December 5, 2016

Primary Protection
Improving Healthcare Resilience

Robin Guenther, FAIA LEED Fellow

Principal, Perkins+Will and Senior Advisor Health Care Without Harm

2016 Robert Wood Johnson Culture of Health Leader

fraserhealth

Health Care Without Harm

What is Resilience?

Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.

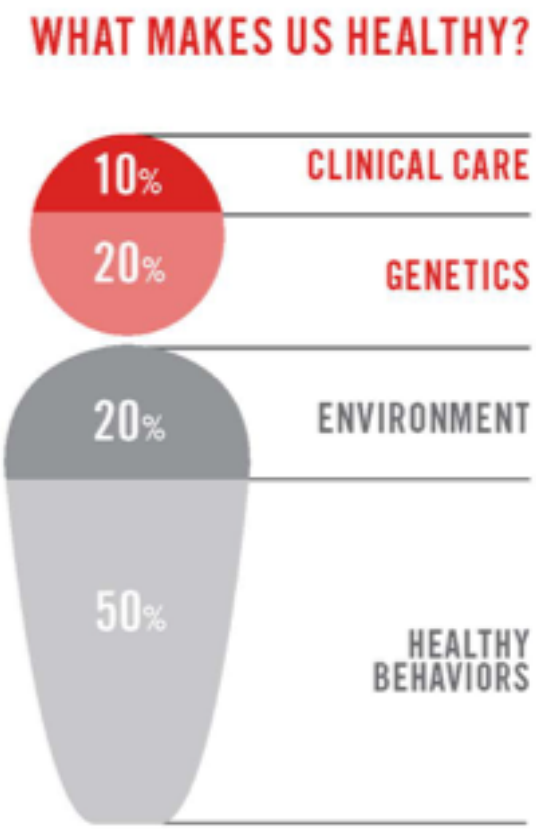
Environmental factors = 25% global disease burden

- Poor sanitation
- Outdoor air pollution
- Poor land use practices
- Resource scarcity

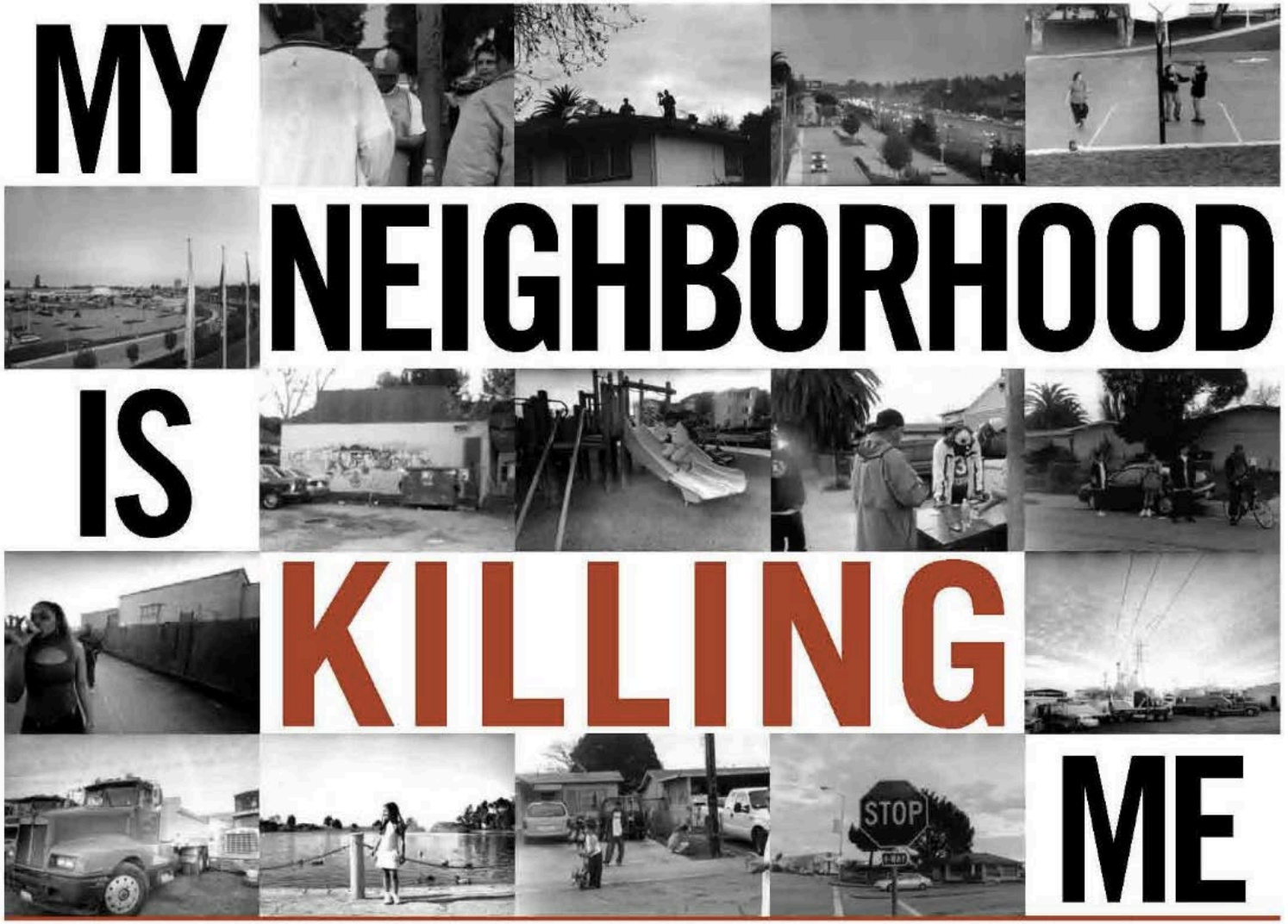
- Extreme weather injuries
- Vector-borne diseases
- Unsafe drinking water

"Although medical care is important, our reviews of research and the hearings we've held have led us to conclude that **building a healthier America will hinge largely on what we do beyond the health care system.**"

"Health beyond Healthcare" -- Robert Wood Johnson Foundation's bi-partisan Commission to Build a Healthier America



MY NEIGHBORHOOD IS KILLING ME

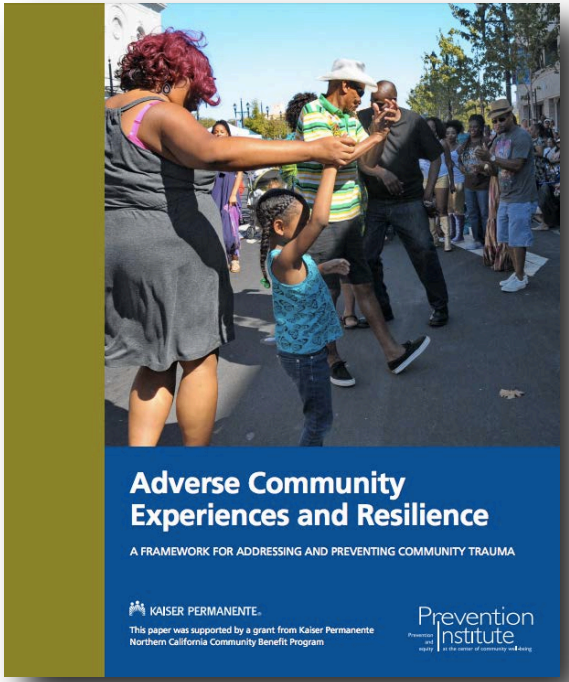


Symptoms of Community Trauma

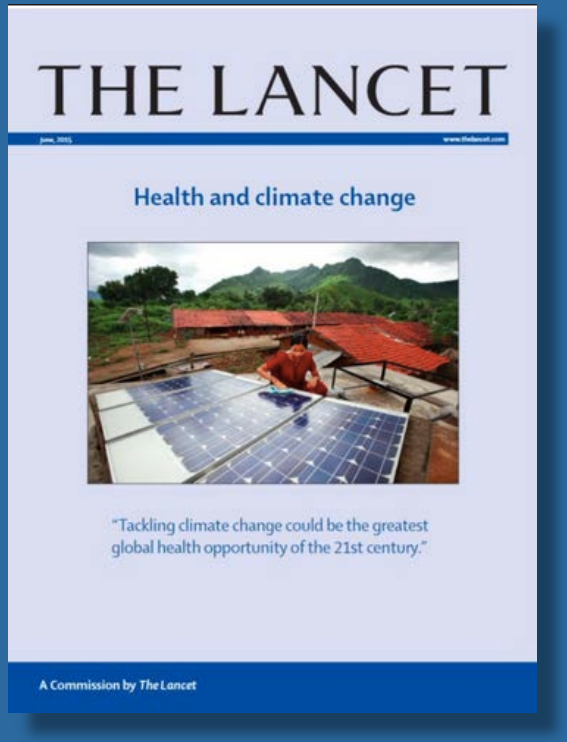
- Intergenerational poverty
- Long-term unemployment
- Relocation of businesses & jobs
- Limited employment
- Disinvestment

- Deteriorated environments and unhealthy, often dangerous public spaces with a crumbling built environment
- Unhealthy products

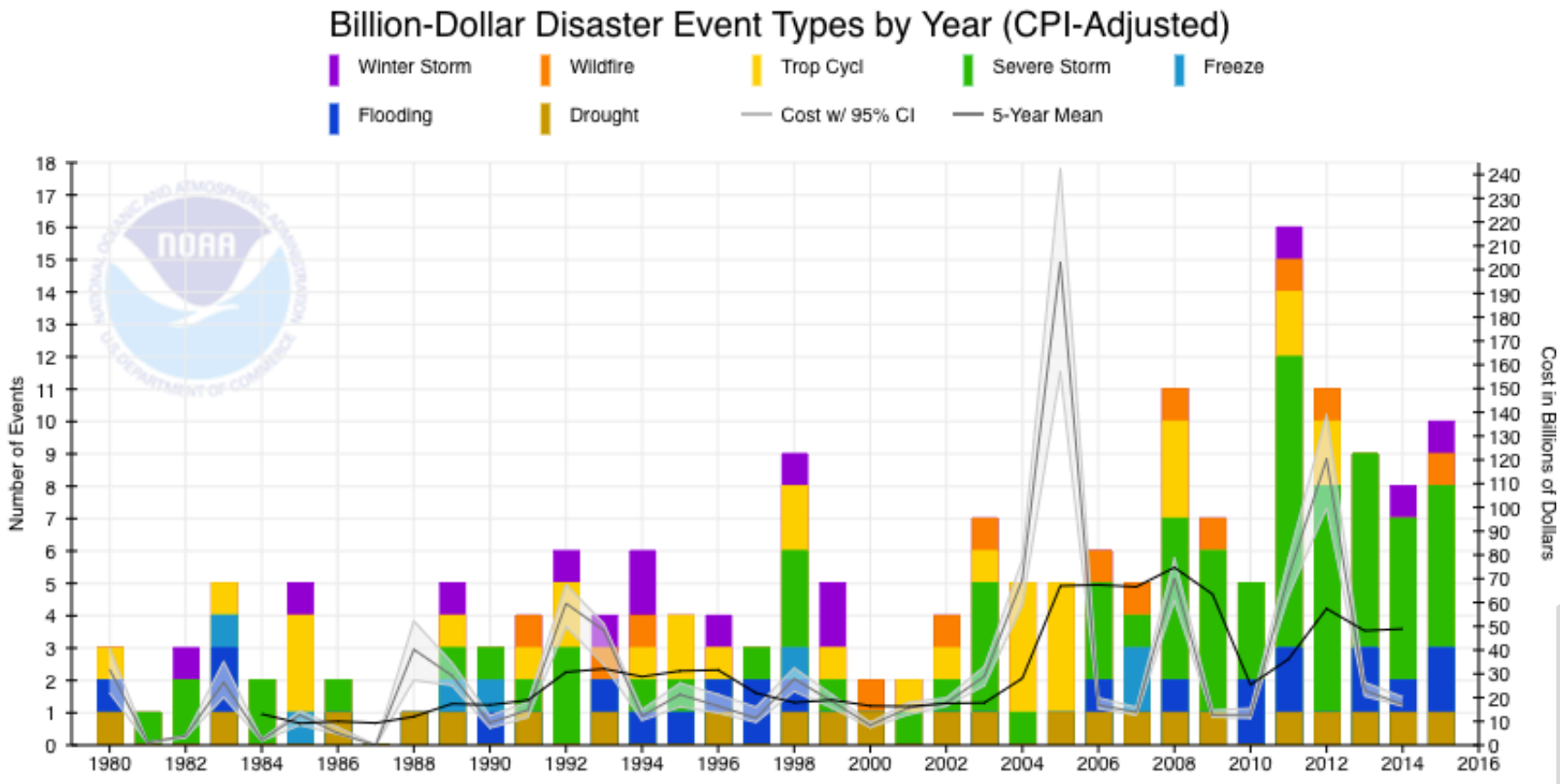
- Disconnected/damaged social relations and social networks
- The elevation of destructive, dislocating social norms
- A low sense of collective political and social efficacy




GREENPOINT
WILLIAMSBURG
LINDEN HILL
MASPETH
Mount Olivet Cemetery
Juniper Valley Park
MIDDLE VILLAGE
Saint John Cemetery
FOREST HILLS
PARKSIDE
All Faiths Cemetery
Forest Park
Mount Lebanon Cemetery
Mount Carmel Cemetery
Cypress Hills Cemetery
Mount Judah Cemetery
Solem Fields Cemetery
Highland Park
Cemetery of the Evergreens
WOODHAVEN
CLINTON HILL
BEDFORD-STUYVESANT
ADELPHI
PROSPECT HEIGHTS
BROADWAY JUNCTION
CITY LINE



"The effects of climate change…represent an unacceptably high and potentially catastrophic risk to human health."



https://www.ncdc.noaa.gov/billions/time-series

The health sector can play a major role in improving population health and community resilience.

Resilience is a **new way of thinking** that starts by identifying our most important vulnerabilities first.

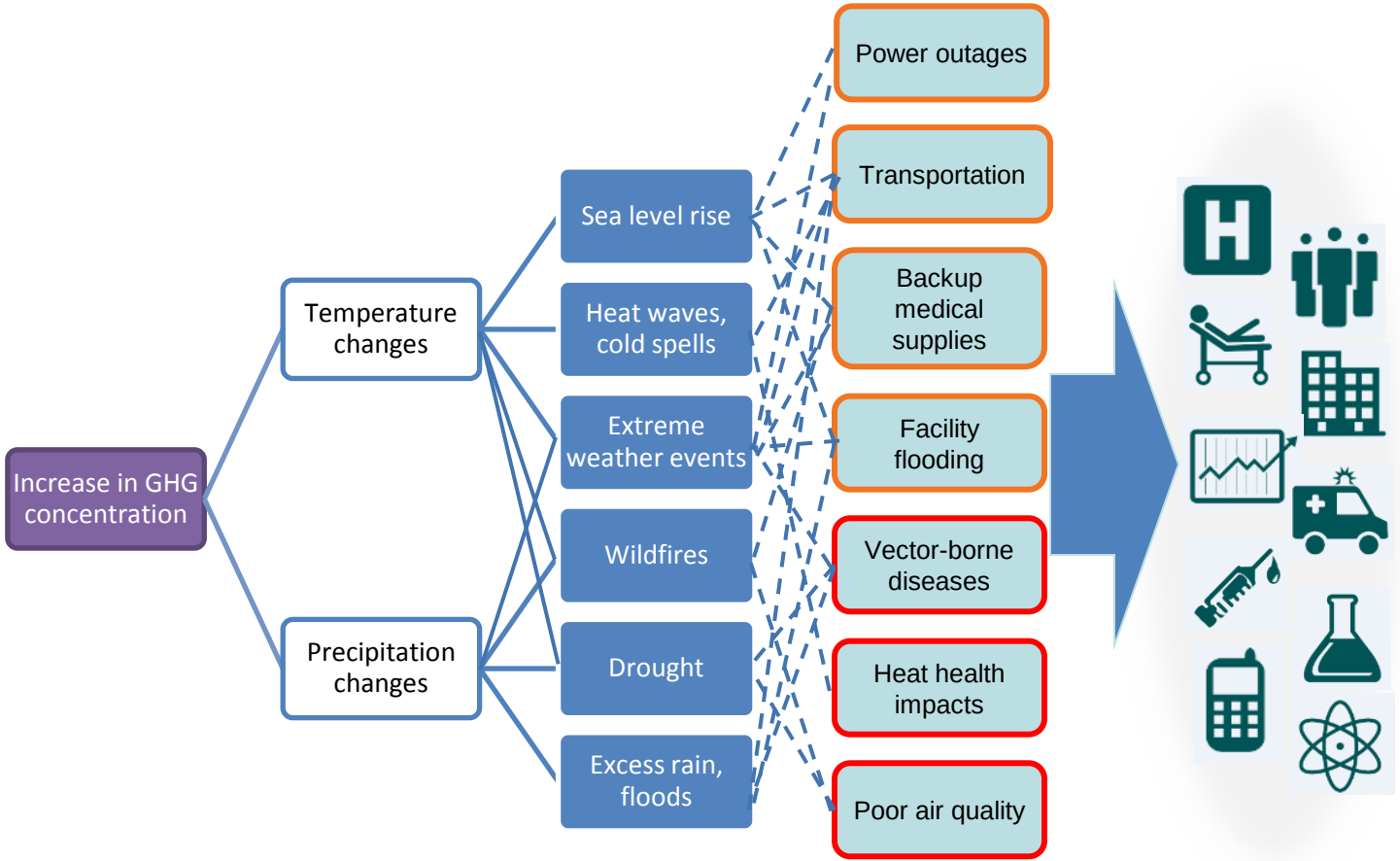
Improving resilience **maximizes the benefits of our investments** and keeps government accountable to what people need the most – being prepared for the **catastrophic shocks and chronic stresses** in a world where crisis is the new normal.

Mapping Climate Impacts on Communities

- Tornado/Winds
- Hurricane
- Inland Flooding
- Drought/Receding Water
- Seismic
- Tsunami
- Extreme Temperatures

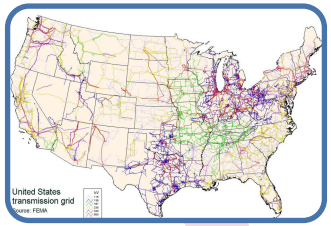
Or combinations of these like in Cascadia….

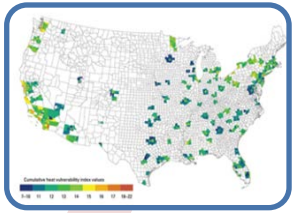
Mapping Climate Impacts on Hospitals & Health



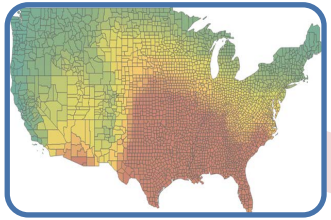
Impact Modeling

Census data

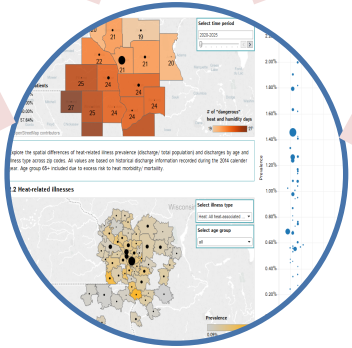




Clinical data



Climate data



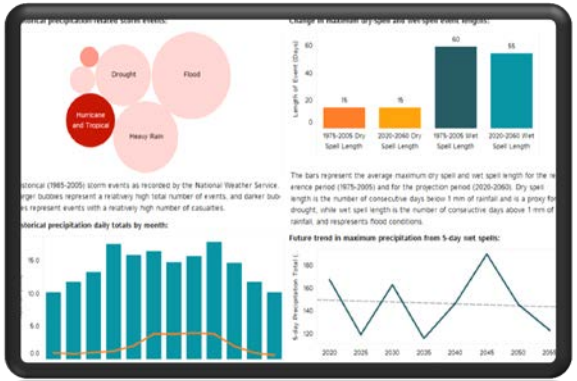
Hospital Climate Risk Assessment

Hospital data

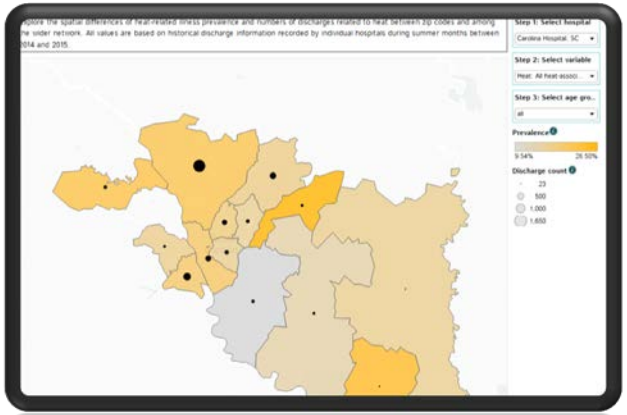
427 Four Twenty Seven Climate Solutions

Resilient Hospital Dashboard

1. Climate Snapshot™



2. Climate Health Impacts



3. Facility Preparedness

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Risk factors: heat vulnerability

Medical factors

Indicator: Medical factors (ICD-9-CMs) associated w/ heat hazards[4]

ICD-9 Code:

- 410-414 - Ischemic heart disease
- 433-436 - Ischemic stroke
- 427 - Cardia dysrhythmia
- 458 - Hypotension
- 250 - Diabetes
- 001-009 - Intestinal infection
- 276.51 - Dehydration
- 584 - Acute renal failure
- 992 - Heat illness

Social factors

Indicator: Social and demographic factors associated w/ heat vulnerability[5]

Census Data:

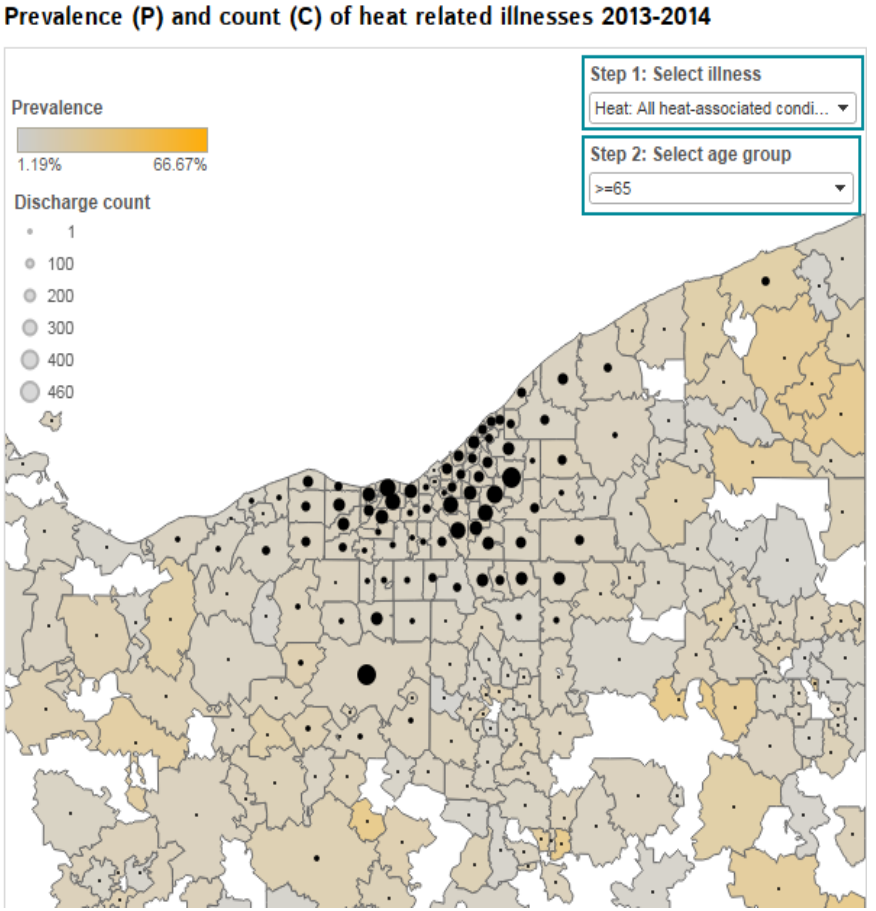
- Age > 65 who are living alone
- Age > 65 years
- Live alone
- Diabetes
- Less than high school diploma
- Below poverty line
- Race other than white
- Area without vegetation
- No AC - (only significant in Pacific and Northeast)[5]

Four Twenty Seven Climate Solutions

4. Basu *et al.*, 2012
5. Reid *et al.*, 2009

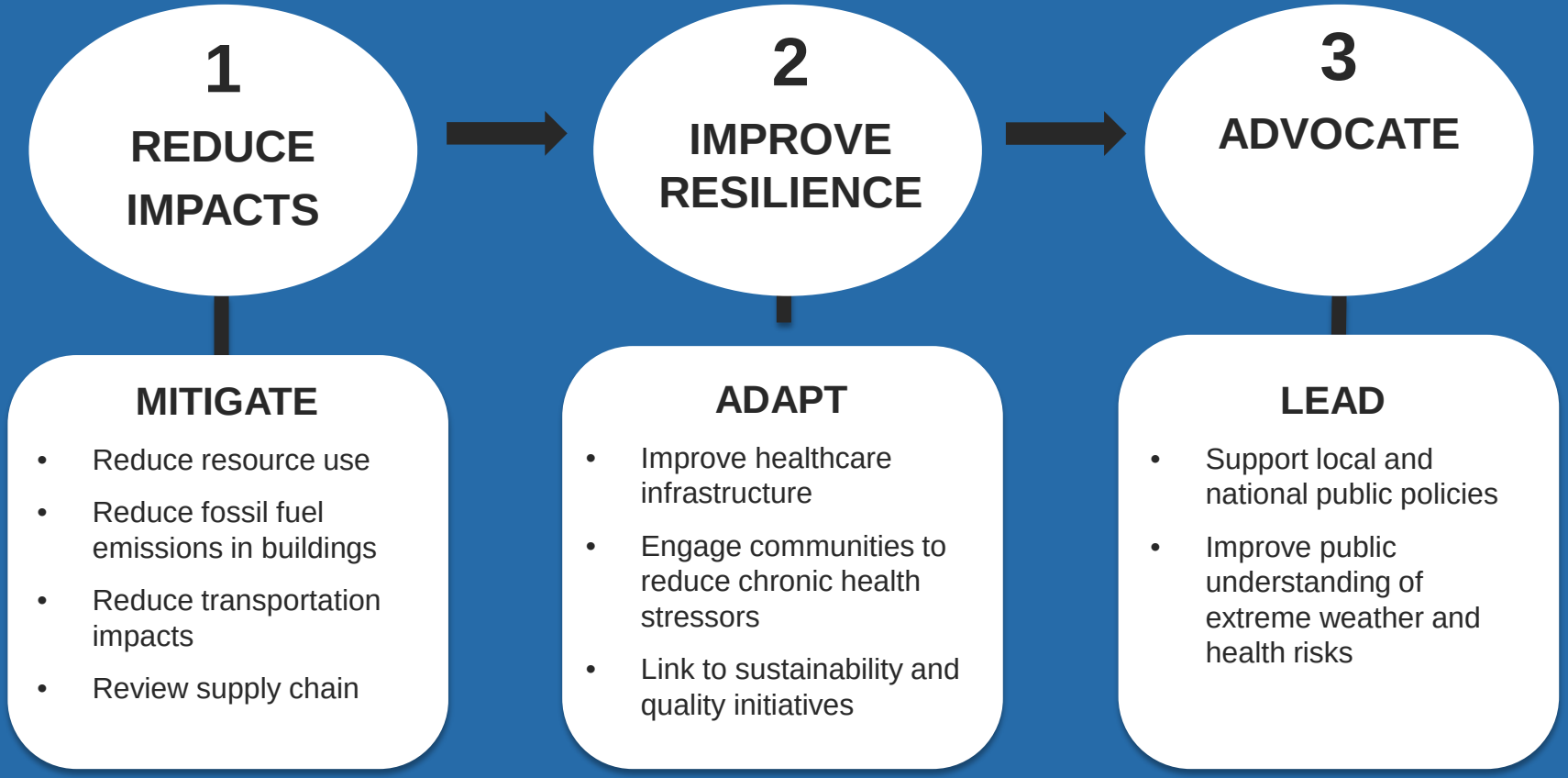
Outputs

- Provide a common reference grid that couples high resolution climate projections with zip code-scale social/ medical data
- Weighted population exposure to heat hazard
- Hotspots by cross-section of medical and social risks



427 Four Twenty Seven Climate Solutions

Health Care's Role



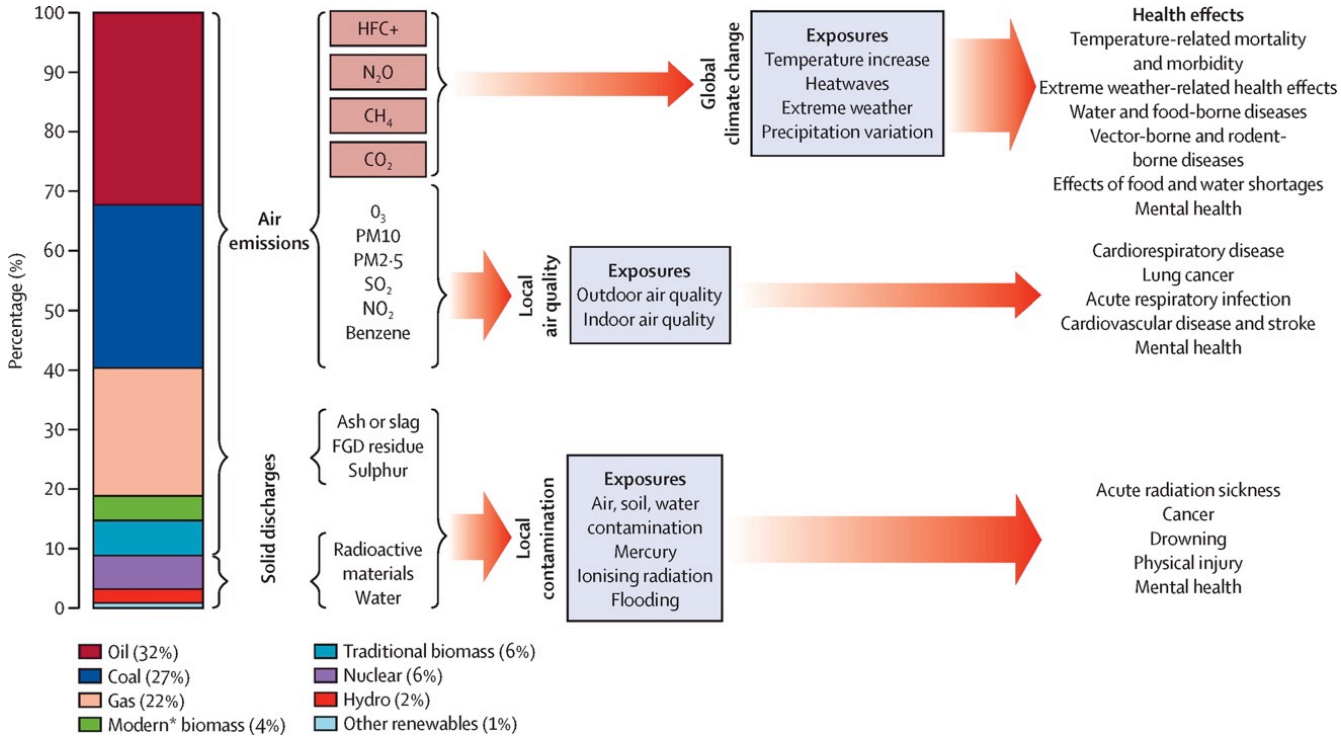
1

REDUCE IMPACTS

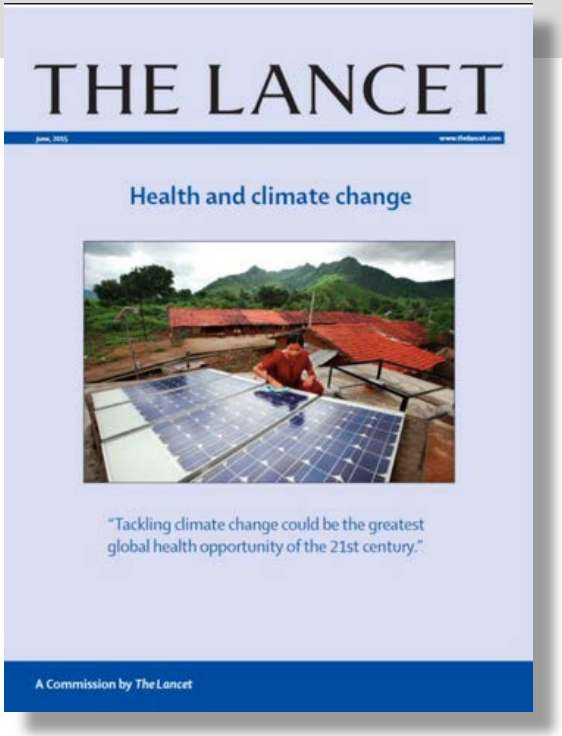
MITIGATE

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

Fossil Fuels and Health



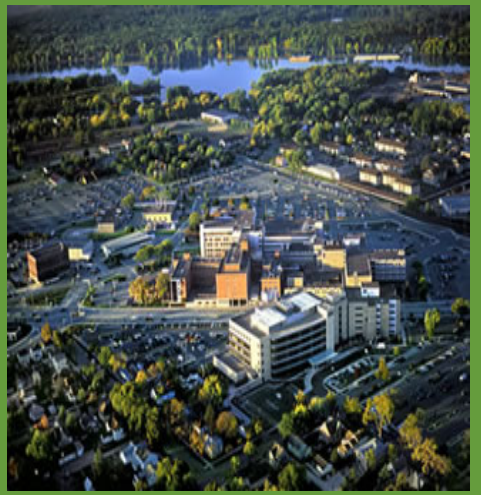
LANCET commission on health & climate '15



"Hospitals and health systems, particularly in more industrialized settings, have a significant carbon footprint."

"By moving toward low-carbon health systems, health care can become more resilient to the impacts of climate change, save money, and lead by example."

“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

Envision GUNDERSEN HEALTH SYSTEM

- 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
(EF-5 tornado, 2008)

Press Release

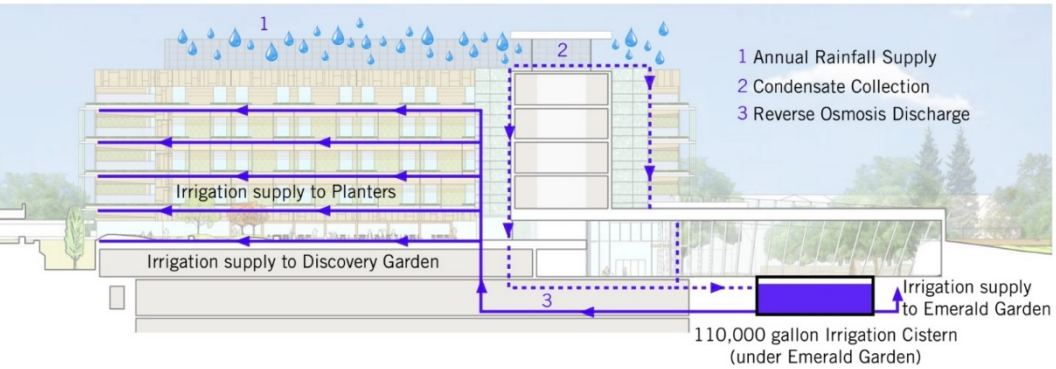
Kaiser Permanente Pledges Bold 2025 Environmental Performance to Benefit People and Planet

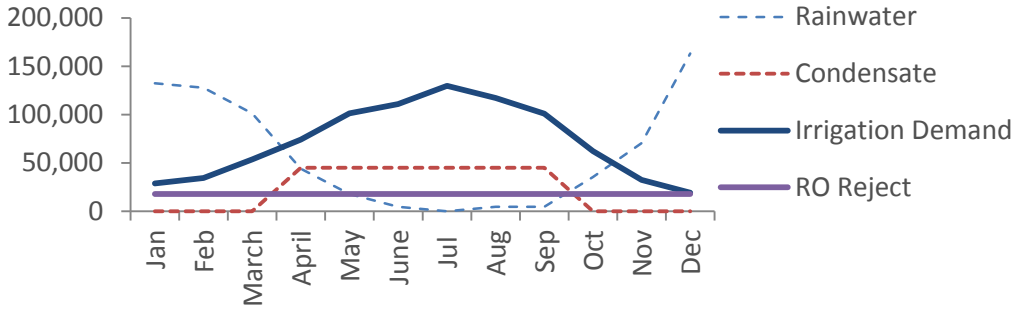
Already a global leader in climate action, organization sets in motion its most ambitious plan ever for a healthier future

May 17, 2016

carbon positive

Kaiser Permanente
Oakland, California





Lucile Packard Children's Hospital at Stanford

Palo Alto, California

Seattle Children's Hospital
Seattle, Washington

1 REDUCE IMPACTS

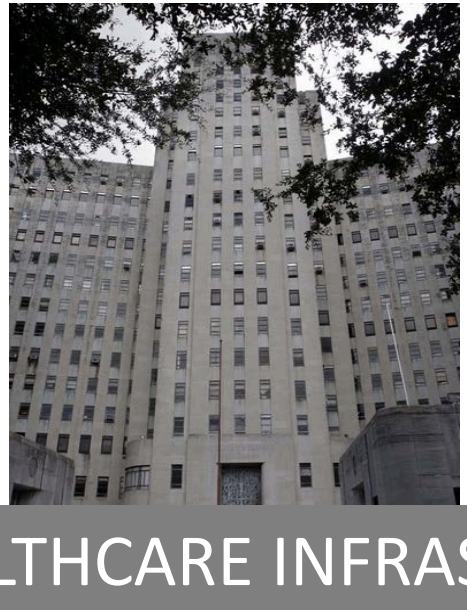
MITIGATE

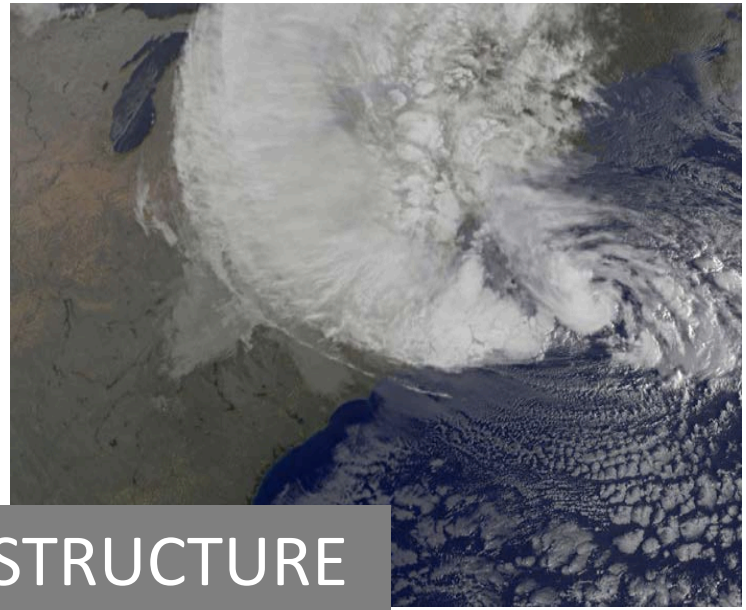
- Reduce resource use
- Reduce fossil fuel emissions in buildings
- Reduce transportation impacts
- Review supply chain

2 IMPROVE RESILIENCE

ADAPT

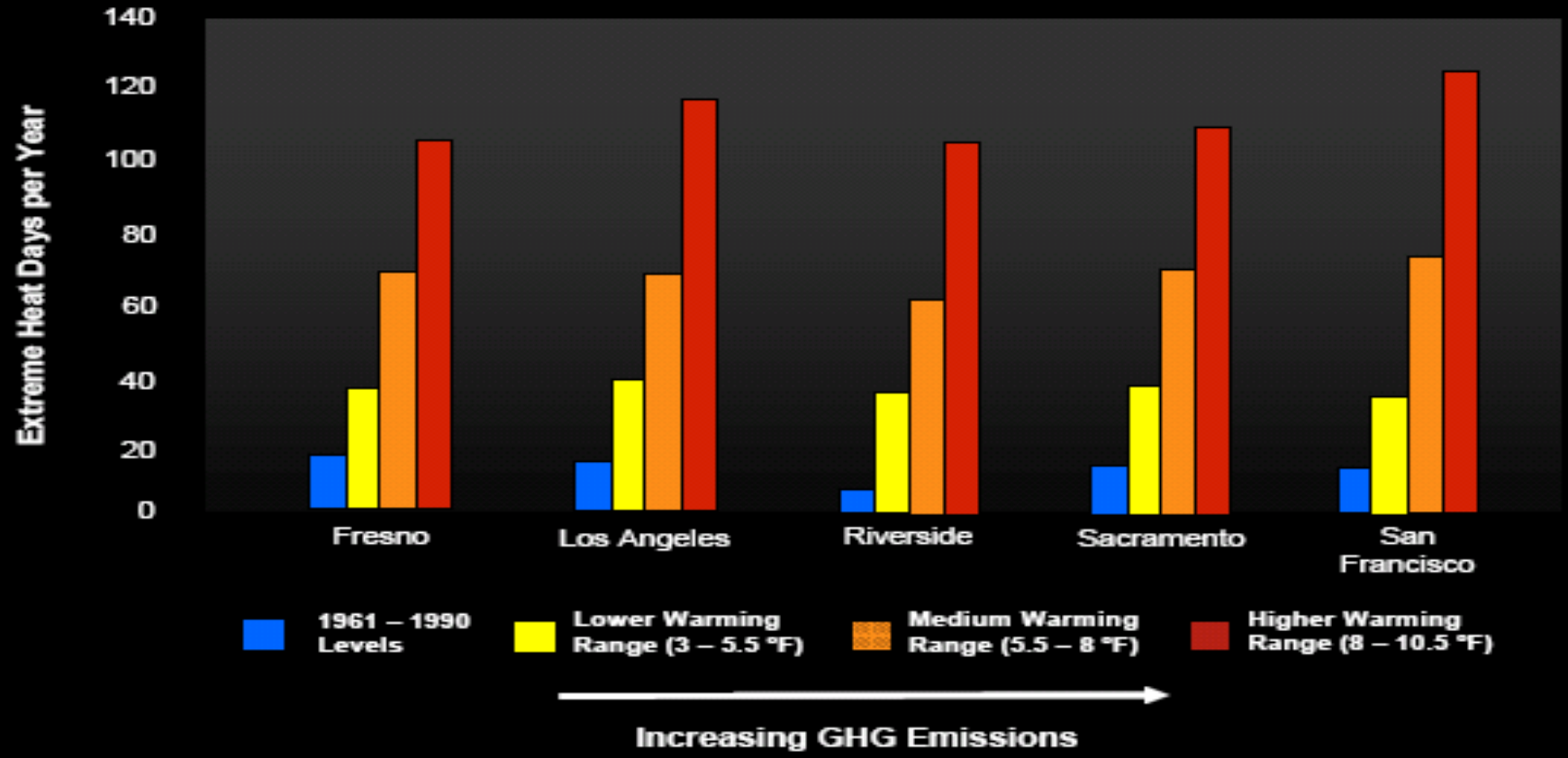
- Improve healthcare infrastructure
- Engage communities to reduce chronic health stressors
- Link to sustainability and quality initiatives





IS OUR HEALTHCARE INFRASTRUCTURE RESILIENT TO EXTREME WEATHER?

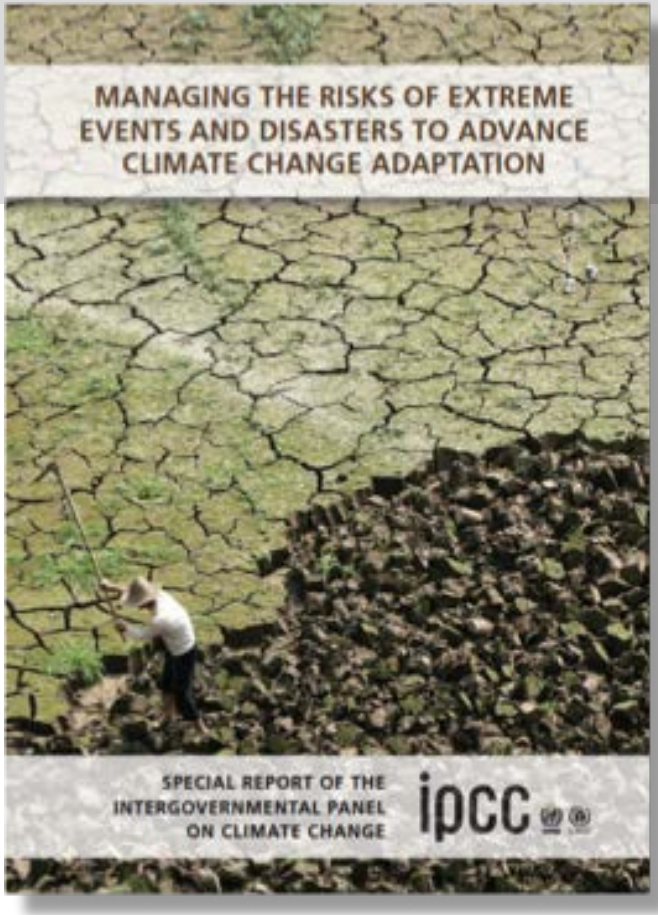
Increase in Extreme Heat Days

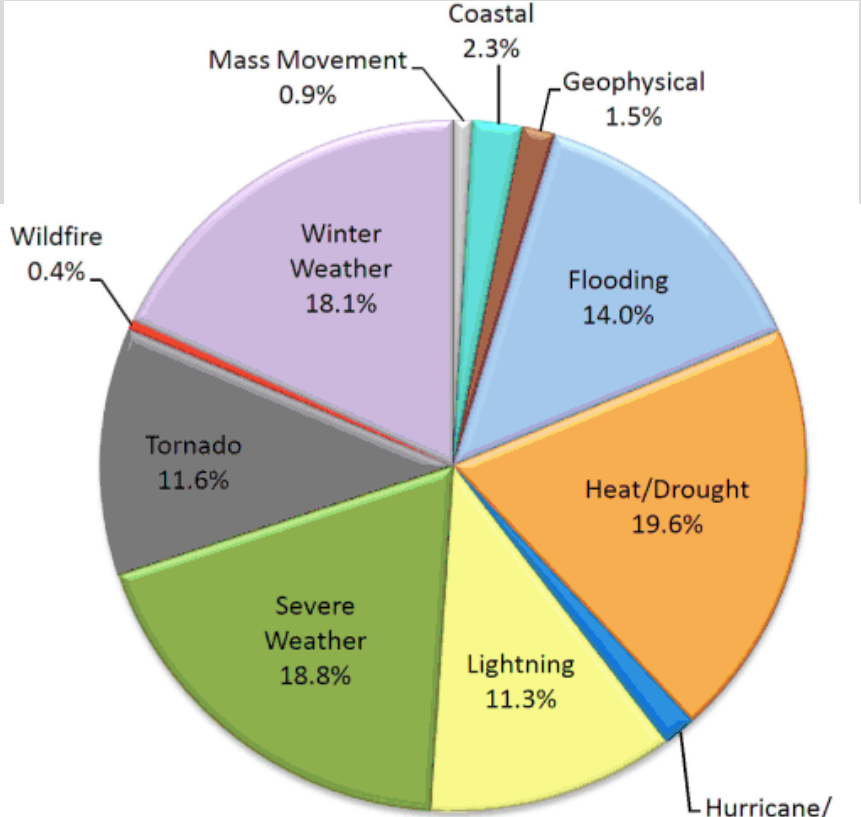


Our Changing Climate: Assessing the Risks to California (2006), *www.climatechange.ca.gov*

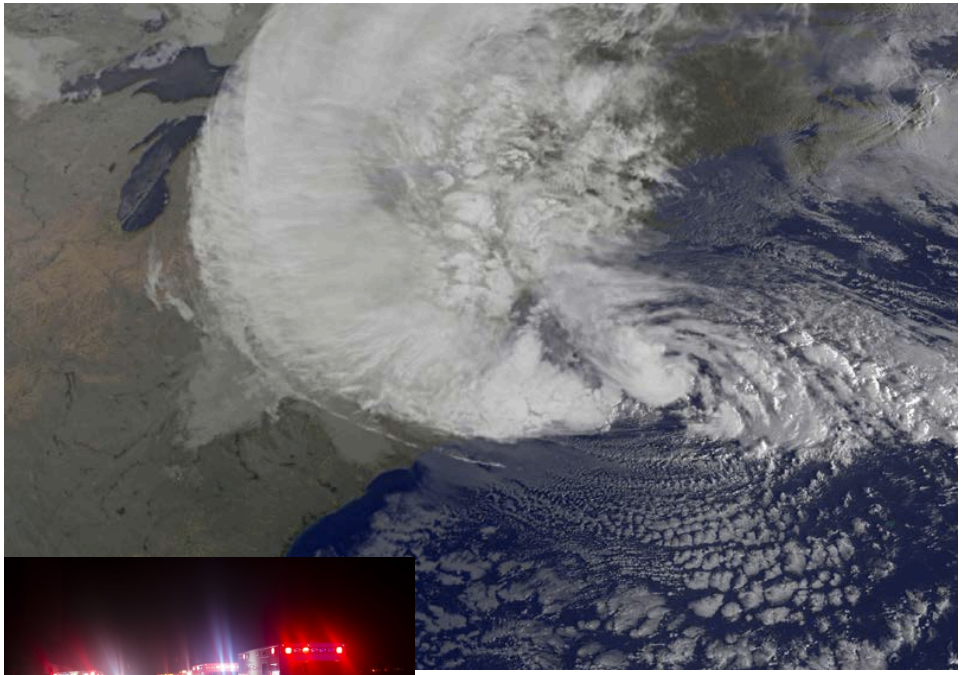
California Heat Wave 2006

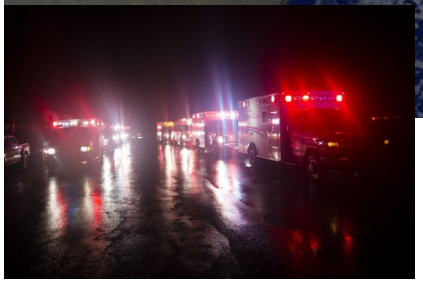
- Daytime temperatures >100 degrees for two weeks
- Record night time highs
- 1 million people without electricity
- Death toll estimates 150-450
- 16,000 excess ER visits and 1,000 excess hospitalizations
- 25,000 cattle and 700,000 chickens died





U.S. deaths from natural hazards by category, 1970-2004





NYU Langone and Bellevue

New York, NY

(Hurricane Sandy, 2012)

The President's Climate Action Plan- June 2013

THE PRESIDENT'S PLAN WILL

PREPARE THE U.S. FOR THE IMPACTS OF CLIMATE CHANGE

WE'VE MADE GREAT PROGRESS

The Administration and partners developed national strategies to help decision makers address the impacts of climate change on freshwater resources — fish, wildlife, and plants — and oceans.

PROGRESS: In 2013, federal agencies released Climate Change Adaptation plans for the first time, outlining strategies to protect their operations, missions, and programs from the effects of climate change.

PROGRESS: The US Global Change Research Program, NOAA, USACE, and FEMA developed and released interactive sea-level rise maps and a calculator to aid rebuilding efforts in NY and NJ after Superstorm Sandy.

THERE'S MORE WORK TO DO

Moving forward, the Obama Administration will help states, cities, and towns build stronger communities and infrastructure, protect critical sectors of our economy as well as our natural resources, and use sound science to better understand and manage climate impacts.

SUPPORT CLIMATE-RESILIENT INVESTMENTS

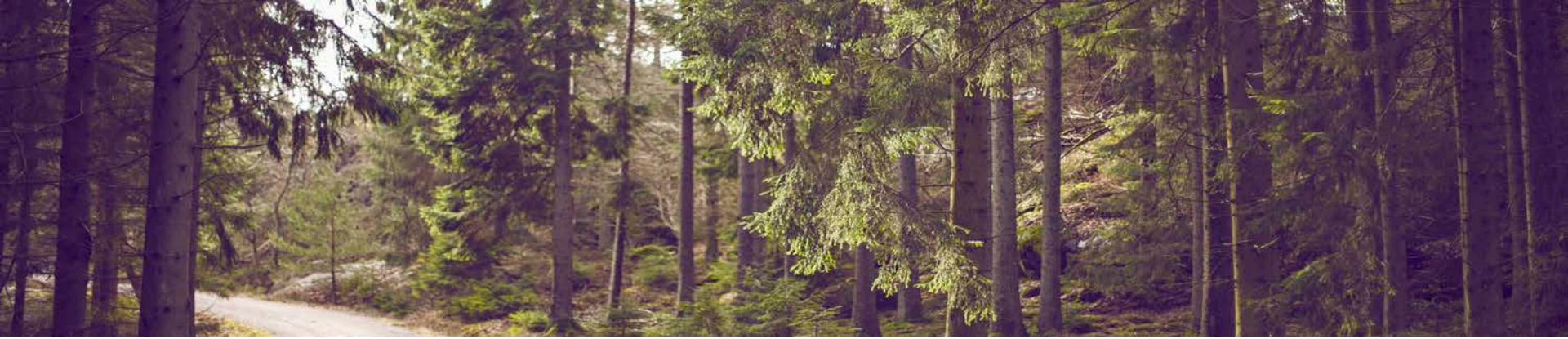
at the community level by removing policy barriers, modernizing programs, and establishing a short-term task force of state, local, and tribal officials to advise on key actions the federal government can take to support local and state efforts to prepare for climate change.

REBUILD AND LEARN FROM SUPERSTORM SANDY

by piloting innovative strategies in the Superstorm Sandy-affected region to strengthen communities against future extreme weather and other climate impacts and building on a new, consistent flood risk reduction standard established for the Sandy-affected region, agencies will update their flood-risk reduction standards for all federally-funded projects.

LAUNCH AN EFFORT TO CREATE SUSTAINABLE AND RESILIENT HOSPITALS

in the face of climate change through a public-private partnership with the healthcare industry.



Sustainability

Sustainability and Resilience

Resilience

Low VOC Materials
Local Food Suppliers
Waste Recycling
Air Quality

Energy, Water Efficiency
Daylighting
Natural Ventilation
Rainwater Capture
Solar Shading

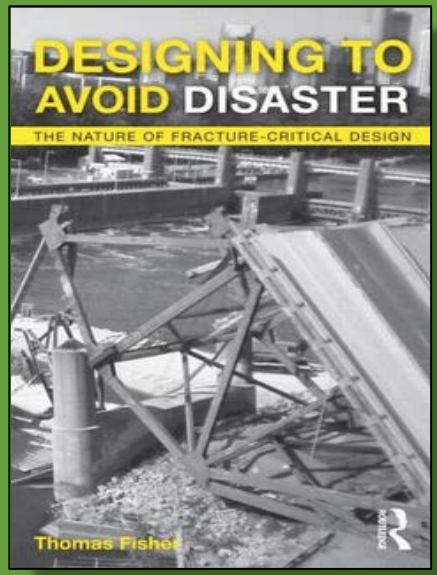
Flood barriers
Elevation
Backup generators

Fracture Critical

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

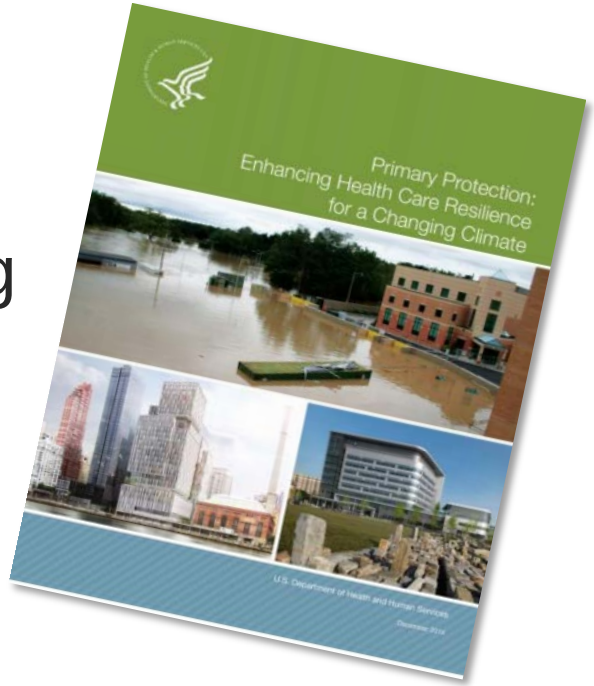
We are at our best when we have imagined, and accounted for, the worst."

–Thomas Fisher
University of Minnesota

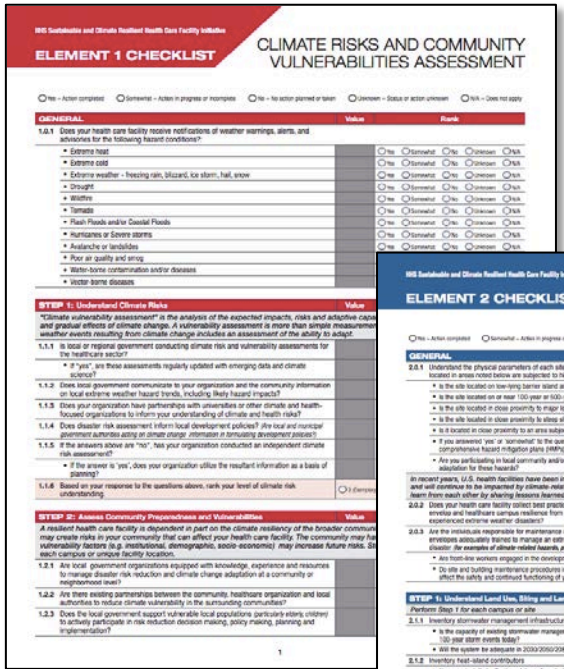


Primary Protection: Enhancing Health Care Resilience for a Channing Climate

- Goal: assist organizations in reducing future vulnerabilities and losses, and improve the functioning of a broad range of health care facilities



http://toolkit.climate.gov/topics/human-health/building-climate-resilience-health-sector


IHS Sustainable and Climate Resilient Health Care Facility Initiative

ELEMENT 1 CHECKLIST

CLIMATE RISKS AND COMMUNITY VULNERABILITIES ASSESSMENT

Yes – Action completed | Somewhat – Action in progress or incomplete | No – No action planned or taken | Unknown – Status or action unknown | N/A – Does not apply

GENERAL — Value — Rank

1.0.1 Does your health care facility receive notifications of weather warnings, alerts, and advisories for the following hazard conditions?

- Extreme heat
- Extreme cold
- Extreme weather – freezing rain, blizzard, ice storm, hail, snow
- Drought
- Wildfire
- Tornado
- Flash Floods and/or Coastal Floods
- Hurricanes or Severe storms
- Avalanche or landslides
- Poor air quality and smog
- Water-borne contamination and/or diseases
- Vector-borne diseases

STEP 1: Understand Climate Risks — Value

"Climate vulnerability assessment" is the analysis of the expected impacts, risks and adaptive capa… and gradual effects of climate change. A vulnerability assessment is more than simple measurem… weather events resulting from climate change includes an assessment of the ability to adapt.

1.1.1 Is local or regional government conducting climate risk and vulnerability assessments for the healthcare sector?

- If "yes", are these assessments regularly updated with emerging data and climate science?

1.1.2 Does local government communicate to your organization and the community information on local extreme weather hazard trends, including likely hazard impacts?

1.1.3 Does your organization have partnerships with universities or other climate and health-focused organizations to inform your understanding of climate and health risks?

1.1.4 Does disaster risk assessment inform local development policies? *(Are local and municipal government authorities acting on climate change information in formulating development policies?)*

1.1.5 If the answers above are "no", has your organization conducted an independent climate risk assessment?

- If the answer is 'yes', does your organization utilize the resultant information as a basis of planning?

1.1.6 Based on your response to the questions above, rank your level of climate risk understanding. ☐ 1 (Emerging)

STEP 2: Assess Community Preparedness and Vulnerabilities — Value

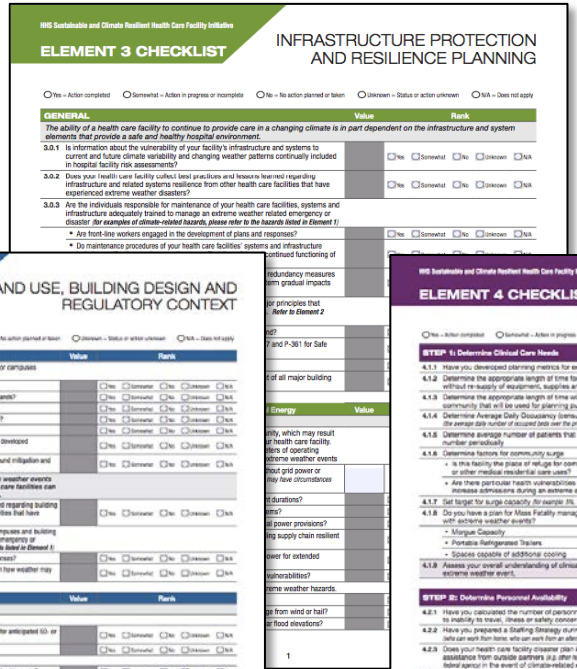
A resilient health care facility is dependent in part on the climate resiliency of the broader communi… may create risks in your community that can affect your health care facility. The community may hav… vulnerability factors (e.g. institutional, demographic, socio-economic) may increase future risks. St… each campus or unique facility location.

1.2.1 Are local government organizations equipped with knowledge, experience and resources to manage disaster risk reduction and climate change adaptation at a community or neighborhood level?

1.2.2 Are there existing partnerships between the community, healthcare organization and local authorities to reduce climate vulnerability in the surrounding communities?

1.2.3 Does the local government support vulnerable local populations (particularly elderly children) to actively participate in risk reduction decision making, policy making, planning and implementation?

1


IHS Sustainable and Climate Resilient Health Care Facility Initiative

ELEMENT 3 CHECKLIST

INFRASTRUCTURE PROTECTION AND RESILIENCE PLANNING

Yes – Action completed | Somewhat – Action in progress or incomplete | No – No action planned or taken | Unknown – Status or action unknown | N/A – Does not apply

GENERAL — Value — Rank

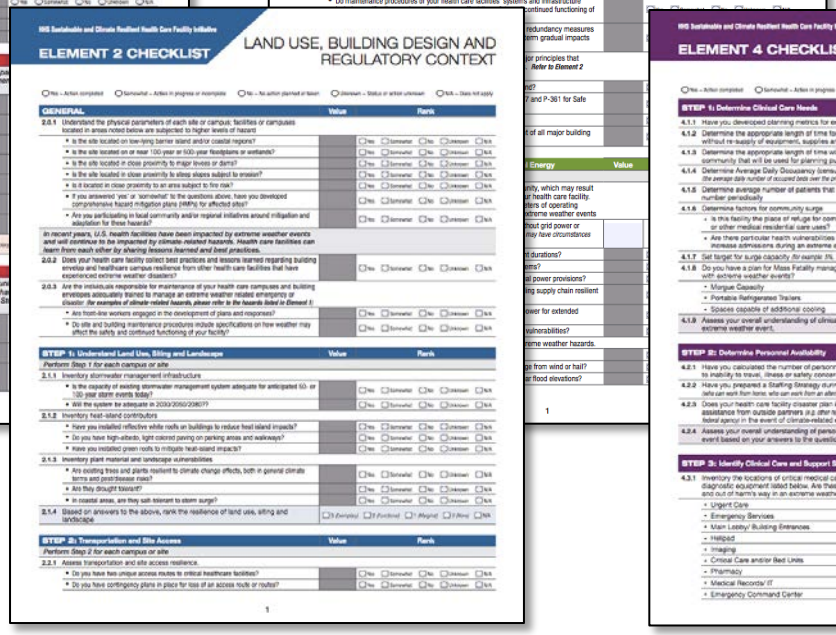
The ability of a health care facility to continue to provide care in a changing climate is in part dependent on the infrastructure and system elements that provide a safe and healthy hospital environment.

3.0.1 Is information about the vulnerability of your facility's infrastructure and systems to current and future climate variability and changing weather patterns continually included in hospital facility risk assessments?

3.0.2 Does your health care facility collect best practices and lessons learned regarding infrastructure and related systems resilience from other health care facilities that have experienced extreme weather disasters?

3.0.3 Are the individuals responsible for maintenance of your health care facilities, systems and infrastructure adequately trained to manage an extreme weather related emergency or disaster *(for examples of climate-related hazards, please refer to the hazards listed in Element 1)*

- Are front-line workers engaged in the development of plans and responses?
- Do maintenance procedures of your health care facilities' systems and infrastructure


IHS Sustainable and Climate Resilient Health Care Facility Initiative

ELEMENT 2 CHECKLIST

LAND USE, BUILDING DESIGN AND REGULATORY CONTEXT

Yes – Action completed | Somewhat – Action in progress or incomplete | No – No action planned or taken | Unknown – Status or action unknown | N/A – Does not apply

GENERAL — Value — Rank

2.0.1 Understand the physical parameters of each site or campus: facilities or campuses located in areas noted below are subjected to higher levels of hazard

- Is the site located on low-lying barrier island and/or coastal regions?
- Is the site located on or near 100-year or 500-year floodplains or wetlands?
- Is the site located in close proximity to major levees or dams?
- Is the site located in close proximity to steep slopes subject to erosion?
- Is it located in close proximity to an area subject to fire risk?
- If you answered 'yes' or 'somewhat' to the questions above, have you developed comprehensive hazard mitigation plans (HMPs) for affected sites?
- Are you participating in local community and/or regional initiatives around mitigation and adaptation for these hazards?

In recent years, U.S. health facilities have been impacted by extreme weather events and will continue to be impacted by climate-related hazards. Health care facilities can learn from each other by sharing lessons learned and best practices.

2.0.2 Does your health care facility collect best practices and lessons learned regarding building envelope and healthcare campus resilience from other health care facilities that have experienced extreme weather disasters?

2.0.3 Are the individuals responsible for maintenance of your health care campuses and building envelopes adequately trained to manage an extreme weather related emergency or disaster *(for examples of climate-related hazards, please refer to the hazards listed in Element 1)*

- Are front-line workers engaged in the development of plans and responses?
- Do site and building maintenance procedures include specifications on how weather may affect the safety and continued functioning of your facility?

STEP 1: Understand Land Use, Siting and Landscape — Value — Rank

Perform Step 1 for each campus or site

2.1.1 Inventory stormwater management infrastructure

- Is the capacity of existing stormwater management system adequate for anticipated 50- or 100-year storm events today?
- Will the system be adequate in 2030/2050/2080??

2.1.2 Inventory heat-island contributors

- Have you installed reflective white roofs on buildings to reduce heat island impacts?
- Do you have high-albedo, light colored paving on parking areas and walkways?
- Have you installed green roofs to mitigate heat-island impacts?

2.1.3 Inventory plant material and landscape vulnerabilities

- Are existing trees and plants resilient to climate change effects, both in general climate terms and post-disease risks?
- Are they drought tolerant?
- In coastal areas, are they salt-tolerant to storm surge?

2.1.4 Based on answers to the above, rank the resilience of land use, siting and landscape ☐ 0 (Emerging) ☐ 1 (Functional) ☐ 2 (Marginal) ☐ 3 (None) ☐ N/A

STEP 2: Transportation and Site Access — Value — Rank

Perform Step 2 for each campus or site

2.2.1 Assess transportation and site access resilience.

- Do you have two unique access routes to critical healthcare facilities?
- Do you have contingency plans in place for loss of an access route or routes?

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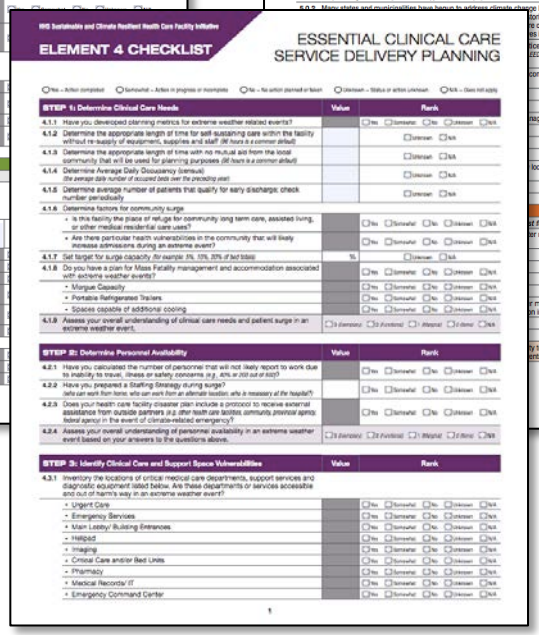

IHS Sustainable and Climate Resilient Health Care Facility Initiative

ELEMENT 4 CHECKLIST

ESSENTIAL CLINICAL CARE SERVICE DELIVERY PLANNING

Yes – Action completed | Somewhat – Action in progress or incomplete | No – No action planned or taken | Unknown – Status or action unknown | N/A – Does not apply

STEP 1: Determine Clinical Care Needs — Value — Rank

4.1.1 Have you developed planning metrics for extreme weather related events?

4.1.2 Determine the appropriate length of time for self-sustaining care within the facility without re-supply of equipment, supplies and staff *(96 hours is a common default)*

4.1.3 Determine the appropriate length of time with no mutual aid from the local community that will be used for planning purposes *(96 hours is a common default)*

4.1.4 Determine Average Daily Occupancy (census) *(the average daily number of occupied beds over the preceding year)*

4.1.5 Determine average number of patients that qualify for early discharge; check number periodically

4.1.6 Determine factors for community surge

- Is this facility the place of refuge for community long term care, assisted living, or other medical residential care uses?
- Are there particular health vulnerabilities in the community that will likely increase admissions during an extreme event?

4.1.7 Set target for surge capacity *(for example 5%, 10%, 20% if fed bldg)* %

4.1.8 Do you have a plan for Mass Fatality management and accommodation associated with extreme weather events?

- Morgue Capacity
- Portable Refrigerated Trailers
- Spaces capable of additional cooling

4.1.9 Assess your overall understanding of clinical care needs and patient surge in an extreme weather event. ☐ 0 (Emerging) ☐ 1 (Functional) ☐ 2 (Marginal) ☐ 3 (None) ☐ N/A

STEP 2: Determine Personnel Availability — Value — Rank

4.2.1 Have you calculated the number of personnel that will not likely report to work due to inability to travel, illness or safety concerns *(e.g., 40% or 350 out of 850)*?

4.2.2 Have you prepared a Staffing Strategy during surge? *(who can work from home, who can work from an alternate location, who is necessary at the hospital?)*

4.2.3 Does your health care facility-disaster plan include a protocol to receive external assistance from outside partners *(e.g. other health care facilities, community, provincial agency, federal agency)* in the event of climate-related emergency?

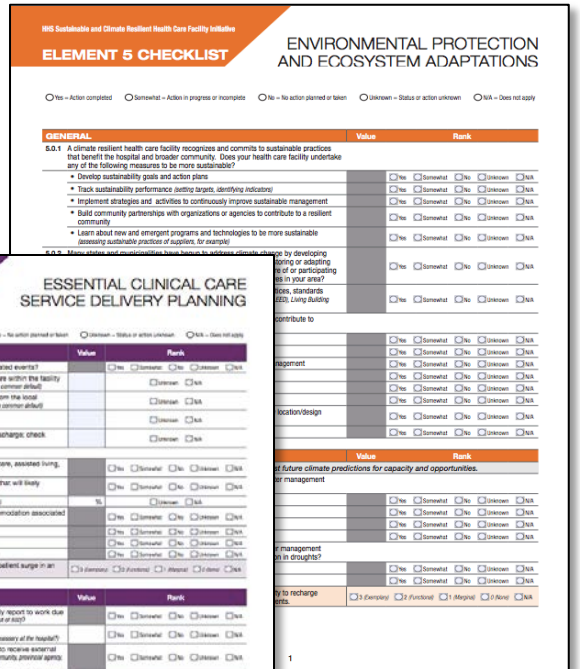
4.2.4 Assess your overall understanding of personnel availability in an extreme weather event based on your answers to the questions above. ☐ 0 (Emerging) ☐ 1 (Functional) ☐ 2 (Marginal) ☐ 3 (None) ☐ N/A

STEP 3: Identify Clinical Care and Support Space Vulnerabilities — Value — Rank

4.3.1 Inventory the locations of critical medical care departments, support services and diagnostic equipment listed below. Are these departments or services accessible and out of harm's way in an extreme weather event?

- Urgent Care
- Emergency Services
- Main Lobby/ Building Entrances
- Helipad
- Imaging
- Critical Care and/or Bed Units
- Pharmacy
- Medical Records/ IT
- Emergency Command Center

1


IHS Sustainable and Climate Resilient Health Care Facility Initiative

ELEMENT 5 CHECKLIST

ENVIRONMENTAL PROTECTION AND ECOSYSTEM ADAPTATIONS

Yes – Action completed | Somewhat – Action in progress or incomplete | No – No action planned or taken | Unknown – Status or action unknown | N/A – Does not apply

GENERAL — Value — Rank

5.0.1 A climate resilient health care facility recognizes and commits to sustainable practices that benefit the hospital and broader community. Does your health care facility undertake any of the following measures to be more sustainable?

- Develop sustainability goals and action plans
- Track sustainability performance *(setting targets, identifying indicators)*
- Implement strategies and activities to continuously improve sustainable management
- Build community partnerships with organizations or agencies to contribute to a resilient community
- Learn about new and emergent programs and technologies to be more sustainable *(assessing sustainable practices of suppliers, for example)*

5.0.2 Many states and municipalities have begun to address climate change by developing … or adapting … or participating … es in your area?

… ices, standards … EDB, Living Building …

… contribute to …

… nagement …

… location/design …

Value — Rank

… t future climate predictions for capacity and opportunities.

… r management …

… r management … n in droughts?

… y to recharge … rds.

1

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

Bellevue Hospital Evacuated After Two Days on Emergency Generators

By **Julie Shapiro** and **Jeff Mays** on October 31, 2012 2:32pm | *Updated on November 1, 2012 12:21am*

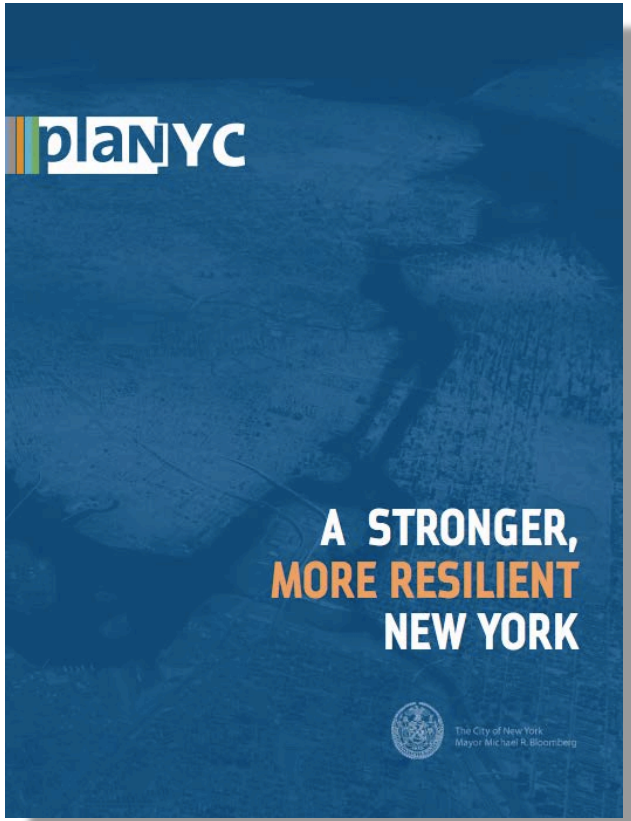
KIPS BAY — Bellevue Hospital Center was evacuated Wednesday after running on emergency generators for two days and could be closed for two to three weeks, officials said.

The East Side hospital transferred its most critically ill patients after losing power during Hurricane Sandy's floods, and on Wednesday, Bellevue began moving the roughly 500 patients that remained, Mayor Michael Bloomberg said.

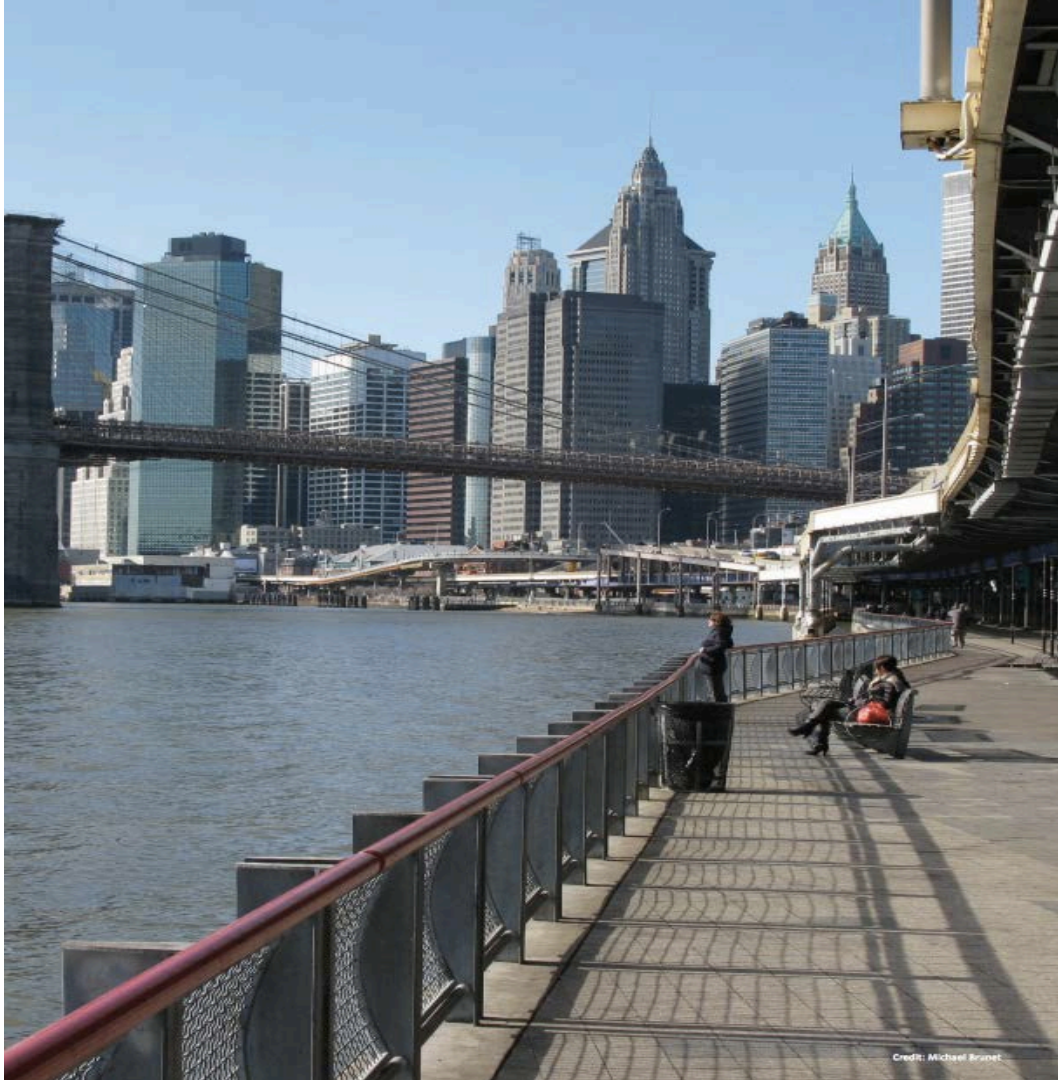
What happens?

- 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***



http://www.nyc.gov/html/sirr/html/report/report.shtml



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

Minimize disruptions in the **healthcare system** in order to preserve the wellbeing and health of staff, patients and community

Operate continuously

or

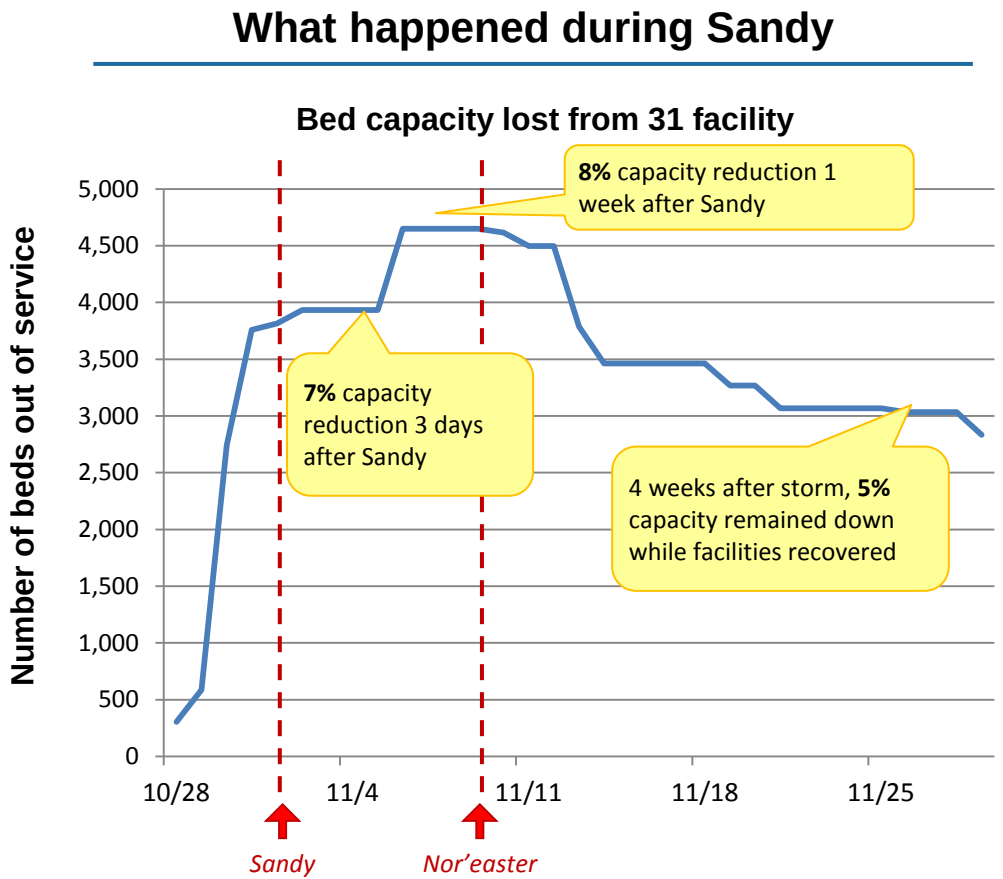
Re-open quickly

Key strategies

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

Nursing Homes/ Adult Care Facilities

Patient impact: emergency evacuations, reduced citywide bed-capacity, hospitals couldn't discharge



Source: NYSDOH, PLUTO, DOHMH, Mayor's Office of Analytics, SIRR interviews

In summary, during Sandy, critical system failures – namely power – caused evacuations, closures, and reduced services

Providers	Impact	Building	Equipment (elevators. Imaging)	Utilities (power, water)	Heating/ cooling	Commun-ications/ IT	Staff	Supplies
Hospital	**Evacuations/ closures/ reduced services**	Flooded	Flooded	Back-up failed	Flooded	Phone/ internet outages	Staff couldn't travel	Limited deliveries
Nursing homes/ adult care facilities	**Evacuations**	Flooded	No back-up power	Back-up failed (NH) / no back-up (ACF)	No back-up	Phone/ internet outages	Staff couldn't travel	Limited deliveries
Community-based providers	**Closures / reduced services**	Flooded	No back-up power	No back-up	No back-up	Phone/ internet outages	Staff couldn't travel	Limited deliveries
Home-based providers	**Reduced services**	Disruptions in patients' homes/residences, e.g. loss of power, elevators not working				Phone/ internet outages	Staff couldn't travel	Delayed deliveries

Primary reason for disruption Secondary reason Tertiary reason

What is the risk this could happen again to the same number or even more providers?

Source: SIRR interviews

Mapping Climate Impacts on the Bottom Line
Dollars and Cents

- After Superstorm Sandy
  - NYC public hospitals: $800 Million in damage
  - Estimated $3.1 Billion recovery costs to healthcare facilities
  - Lost research animals valued at more than $100,000 – Research losses estimated above $200 Million
  - FEMA Assistance: $25.9 Million for Equipment replacement

Texas Medical Center

Houston, TX

Tropical Storm Allison, 2001

Texas Medical Center, Houston, Texas (SOM Site Master Planning)

Completed early in 2006, Brays Bayou Marsh at Mason Park is near the mouth of Brays Bayou. The marsh is an award-winning partnership project.

Texas Medical Center

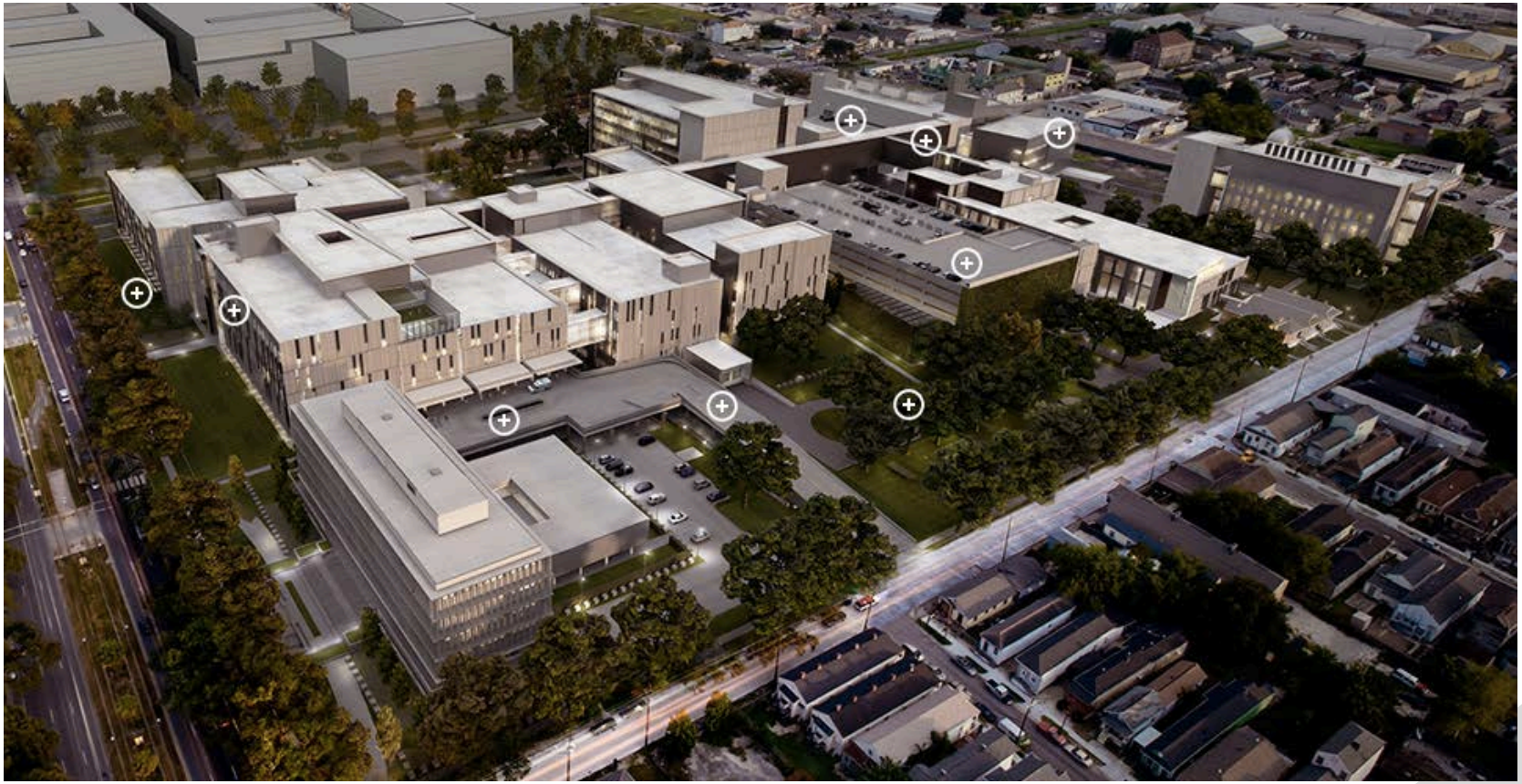
Houston, TX

Since Tropical Storm Allison, 2001

Charity Hospital and VAMC

New Orleans, LA

(Hurricane Katrina, 2005)



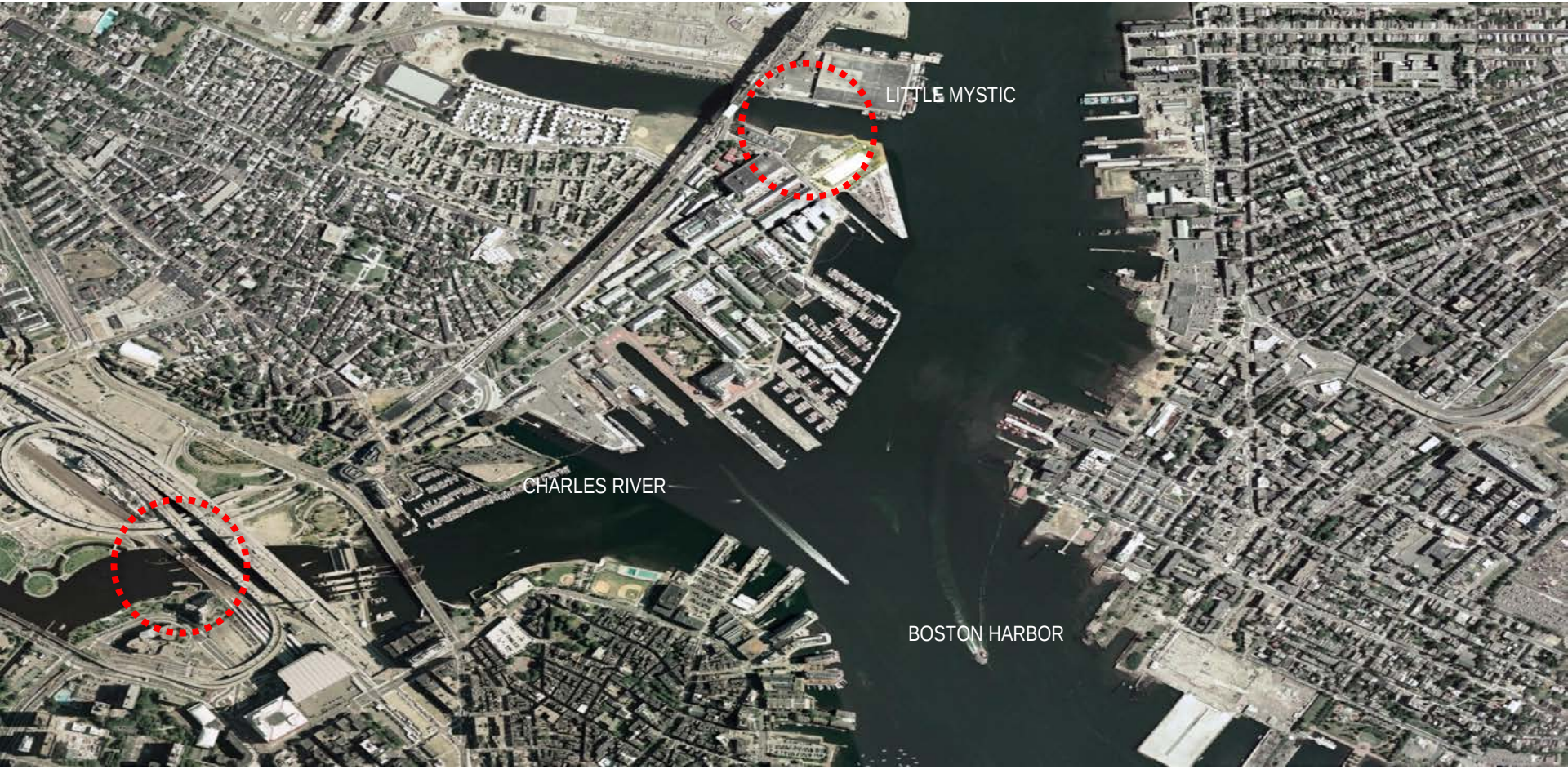
Charity Hospital and VAMC

New Orleans, LA

(Hurricane Katrina, 2005)

Spaulding Rehabilitation Hospital

Boston, MA

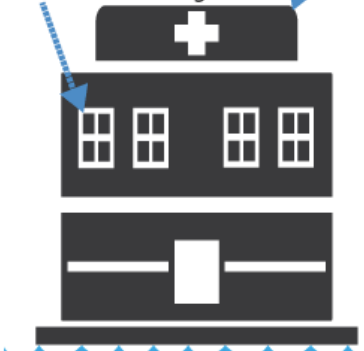

LITTLE MYSTIC
CHARLES RIVER
BOSTON HARBOR

Boston's Spaulding Rehabilitation Hospital

Was climate-proofed for about a half-percent of total building costs.

Electrical equipment is on the roof in case of flooding.

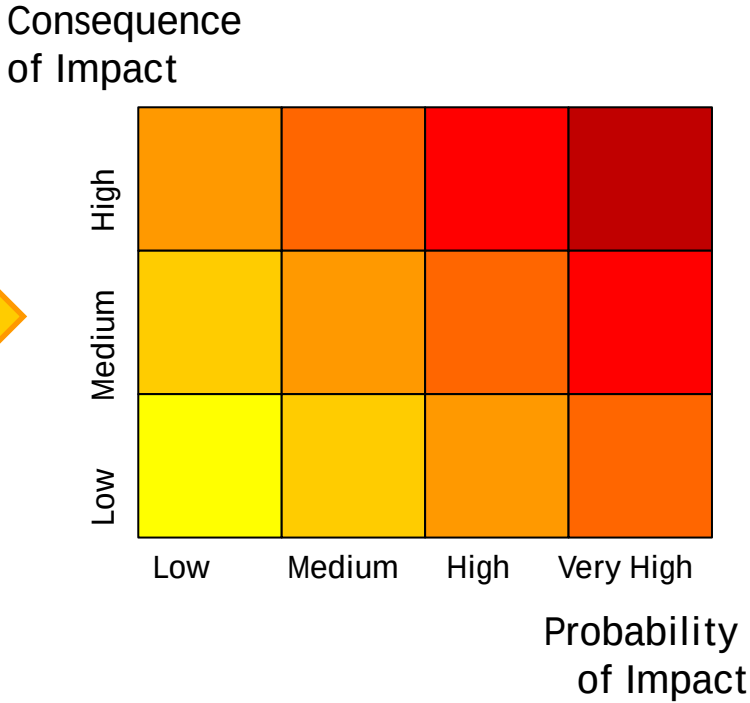
Windows open, so patients don't overheat if air conditioning fails.



The ground floor is raised 30 inches above the current 500-year flood level and 42 inches above the 100-year flood level.

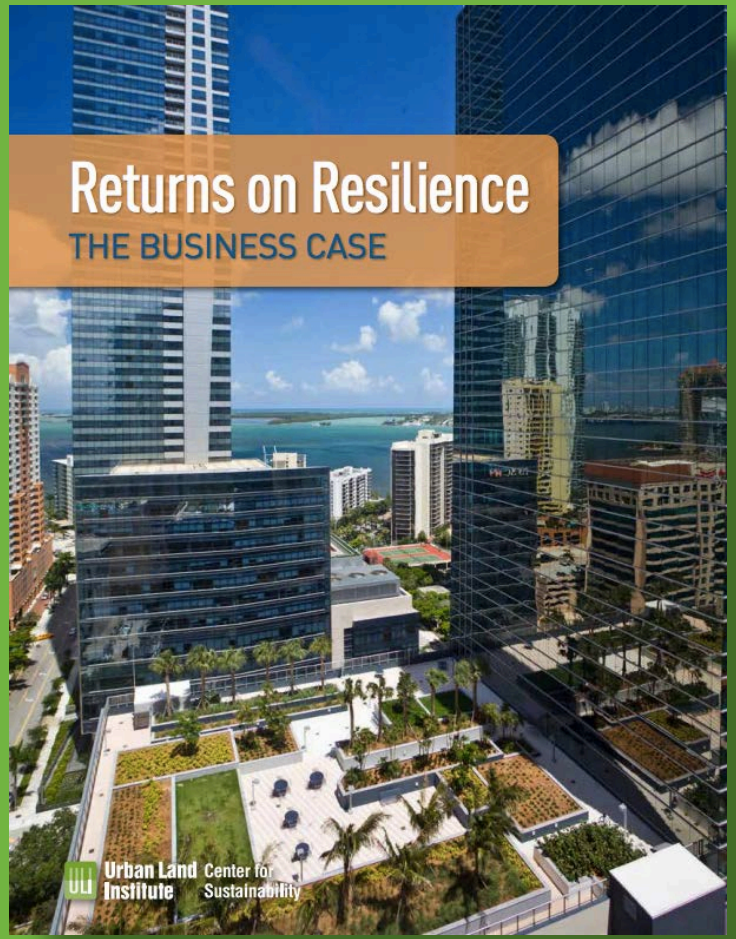
Understand and Prioritize Risk

Climate Scenarios



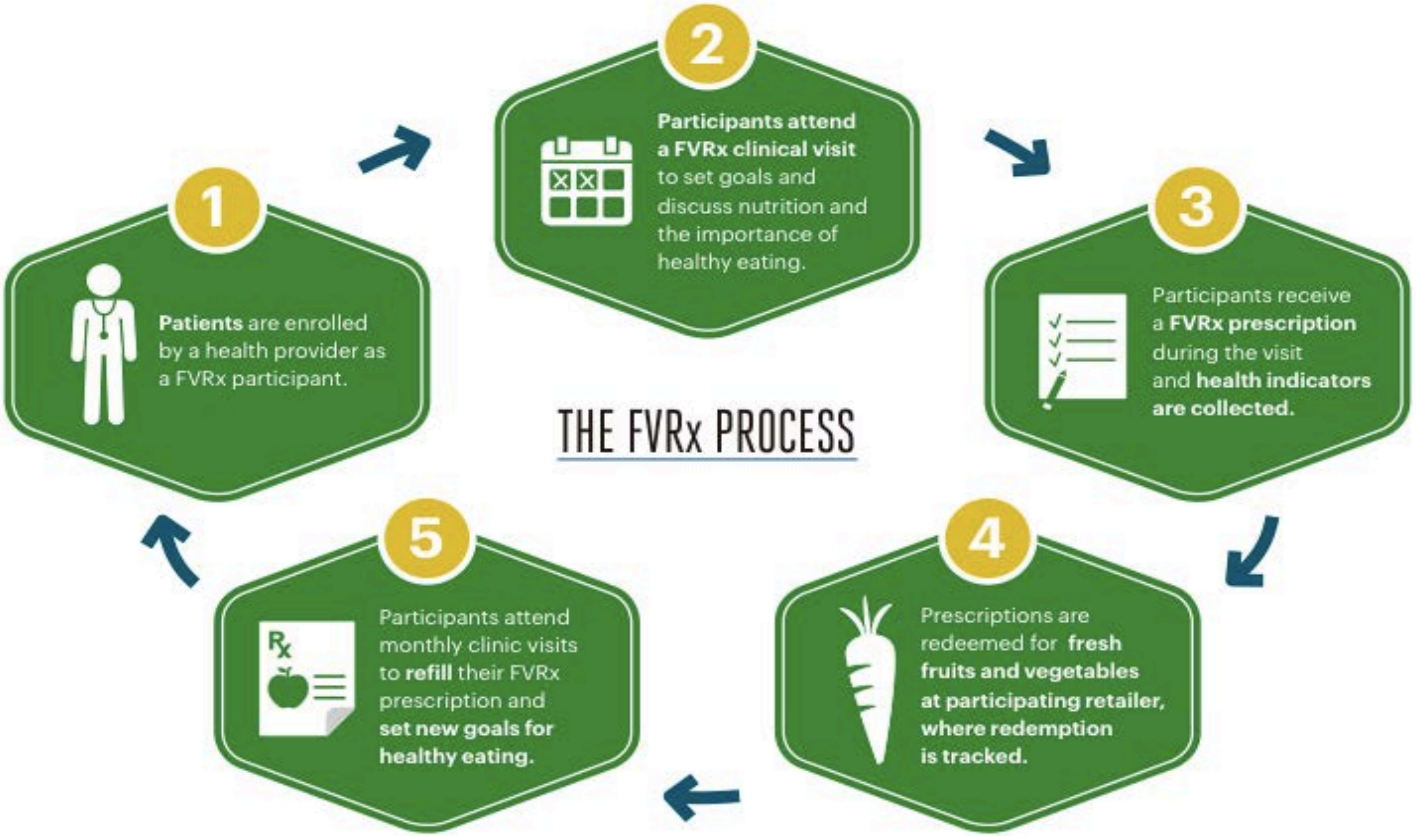
- Identify Critical Facilities and Operations
- Vulnerability & Risk Assessment
- Prioritize Need Across System

The payback for resilience efforts can be measured in many ways, including cost savings from preventing damages and reducing operating costs, as well as revenue enhancements from improved marketing, company brand, and project image.



improving community health

access to healthy food



improving community health | prescribing fruits and vegetables

250,000+
PATIENT VISITS / YEAR

LARGEST EMPLOYER
IN LA CROSSE, WI

RESIDENTS EARNING
58% LESS THAN
THE CITY AVERAGE
USDA FOOD
DESERT

improving community health | community placemaking

Image courtesy of Shutterstock

improving community health

equitable opportunity

Green City Growers Cooperative

Green City Growers Cooperative, Inc. is a 3.25-acre leafy greens, hydroponic greenhouse in the Central neighborhood of Cleveland, OH. The greenhouse, which officially opened on February 25th, 2013, has 15,000 square feet of packinghouse and office space, and is currently producing Bibb lettuce, green leaf lettuce, gourmet lettuces and basil.

Fresh + Local Products

Our Mission

Image courtesy of Evergreen Cooperatives

Image courtesy of Shutterstock

Henry Ford Health System

Detroit, Michigan

Waldron Health Centre, London — Henley Halebrown and Rorrison (c) Nick Kane

community connected

health at the center of civic life

1 REDUCE IMPACTS

MITIGATE

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

2 IMPROVE RESILIENCE

ADAPT

- Improve healthcare infrastructure
- Engage communities to reduce chronic health stressors
- Link to sustainability and quality initiatives

3 ADVOCATE

LEAD

- Support local and national public policies
- Improve public understanding of extreme weather and health risks

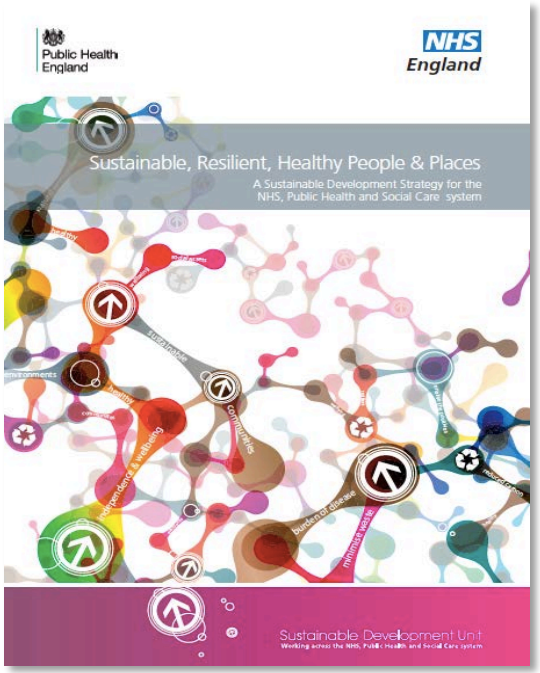
December 2014: the White House highlights health sector resilience

Enable the positives

By valuing our physical and social environment, we can restore our natural environment and strengthen our social assets, whilst enhancing our independence and wellbeing at both a personal and community level. By doing so, we improve the quality of care, build strong communities and generate conditions where life is valued in ways that current generations can be proud to pass on.

Reduce the negatives

By radically reducing the harmful impacts of how we currently live we can stop wasting finite resources, reduce the burdens of preventable mental and physical ill health, reduce social inequalities and reduce risks from a changing climate. In addition, many interventions that reduce harmful impacts also promote positive co-benefits and reduce the burden of disease.



2020 HEALTHCARE Climate Challenge

GLOBAL GREEN and HEALTHY HOSPITALS

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

2020 HEALTHCARE Climate Challenge

GLOBAL GREEN and HEALTHY HOSPITALS

131 Participants =

>9,000 Hospitals and health centers

- Albert Einstein Hospital (Brazil)
- Catalan Institute of Oncology (Spain)
- Dignity Health (USA)
- Fraser Health (Canada)
- Health Department Xativa-Ontinyent (Spain)
- Hospital León Becerra (Ecuador)
- Hospital Sirio Libanes (Brazil)
- Hospital “Dr. Enrique F. Enril” (Argentina)
- Kaiser Permanente (USA)
- Partners Health Care (USA)
- National Health Service (England)
- Stockholm County Council (Sweden)
- TzuChi Medical Foundation (Taiwan)
- University Health Network (Canada)
- Virginia Mason Health System (USA)
- Western Cape Government Health (South Africa)
- Yonsei University Health System (South Korea)

the good news

The healthcare sector can help shift the entire economy toward sustainable, safer products and practices.