The Natural Resources Defense Council has done a lot of important work on this issue. Their "Climate Change Threatens Health" website is at: <http://www.nrdc.org/health/climate/>

This map outlines vulnerabilities in different parts of the country: www.nrdc.org/climatemaps

The NRDC health costs of climate change paper and factsheet are described at:

<http://www.nrdc.org/health/accountingforcosts/>

<http://content.healthaffairs.org/content/30/11/2167.full>

Climate Change and Health (General):

IPCC Report: <http://ipcc-wg2.gov/AR5/report/final-drafts/>

Lancet Report: <http://www.thelancet.com/commissions/climate-change>

<http://www.cdc.gov/climateandhealth/effects/>

<http://nca2014.globalchange.gov/report/sectors/human-health#intro-section-2>

http://www.niehs.nih.gov/research/programs/geh/climatechange/health_impacts/

<http://discovermagazine.com/2010/dec/04-hot-zone-warming-planets-rising-tide-of-disaster>

<http://aeon.co/magazine/society/welcome-to-earth-population-500-million/>

Heat Waves:

<http://www.climatecentral.org/news/climate-change-is-increasing-extreme-heat-globally-17120>

<http://news.nationalgeographic.com/news/2014/09/140929-climate-change-heat-waves-drought-severe-weather-science/>

<http://www.climatecentral.org/news/study-shows-global-warmings-role-in-australias-angry-summer-16163>

<http://www.reportingonhealth.org/2013/07/03/health-hot-zone-extreme-heat-can-be-deadly>

Infectious Diseases:

<http://www.nrdc.org/health/dengue/files/dengue.pdf>

<http://thinkprogress.org/climate/2015/04/14/3646478/climate-change-winners/>

<http://america.aljazeera.com/articles/2014/4/21/chikungunya-a-highlyinfectiousdiseasemaysoonarriveintheus.html>

<http://www.newsweek.com/climate-change-poised-make-infectious-disease-outbreaks-more-frequent-307161>

<http://www.reportingonhealth.org/2013/07/31/hotter-weather-facilitates-disease-outbreaks>

Public Health Systems:

Aftermath of Superstorm Sandy: <http://ehp.niehs.nih.gov/121-a152/>

<http://thinkprogress.org/climate/2014/12/16/3604324/hospitals-prepare-for-climate-change/>

Bad Air:

<http://www.takepart.com/article/2014/07/29/first-climate-change-now-ozone-pollution-threatens-global-food-supply>

<http://discovermagazine.com/2013/julyaug/19-californias-air-pollution-causes-asthma-allergies-and-premature-births>

<http://www.reportingonhealth.org/2013/08/06/health-effects-bad-air>

Violence, Political Instability and Wars:

<http://www.reportingonhealth.org/2013/08/14/rising-temperatures-may-trigger-more-wars>

Solutions:

Going Green is Good for Our Health:

<http://www.reportingonhealth.org/2013/07/09/health-hot-zone-greener-cities-are-healthier-places-live>

Disaster Proofing Health Care:

<http://www.reportingonhealth.org/2013/07/23/disaster-proofing-health-care>

Books:

Fevered: Why a Hotter Planet Will Hurt Our Health -- and How We Can Save Ourselves; Linda Marsa (Rodale, 2013).

Changing Planet, Changing Health: How the Climate Crisis Threatens Our Health and What We Can Do about It; Dr. Paul Epstein and Dan Ferber (University of California Press, 2011).