



WHAT IS HEALTH CARE FOR?

Gary Cohen







Climate change is a growing health emergency — *The Lancet 2015*

Climate change is one of the greatest challenges of our time

Dr. Margaret Chan

Director General WHO



CLIMATE CHANGE AND HUMAN HEALTH



Weather Disasters



Allergies



Infectious Disease



Water Borne Diseases



Heat Stress



Asthma



BURDEN OF CHRONIC DISEASE IS GROWING

- By 2030, U.S. cancer cases will increase 45% and become the leading cause of death.
- 57% of men and 47% of women in Britain are overweight or obese.
- 5.5 million people in Britain have diabetes; incidence rate has doubled in 20 years
- 1 in every 11 American children has asthma. Black children are twice as likely to have it than white children.
- 60 million Americans (10 million children) have a learning disability.
- **7 million people die annually due to indoor and outdoor air pollution; twice as many as AIDs, TB and malaria combined**

HEALTH CARE'S ENVIRONMENTAL IMPACTS

- **Energy:** Healthcare is the second most energy intensive sector in commercial buildings
- **Medical Waste:** In 1995 medical waste incineration was the largest source of dioxin emissions in the US, responsible for 10% of mercury air emissions
- **Pharmaceutical Waste:** Hundreds of million pounds of pharmaceutical waste is generated annually from hospitals and long-term care centers
- **Toxic Chemicals:** Healthcare is one of the largest users of toxic chemicals in the economy
- **Indoor Air Quality:** Poor air quality has been identified as the most frequent cause of work-related asthma in healthcare workers
- **Unhealthy Food:** Hospitals often serve unhealthy food to their patients and employees

THE PROBLEM

Environmental factors are a key driver in human health outcomes.

Health care itself is a major contributor to the deterioration of environmental health conditions.

- Hospitals are major polluters and energy consumers
- Hospitals are significant users of toxic chemicals
- Hospitals serve food that contributes to diabetes and obesity

THE SOLUTION

Addressing environmental and social factors will scale improvements in health outcomes faster than refining treatment technologies and resources.

The health care sector has a moral obligation, and good business reasons, to be *the* leader in improving environmental health. If health care leveraged the full force of its business and political assets to this end, it could have a substantial and measurable global impact and redefine the way we think about and provide health.

HEALTH CARE WITHOUT HARM'S MISSION

Our mission is to transform health care worldwide so that it reduces its environmental footprint, becomes a community anchor for sustainability and a leader in the global movement for environmental health and justice.

HOW WE CREATE CHANGE

Research and Innovation

We identify and pilot opportunities for health care to implement innovative, economical, science-based solutions to environmental health problems.



Implementation and Capacity Building

We educate, build implementation tools, train health care professionals and scale-up solutions across our networks, the health sector and in the communities it serves.



Policy and Market Changes

We aggregate the influence and purchasing power of hospitals, health systems, health professionals and organizations to drive the marketplace toward sustainability and advocate for policies that will create worldwide change.

THE MERCURY CASE

Research and Innovation

- In the 1990's, HCWH identified mercury waste (incineration and breakage of thermometers and blood pressure devices) as a significant source of mercury pollution and health risk to patients and health workers
- Conducted research to identify safer alternatives and business case for switching



Implementation and Capacity Building

- Began work with one hospital in Boston to switch out their mercury thermometers for safer alternatives
- Spread practice to other hospitals in Boston, then to other cities, then to large health care systems and then to pharmacies
- Led 5,000 U.S. hospitals to commit to phasing out mercury-based medical devices
- Documented 5,600 developing country hospitals committed to or already phasing out mercury



Policy and Market Changes

- Convinced all the major pharmacy chains in the U.S. to agree to stop selling mercury devices
- Won a ban on mercury devices in the European Union
- Won national phase outs on mercury devices in Argentina and the Philippines and health system phase outs in Brazil, South Africa, Mexico and India
- Partnered with the World Health Organization and in 2013 secured a global phase out of mercury medical devices by 2020 in the Minamata Treaty



Global Green and Healthy Hospitals | Agenda Goals



Leadership

Prioritize environmental health as a strategic imperative



Chemicals

Substitute harmful chemicals with safer alternatives



Waste

Reduce, treat and safely dispose of healthcare waste



Energy

Implement energy efficiency and clean, renewable energy generation.



Water

Reduce hospital water consumption and supply potable water



Transportation

Improve transportation strategies for patients and staff



Food

Purchase and serve sustainably grown, healthy food



Pharmaceuticals

Prescribe appropriately, safely manage and properly dispose of pharmaceuticals



Buildings

Support green and healthy hospital design and construction



Purchasing

Buy safer and more sustainable products and materials

Low Carbon Health Care

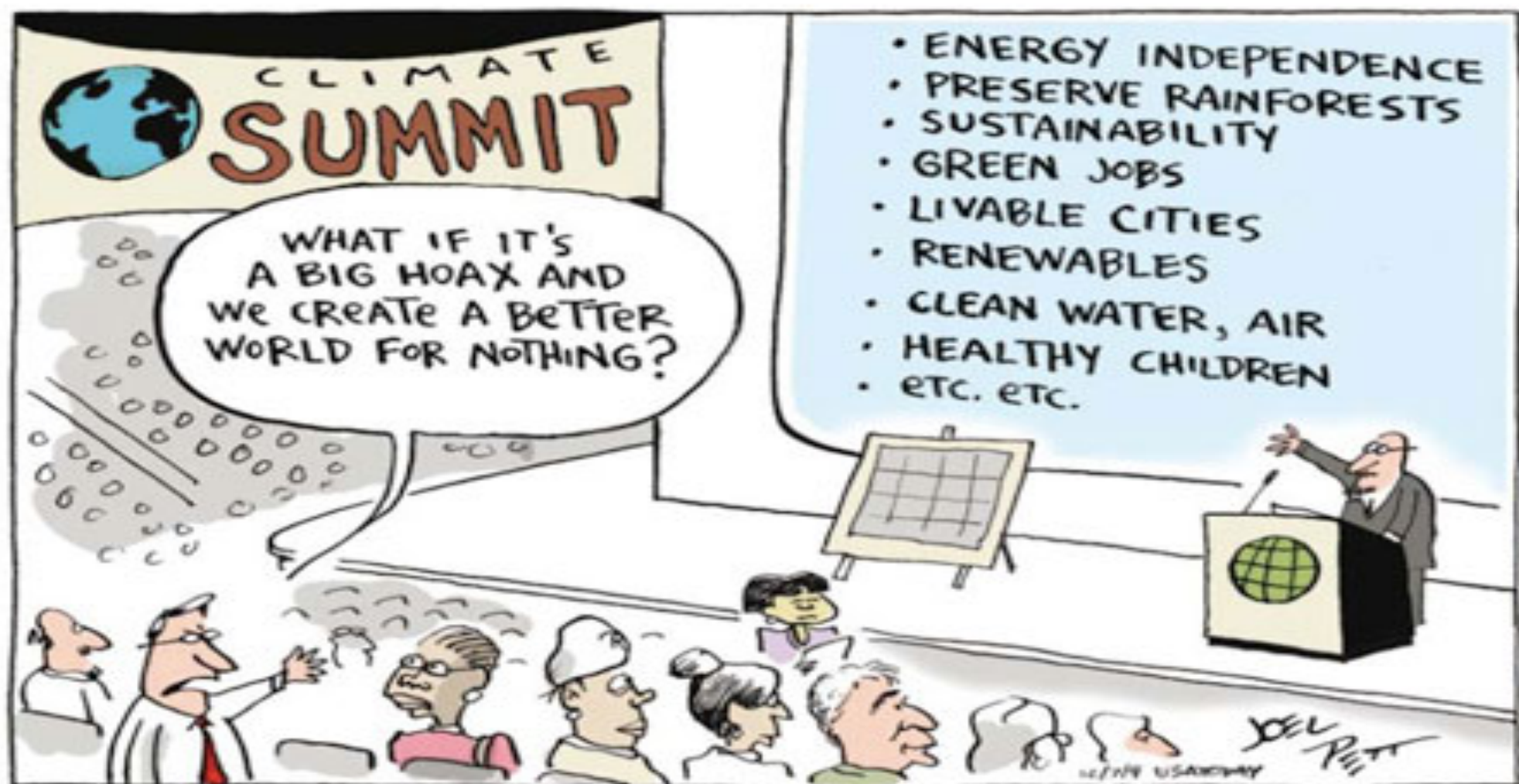
7 Key Elements

World Bank/NDF Guidance Paper (draft)



1. **Building design and construction** based on low carbon approaches.
2. Investment in **renewable energy** and **energy efficiency**.
3. Waste minimization and sustainable health care **waste management**.
4. Sustainable **transport** and **water** consumption policies.
5. Low carbon **procurement** policies for pharmaceuticals, medical devices, food and other products.
6. **Resilience** strategies to withstand extreme weather events.
7. **Overall system design** for coordinated care, emphasis on local providers, and driven by public health needs.





Low Carbon Health Care – Resilience



U.S. National Institute for Environmental Health Sciences report co-authored by Health Care Without Harm.

WHS Sustainable and Climate Resilient Health Care Facility Initiative

ELEMENT 1 CHECKLIST

CLIMATE RISKS AND COMMUNITY VULNERABILITIES ASSESSMENT

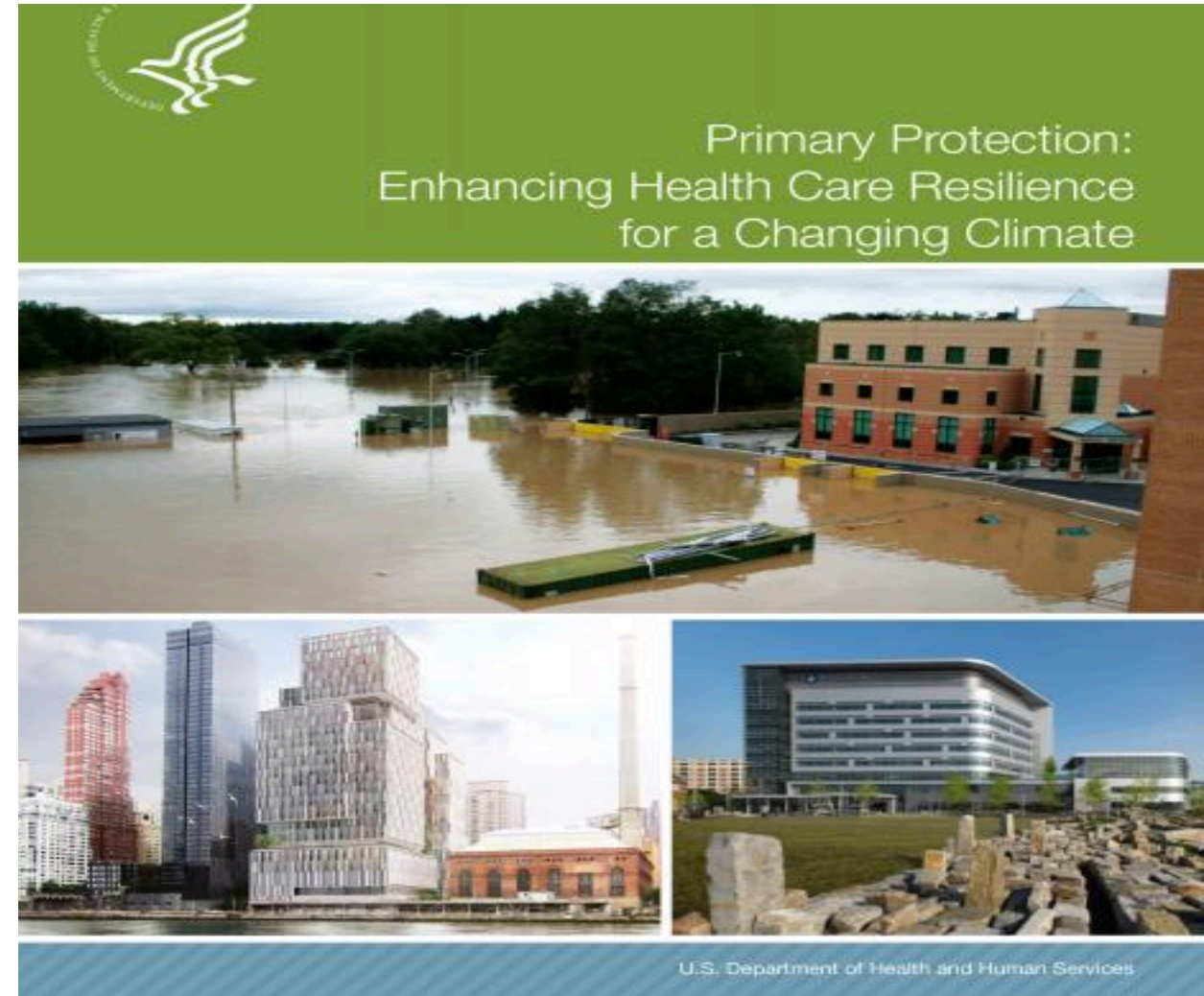
☐ Yes = Action completed ☐ Somewhat = Action in progress or incomplete ☐ No = No action planned or taken ☐ Unknown = Status or action unknown ☐ N/A = Does not apply

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	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Extreme cold	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Extreme weather – freezing rain, blizzard, ice storm, hail, snow	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Drought	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Wildfire	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Tornado	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Flash Floods and/or Coastal Floods	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Hurricanes or Severe storms	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Avalanche or landslides	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Poor air quality and smog	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Water-borne contamination and/or diseases	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Vector-borne diseases	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	

STEP 1: Understand Climate Risks

"Climate vulnerability assessment" is the analysis of the expected impacts, risks and adaptive capacity of a region or sector to the extreme and gradual effects of climate change. A vulnerability assessment is more than simple measurement of the potential harm caused by extreme weather events resulting from climate change; it includes an assessment of the ability to adapt.

	Value	Rank
1.1.1 Is local or regional government conducting climate risk and vulnerability assessments for the healthcare sector?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• If "yes", are these assessments regularly updated with emerging data and climate science?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.1.2 Does local government communicate to your organization and the community information on local extreme weather hazard trends, including likely hazard impacts?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
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?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
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?)	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.1.5 If the answers above are "no", has your organization conducted an independent climate risk assessment?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	



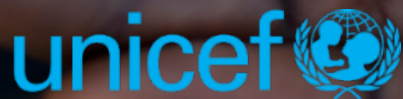
Low Carbon Health Care –Procurement



SPHS

INFORMAL INTERAGENCY TASK TEAM

Moving US \$5 billion in health procurement toward
Low carbon * Safer chemicals * Sustainable Resource Use



GREENHEALTH EXCHANGE: TRANSFORMING MARKETS

GX is a purchasing cooperative focus on:

- Accelerating the adoption and use of safer, greener products by leading healthcare systems
- Catalyzing innovation in next generation product development
- Inspiring similar action in other sectors



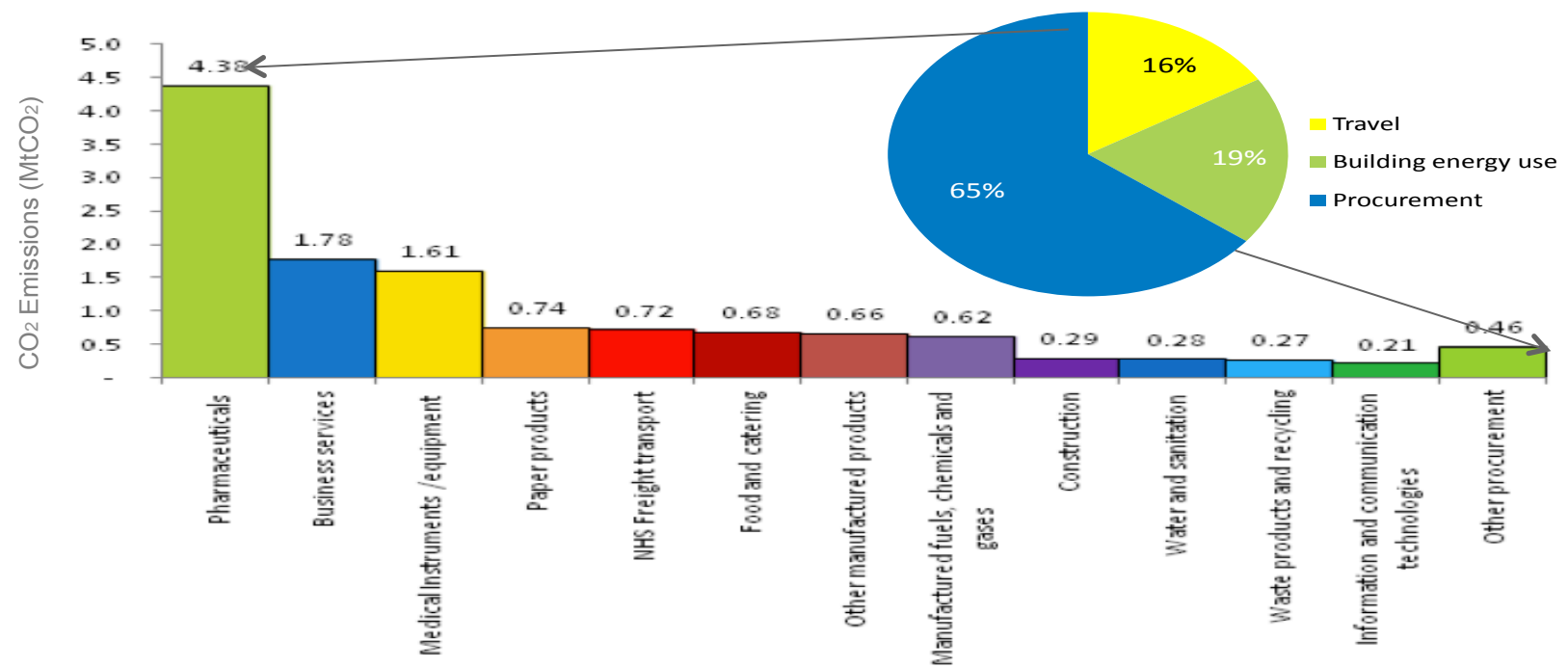
Low Carbon Health Care – System Wide

National Health Service (NHS), UK

Footprint: 18 million tons of CO₂ per year,
26% of public sector emissions

CO₂ Reduction Targets

- 10% by 2015
- 26% by 2020
- 80% by 2050



Low Carbon Health Care – System Wide – Kaiser Permanente, USA



Priority Area	2025 Goal
Climate change	Net positive carbon (remove more CO2 from the atmosphere than we emit)
Safer chemicals	50% of total spend on all products, building materials, and furnishings meets environmental criteria
Sustainable food	100% of purchased food is sustainable and produced without antibiotics
Waste reduction	100% of solid waste is reused, recycled or composted
Water conservation	Decrease water use intensity by 25%
Sustaining Sustainability	100% of hospitals certified ISO 14001
Collaboration	Reduce risks in watersheds, foodsheds, and in chemical/waste intensive economies

HEALTHY FOOD IN HEALTH CARE: ANCHORS FOR RESILIENT COMMUNITIES



LOCALIZING THE FOOD ECONOMY

- 1) Aggregate demand for healthy food products
- 2) Increase community access to healthy foods
- 3) Create jobs for community residents
- 4) Increase markets for local producers



JOURNAL OF THE CATHOLIC HEALTH ASSOCIATION OF THE UNITED STATES

HEALTH PROGRESS

May-June 2016 | Volume 97, Number 3

A Call to Climate Leadership

By SR. MARY ELLEN LECIEJEWSKI, OP, MA, SR. SUSAN VICKERS, RSM and RACHELLE REYES WENGER, MPA



OUR WORK OUR EXPERTS OUR STORIES GET INVOLVED ABOUT US

No Time to Stay Quiet: The Clean Power Plan Is Critical to Protect Public Health

February 22, 2016 Kim Knowlton

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Edition: US

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Why We Need Hospitals to Help Lead the Fight Against Climate Change

09/28/2015 08:16 pm ET | Updated Sep 28, 2015

Health Affairs Blog

HOME TOPICS ARCHIVE SUBMIT

More Needs To Be Done To Prioritize Climate Change

Lloyd Dean

February 25, 2016



Modern Healthcare

The leader in healthcare business news, research & data

Healthcare confronts climate change: Schools, providers focus on health effects to dampen political opposition

By Andis Robeznieks | June 13, 2015

Unprecedented Global Medical Consensus: Action on Climate Needed for Our Patients

EMBARGOED UNTIL SATURDAY, 5 DECEMBER, 00:01 GMT

Contact: Paige Knappenberger | PKnappenberger@climatenexus.org | +16025490344

Paris, France — Today, an unprecedented alliance of doctors, nurses, and other health professionals from every part of the health sector have come together calling on governments to reach a strong agreement at the UN climate negotiations that protects the health of patients and the public. Together, they will announce the signatories of declarations representing over 1,700 health organizations, 8,200 hospitals and health facilities, and 13 million health professionals, bringing the global medical consensus on climate change to a level never seen before.

Building on Paris: 4 ways hospitals can go green

By Ned Pagliarulo | January 4, 2016

Climate Accord Mobilizes Health Industry

SAM ROSS-BROWN DECEMBER 18, 2015

The Paris climate accord has mobilized the health-care sector and will have sweeping impacts on public health.



(AP Photos/Matt Dunham)

Public health advocates were among those demonstrating at the recent Paris climate talks.



With their landmark accord following talks in Paris, world leaders have hammered out not only the first global commitment to combat climate change, but arguably the most significant public health treaty of our time.

OUR NETWORK

NORTH AMERICA

3 organizations and 41 health systems representing the interest of 1400 Hospitals

LATIN AMERICA

344 Hospitals, 41 Health Centers, 20 Health Systems and 13 Organizations, representing the interest of 2625 Hospitals and Health Centers

MULTINATIONAL

3 organizations representing the interests of 900 hospitals

AFRICA

11 Hospitals, 3 Health Systems and 1 Organization, representing the interest of 141 Hospitals and 250 Health Centers

EUROPE

16 Hospitals, 16 Health Systems and 6 Organizations, representing the interest of 1380 Hospitals and 5029 Health Centers

ASIA

50 Hospitals, 6 Health Systems and 6 Organizations, representing the interest of 5066 Hospitals and 3100 Health Centers

PACIFIC

5 Hospitals, 11 Health Systems and 4 Organizations, representing the interest of 66 Hospitals and 497 Health Centers

GLOBAL

As of February 2016, HCWH has 635 members from 34 countries representing the interest of 20,702 Hospitals and Health Centers

OUR POWER

THEN

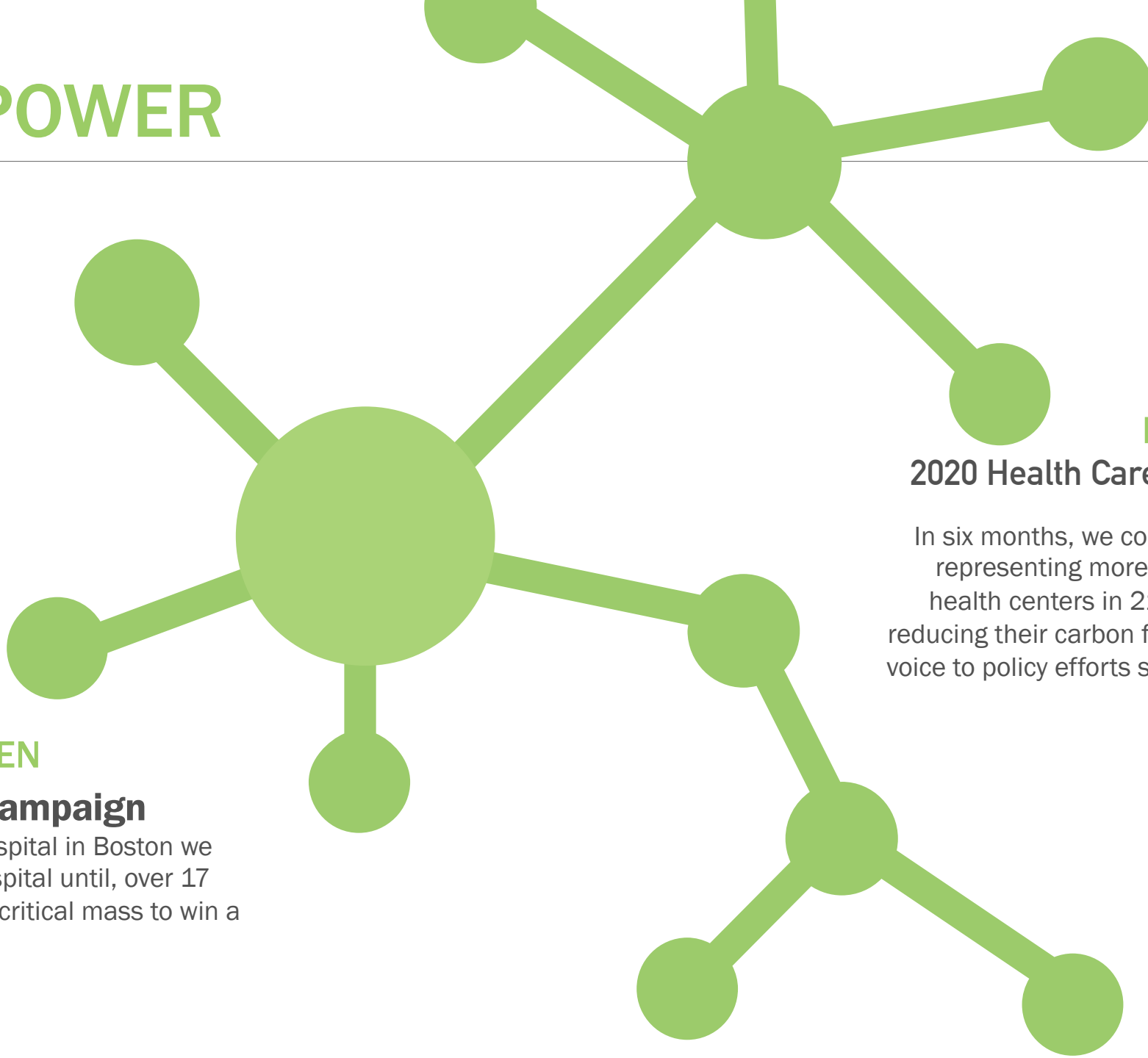
The Mercury Campaign

Beginning with one hospital in Boston we worked hospital by hospital until, over 17 years, we had enough critical mass to win a global treaty.

NOW

2020 Health Care Climate Challenge

In six months, we coordinated 75 participants representing more than 9000 hospitals and health centers in 21 countries, committed to reducing their carbon footprint and lending their voice to policy efforts stemming climate change.





CleanMed
Creating Healing Environments

Europe
2016

Copenhagen

19th -21st October

www.cleanmedeurope.org

Europe's leading conference on sustainable healthcare



