Caribbean Climate and Health Responders Course

Health sector mitigation and adaptation - June 1st, 2022
Antonella Risso / Andrea Hurtado Epstein
Health Care Without Harm
Learning Objectives

A. Apply the concepts of mitigation and adaptation to the healthcare sector and explore examples of how healthcare systems can perform both.

B. Identify ways in which health care facilities can become more resilient in the face of increasingly severe and/or frequent climate-related weather extremes. Sensitization to the PAHO SMART Hospital program.

C. Use emergency planning skills to plan for and respond to climate-related extreme weather events and disasters, including workforce surge needs, and distinguish the roles of and interactions between agencies involved in emergency care.

D. Describe how health professionals can partner with health care institutions, professional organizations, and advocacy groups to reduce health care sector greenhouse gas footprint.
What is Health Care Without Harm?

Health Care Without Harm (HCWH) is an international nongovernmental organization (NGO) that works 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.
The Global Green and Healthy Hospitals (GGHH) Network

GGHH has 1,556 members in 75 countries representing the interests of 62,016 hospitals and health centers.
The climate crisis is a health crisis
The Lancet Countdown on health and climate change

Land Affected by Droughts
Percentage of land area affected by drought events per month, classified by drought severity

- Severe drought
- Extreme drought
- Exceptional drought

https://www.lancetcountdown.org/data-platform/
The climate crisis is a health crisis
The Lancet Countdown on health and climate change

Vulnerability to extremes of heat

Population Vulnerability to Extremes of Heat
Heat vulnerability index by country

https://www.lancetcountdown.org/data-platform/
Climate-related illnesses, premature deaths, malnutrition in all its forms, and threats to mental health and wellbeing are increasing (very high confidence). Climate hazards are a growing driver of involuntary migration and displacement (high confidence) and are a contributing factor to violent conflict (high confidence).

With proactive, timely, and effective adaptation, many risks for human health and wellbeing could be reduced and some potentially avoided.

Climate resilient development has a strong potential to generate substantial co-benefits for health and wellbeing, and to reduce risks of involuntary displacement and conflict.

Key transformations are needed to facilitate climate resilient development pathways for health, wellbeing, migration and conflict avoidance.

Targeted investments in health and other systems, including multi-sectoral, integrated approaches, to protect against key health risks can effectively increase resilience.

Transitioning toward equitable, low-carbon societies has multiple benefits for health and wellbeing.

IPCC Group 1. Sixth Assessment report

- 2018 report: 1.5°C as the threshold for a liveable planet
- AR6: we can still keep 1.5°C alive, but we need to peak emissions by 2025, cut them in half by 2030 and reach net-zero by 2050
- Every single fraction of a degree matters

Why do we need to mitigate in the health sector?

Figure 1. Health Care Without Harm and Arup Global Road Map for health care decarbonization.

https://healthcareclimateaction.org/roadmap
Possible pathways to zero emissions

Figure ii. Reduction in health sector emissions between 2014 and 2050 enabled by the seven high-impact actions. This details a segmentation of the purple wedge shown in Figure i. above.

https://healthcareclimateaction.org/roadmap
Common but differentiated responsibilities

- The United States health sector, the world’s number one emitter in both absolute and per capita terms produces 57 times more emissions per person than India’s health system does.

- Other top health sector emitters, like Australia, Canada, and Switzerland emit between 30 and 50 times more per capita than India does.

**Figure 5.** Top ten emitters plus all other nations and percentage of global health care footprint.

Source: Green Paper One.

[https://healthcareclimateaction.org/roadmap](https://healthcareclimateaction.org/roadmap)
Common but differentiated responsibilities

**Figure 15.** Four Decarbonization Trajectories – annual per capita emissions.

https://healthcareclimateaction.org/roadmap
Zoom Poll Question 1

- Out of the high impact actions that the health sector can take to reach zero emissions by 2050, which are the three in which you could have the most influence from your current position?
  1. Powering healthcare with 100% clean, renewable electricity
  2. Investing in zero emissions buildings and infrastructure
  3. Transitioning to zero emissions, sustainable travel and transport
  4. Providing healthy and sustainably grown food
  5. Incentivizing and producing low-carbon pharmaceuticals
  6. Implementing circular healthcare and sustainable health care waste management
  7. Establishing greater health system effectiveness
“4-5% of total GHG emissions in the world are produced by the health care sector”
One integrated approach
WHO Guidance for climate resilient and environmentally sustainable health care facilities

https://www.who.int/publications/i/item/9789240012226
One integrated approach
WHO Guidance for climate resilient and environmentally sustainable health care facilities

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Towards a new model that integrates decarbonization, resilience and pandemic preparedness.
Towards a new model that integrates decarbonization, resilience and pandemic preparedness

Integrating climate-smart health care into COVID-19 response and recovery

- Public health surveillance and risk assessment
- Emergency preparedness, planning and rehabilitation
- Capacity for testing, isolation and treatment
- Supply of essential medical commodities
- Health services for non-COVID-19 conditions
- Non-pharmaceutical interventions
- Public health risk communication
- Vaccine readiness, procurement and deployment
- Building back better

### Sustainable Procurement in health systems: Climate-smart health care during COVID-19

**COLOMBIA**

<table>
<thead>
<tr>
<th>DISPOSABLE GOWNS</th>
<th>PPE</th>
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<tbody>
<tr>
<td><strong>36,000 less units</strong> purchased per month</td>
<td><strong>Decontamination</strong> of N95 masks</td>
</tr>
<tr>
<td><strong>3.6 tons less</strong> of biological waste per month</td>
<td><strong>500,000 less</strong> PPE items disposed of per month</td>
</tr>
<tr>
<td><strong>5.43 Ton CO\textsubscript{2}</strong> eq less produced per month</td>
<td><strong>9 tons less</strong> of biological waste per month</td>
</tr>
<tr>
<td><strong>$82,700</strong> saved per month</td>
<td></td>
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</tbody>
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Biohazardous waste
Autoclave in Costa Rica

Climate-smart health care: action at the national and at the facility level
Climate and health opportunities for action
COP26 Health programme

So far, 57 countries have formally committed to develop climate resilient and low carbon, sustainable health systems:

<table>
<thead>
<tr>
<th></th>
<th>Signed net zero commitment (Perú)</th>
<th>Committed to work for sustainable and low carbon health care systems</th>
<th>Committed to build Climate resilient systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td></td>
<td>Argentina, Belize, Chile, Colombia, Costa Rica, República Dominicana, Jamaica, Panamá</td>
<td>Argentina, Bahamas, Belize, Colombia, Costa Rica, República Dominicana, Jamaica, Panamá</td>
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<td>52</td>
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<td>56</td>
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</table>
Climate and health opportunities for action
COP26 Health programme

LAC countries that have joined the COP26 Health Programme:
- Argentina
- Bahamas
- Belize
- Chile
- Colombia
- Costa Rica
- Dominican Republic
- Jamaica
- Panama
- Peru
Climate and health opportunities for action
COP26 Health programme

TOP DOWN

ACROSS HEALTH SECTOR

NATIONAL OR SUBNATIONAL DATA
NATIONAL SPEND DATA
NATIONAL SURVEY DATA

GHG EMISSIONS ESTIMATE

SURVEY DATA
SPEND DATA
ACTIVITY DATA

FACILITY LEVEL

BOTTOM UP
The health sector’s carbon footprint in the LAC region

Gráfico 6. Distribución de emisiones reportadas por nivel de complejidad y alcance (2019)

Gráfico 7. Composición de las emisiones reportadas para el alcance 1 (2019)

https://www.hospitalesporlasaludambiental.net/informes-avance/
Health care climate action in the LAC region: Colombia case study

Minsalud firma memorando de entendimiento con organización "Salud sin Daño"

Colombia se convertirá en el primer país de la región en llevar a cabo un ejercicio exhaustivo de estimación de la huella de carbono de su sistema nacional de salud. Colombia es uno de los diez países de América Latina y el Caribe que presentaron su compromiso en el marco de la vigesimosexta Conferencia de las Naciones Unidas sobre Cambio Climático (COP26) y, con la firma de este memorando de entendimiento, avanza en los primeros pasos hacia la implementación para impulsar la descarbonización del sistema de salud colombiano", explicó Juan Carlos Bernal, Coordinador del Grupo de Cooperación y Relaciones Internacionales.

Señaló que los equipos técnicos de ambas organizaciones ya están trabajando en conjunto para diseñar un cronograma de actividades y avanzar en la implementación del proyecto, cuyos resultados están previstos para inicios de 2023.
Greenhouse gas emissions: Scopes

SCOPE 1: Direct
- Fuel combustion
- Company owned vehicles
- Purchased electricity for own use

SCOPE 2: Indirect
- Employee business travel
- Production of purchased materials
- Product use
- Outsourced activities
- Waste disposal
- Contractor owned vehicles

SCOPE 3: Indirect

Source: Graphic adaptation of the Greenhouse Gas Protocol (GHGP)\textsuperscript{6}.
Climate Impact Checkup tool

- CO₂
- CH₄
- SF₆
- N₂O
- HFCs
- PFCs

SCOPE 1
- DIRECT
- STATIONARY COMBUSTION
- MOBILE COMBUSTION
- WASTE ON SITE TREATMENT
- FUGITIVE EMISSIONS (COOLING AND MEDICINAL / ANESTHETIC GASES)

SCOPE 2
- INDIRECT
- PURCHASED ELECTRICITY
- PURCHASED STEAM, HEAT AND COOLING

SCOPE 3
- INDIRECT
- WASTE OFF SITE TREATMENT
- BUSINESS TRAVEL
- PATIENT AND EMPLOYEE COMMUTING
- INHALERS
- ELECTRICITY TRANSMISSION AND DISTRIBUTION LOSSES

WITH EXTRA SUPPLY CHAIN
- INDIRECT
- MEDICAL INSTRUMENTS / EQUIPMENT
- FOOD AND CATERING
- PHARMACEUTICALS
- OTHER PROCUREMENT
- CONSTRUCTION
What does a carbon footprint look like?

*Real data from a medium complexity institution sharing data with HCWH*
Institutions already using Climate Impact Checkup
Zoom Poll Question 2

- Is your institution/organization already estimating its carbon footprint, or is in a position to do so? If not, what is the main challenge that your institution/organization faces to calculate its carbon footprint?
  - Yes - We are already calculating our carbon footprint
  - Yes - We have the capacity but haven’t started yet
  - No - We lack the necessary data
  - No - We lack the technical capacity to undergo the analysis
  - No - We do not have the resources, including dedicated personnel
  - No - It is not a priority for our institution/organization
  - No - Other reasons
How can your institution get involved?

- Health Care Climate Challenge
- Race to Zero campaign
- If your country joined the COP26 Health Programme, ask your government how your institution can help and participate
How can you get involved?

- Think about what you as an individual can change in your daily practice from tomorrow onwards
- Talk with your peers
- Ask if your institution has a sustainable, resilient and low carbon action plan
- If your institution does not have a plan yet, contribute so it can develop its baseline. We can help : )

*Images from GGHH members in Colombia and México*
References and resources

- Health Care Without Harm | Health Care Climate Action microsite: [https://healthcareclimateaction.org/](https://healthcareclimateaction.org/)
- WHO Guidance for Climate Resilient and Environmentally Sustainable Health Care Facilities: [https://www.who.int/publications/i/item/9789240012226](https://www.who.int/publications/i/item/9789240012226)
- Glossary of climate terminology for health professionals (in Spanish): [https://saludsindanio.org/glosarioCC](https://saludsindanio.org/glosarioCC)
- Webinar recording | Climate change for beginners: introduction to the climate negotiations for health professionals (in Spanish): [https://saludsindanio.org/seminario-web-cambio-climatico](https://saludsindanio.org/seminario-web-cambio-climatico)