Environmental Factors = 25% of global disease burden

These include unsafe drinking water, poor sanitation and hygiene.

The health care sector can play a leading role in solving these problems. Through its massive buying power and mission-driven interest in preventing disease, the health care sector can help shift the entire economy toward sustainable, safer products and practices.

Health Care Without Harm works to transform the health sector worldwide so that it becomes ecologically sustainable and a leading advocate for environmental health and justice across the globe.

“The effects of climate change are being felt today, and future projections represent an unacceptably high and potentially catastrophic risk to human health.”
“Hospitals and health systems, particularly in more industrialized settings, have a significant carbon footprint.”

“By moving toward low-carbon health systems, health care can mitigate its own climate impact, become more resilient to the impacts of climate change, save money, and lead by example.”
IS OUR HEALTHCARE INFRASTRUCTURE RESILIENT TO CLIMATE CHALLENGES?

Charity Hospital and VAMC
New Orleans, LA (Hurricane Katrina, 2005)

Health Care’s Role

1 REDUCE IMPACTS
2 IMPROVE RESILIENCE
3 ADVOCATE

MITIGATE
• Reduce resource use
• Reduce fossil fuel emissions in buildings
• Reduce transportation impacts
• Review supply chain

ADAPT
• Improve infrastructure design
• Engage communities
• Link to sustainability and quality initiatives

LEAD
• Support local and national public policies
• Improve public understanding of climate and health risks

MITIGATE
Reduce Energy And Water Use

Fossil Fuels and Health

Energy Independent by 2014
“We did not set out to be the greenest health system. We set out to make the air better for our patients to breathe, control our rising energy costs and help our local economy.”

—Jeff Thompson, MD
Gundersen Health System 2014
• Low-energy design
• Passive design strategies – operable windows
• On-site power generation
• On-site renewable energy
• Low water use design
• Recycled and reclaimed water reuse
• Independent water source

Kiowa Memorial Hospital
Greensburg, KN
(2008 EF-5 tornado)

Gunjaman Singh Hospital
Pithuwa Village, Nepal

Solar panels provide all power
• Includes power for x-ray and waste autoclave
• Avoids power cuts from unreliable power grid
• Power management enables use up to 18 hours per day

ADAPT
Improve Healthcare Infrastructure Resilience

Fracture Critical
“…centralized infrastructure, from power grids to hospitals, are larger, more complex, increasingly dependent upon massive amounts of increasing ongoing maintenance, and often vulnerable to failure of a single element.”

– Thomas Fisher
University of Minnesota

Fracture Critical
“…going forward, good design and planning will be based on the understanding that nothing will work as planned, or even at all.

We are at our best when we have imagined, and accounted for, the worst.”

– Thomas Fisher
University of Minnesota
What Happens?

- Increasing design thresholds to recognize more severe weather intensities—design temperatures, wind velocities, mean flood elevations
- Increasing warehousing and storage capacities to recognize longer severe weather durations—increasing the minimum amounts of on site food, water and fuel storage

What Happens?

- Enacting requirements for hardening and adapting facilities in new geographic regions to respond to changing extreme weather patterns
- Increasing capabilities for "islanding operation" that recognizes that on site infrastructure may be required for extended periods of time because of damaged community infrastructure

Focus on patient health and safety and provider outages that will strain the healthcare system:

1. Reduce the risk of emergency evacuations
2. Be able to take on acute emergent patient needs (during and after)
3. Avoid extended facility outages that strain the system
4. Reduce how many patients cannot access their normal provider

Key strategies:
- Minimize disruptions to the healthcare system in order to preserve the well-being and health of staff, patients and community
- Operate continuously or Reopen quickly

- Ensure critical healthcare providers' operability through redundancy and the prevention of physical damage
- Reduce barriers to care during and after emergencies

Goals of Resilient Healthcare

- functioning well under stress
- successful adaptation
- self reliance
- social capacity
The storm is just an instance in time; recovery is where all the hard work and decisions are made. Recovery is also where opportunities reside: sustainable design is a must. Hurricanes come in approximately 20-year cycles; there is a generation to forget what you learned.

Steven LeBlanc, UTMB

University of Texas Medical Branch
Galveston Island, TX
Hurricane Ike, 2008

“The tornado not only destroyed our community and hospital—it caused a major shift in how we make decisions. In rebuilding, we learned not to look at the initial cost only, but to look at environmental impact, long term cost savings, and sustainable and renewable resources.”

Mary Sweet, Administrator

Spaulding Rehabilitation Hospital
Boston, MA
LEAD

Educate and advocate locally and globally for climate policies

The President's Climate Action Plan- June 2013
Mitigation
Reducing health care's own carbon footprint

Adaptation
Preparing for the impacts of extreme weather and the shifting burden of disease

Leadership
Educating staff and the public while promoting policies to protect public health from climate change