Global Health Virtual Open Mic

Key takeaways from the speakers

Climate change is not just an environmental issue; it is a health crisis

In this Open Mic, thought leaders across a wide range of fields globally came together to discuss the nexus of climate change and health, along with what comes next.

**Watch the Open Mic:
The nexus of climate change and healthcare**

Open Mic Speakers

Open Mic Moderator

Guest moderator and facilitator

- Climate change is the biggest threat to global health we are facing today, intertwining deeply with healthcare issues.
- It's becoming increasingly clear that the climate crisis is also a health crisis, which demands our immediate attention.
- Our healthcare systems not only face challenges from this crisis but also play a role in contributing to it.

Burcin Ikiz

USA

Baszucki Group & EcoNeuro

Connect with Burcin on LinkedIn

BASZUCKI GROUP

EcoNeuro

Key Takeaways

The key notes and discussion points from each Open Mic speaker

Key Takeaways:
Kim Doell

"How does climate change impact the brain and well-being? A call to action."

- Climate change science should motivate action.
- The environments that we inhibit can have a profound impact on our brains.
- What are the impacts of the changing environment on the human brain and overall well-being?
- There are different consequences of climate change:
    - Extreme heat which is related to increased mortality, decreased cognitive performance and learning, increased levels of crime and civil conflict, decreased quantity and quality of sleep, increased permeability of the blood brain barrier (ability for neurotoxins to enter the brain), increased levels of poor air quality with longer and more severe allergy seasons.
    - In cases of wildfire smoke, for example in Canada where much of the country was on fire for the summer of 2023, smoke travelled tens of thousands of kilometres, impacting part of Europe and the UK. This wildfire smoke can infiltrate the human brain, due to the increased permeability of the blood brain barrier, which has been linked to cognitive decline e.g. dementia.
- There simply is not enough research in the climate health domain to investigate the different relationships and different consequences and how they interact and impact us.
- There is, however, hope. We are starting to see much more focus being dedicated in order to understand the impact of climate change and health.
- Adapting to climate change requires a multi-*everything* approach, which is why it is critical to continue to share knowledge in order to overcome this global threat.

But there IS hope

- We are starting to see more focus!

- Webinars like this one are also awesome!

- Job calls, granting sources, working groups, etc.

Effectively combating and adapting to climate change requires multi-system, multi-pronged, multi-level, multi-discipline approaches!

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Open Mic
Speaker 2

Mark Anderson

USA

Planetary health specialist and consultant with
Santerre International

Key Takeaways:
Mark Anderson

"The impact of climate change on the efficiency of humanitarian health interventions"

- Launching a large or complex humanitarian health intervention requires extensive planning and the mobilization of many resources.
- The probability of an emergency occurring, and the delay required for resources to reach the emergency are factored into the planning phase to make humanitarian operations more efficient.
- Climate change disrupts the inputs that are considered when planning humanitarian health interventions. This can lead to:
  - Missing emergencies at great financial and environmental cost,
  - Overlooking emerging public health threats,
  - Creating new health hazards that are difficult or impossible to rectify.
- Alternative strategies must be adopted to account for this disruption to planning humanitarian operations.

Open Mic
Speaker 3

Sana Khan

USA

Senior Technical Advisor Data Science and Climate, Palladium

Palladium
MAKE IT POSSIBLE

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Key Takeaways:
Sana Khan

"Climate-Adaptive Healthcare system: Addressing challenges and seizing opportunities in governance, workforce"

- Climate adaptive healthcare systems are systems that can adjust or modify their operations infrastructure and practices in response to the changing climate conditions and associated impacts on health.
- The goal of climate adaptation is to minimize the negative health impacts of climate change and ensure the continued provision of healthcare services under changing environmental conditions.
- WHO's operational framework for building climate resilient health systems (2015) is designed for the purposes of mainstreaming climate change into sector wide vertical programs.
- Funded by USAID under Propel Health, we are working to understand how can we incorporate climate data for sustainable financing of CHWs.
- We have seen direct and indirect relationships between causes of death and changing environmental factors/climate conditions. Malaria is topping the list, with rising temperatures extending the geographic range of malaria transmission and allowing mosquitoes to thrive in higher altitudes, which were previously unsuitable regions for their breeding.
- In a situational analysis of CHWs across regions and districts, we found that CHWs are not currently used in providing care to populations vulnerable to climate-induced disasters. There was limited knowledge on how climate change is impacting the health of the population.
- Some CHWs in some districts described using innovative method (e.g. use of canoes and telephones) to support disaster victims and megaphones to raise a community awareness.
- Communication awareness programs are needed to enhance the understanding of climate related-risks and develop adaptive strategies.


Source: WHO

Community Health Workers (CHWs) − crucial role in providing care and support to populations living in Cote d'Ivoire

Projections indicating increased rainfall variability and elevated average temperatures by 2050

Cause of death in Côte d'Ivoire: Temperature and Precipitation are the primary environmental determinants of Malaria.

No distribution of CHWs across regions/districts based on population/demographic data.

Sources: IHME, CDC, PROPEL Health
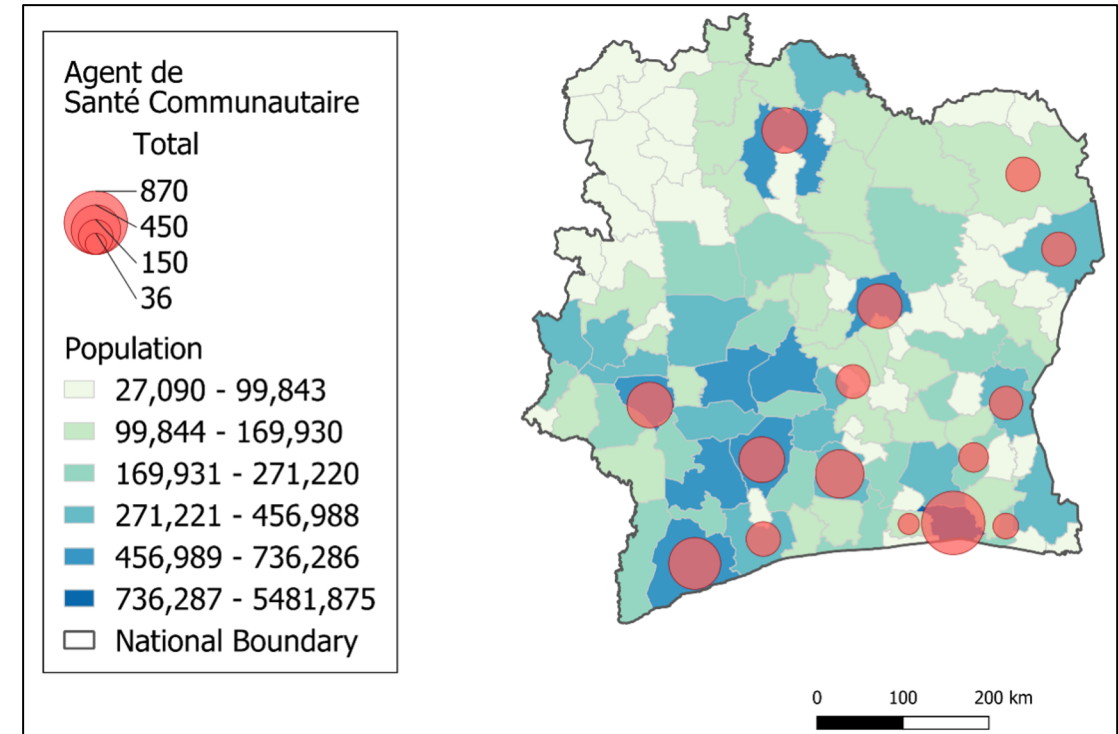
Gap in the awareness/knowledge on climate-related risks, disruptions, services, mobility, and infrastructure.

Key Takeaways:
Sana Khan

"Climate-Adaptive Healthcare system: Addressing challenges and seizing opportunities in governance, workforce"

- Another project we are working on is incorporating climate data in a model called RAPID for raising visibility of family planning and multi-sectoral policies.
- RAPID stands for Resources for Awareness of Population Impacts on Development model. The model projects social and economic consequences of rapid population growth for sectors such as labor, education, health, urbanization and agriculture. It's an advocacy tool to help policy-makers and other stakeholders understand the resources and lives that can be saved by investing in family planning. It uses country specific data and makes projections that are tied to country's goals and priorities that are stated in national policies, vision statements, and millennium development goals.
- In an analysis of stakeholder perceptions of their understanding of the relationship between climate change and family planning in Kenya and Philippines, words were extracted that were the most used by individuals. Population increases are correlated with resources, health problems, food insecurity, evacuation and unwanted pregnancies.
- There were a large number of people who weren't able to respond to questions or do not understand the relationship between climate change and the family planning, and how this can be incorporated in policies.
- There is a need for climate change literacy for all, including policy makers. We need tools and models that are easily able to communicate the message across the board.

Relationship b/w Climate change and Family Planning (KIIs from Kenya and Philippines)

Notable quotes

"Climate change drives displacement, disrupts health systems, and disproportionately affects women, girls, and children. Additionally, population growth exacerbates climate change by increasing greenhouse gas emissions and environmental degradation. Family planning is a set of interventions that can help manage population growth, reduce pressure on ecosystems, and enhance community resilience to climate change." − NGO Kenya

"Besides the sensitivity of population control or reproductive health as an issue, one of the challenges we face is the availability of data or existing studies that can link population control to climate change or how climate change affects the reproductive health of a nation. I believe these are the things we need. Just like any other studies, we need data, and we need related literature."− Climate Change Commission, Philippines

Climate Change Literacy for All, including Policy Makers. Create communication plans/tools that break down complex information into easy-to-understand content for a wide audience.

Open Mic
Speaker 4

Kenny Onasanya

Switzerland

Technical Manager Strategic Sourcing and Supply, Unitaid

Connect with Kenny on LinkedIn

Introduction

Unitaid is a Geneva-based global development agency , hosted by World Health Organization, whose mission is to facilitate the market entry of innovative products (treatments, tests and tools) for people in low- and middle-income countries.

saves lives by making new health products available and affordable

help tackle the market barriers to deliver to the people who need them most – fast.

Unitaid
SAVE LIVES FASTER

4.6%

The health sector is responsible for approximately 4.6% of global carbon emissions.

That's why Unitaid is innovating for lower carbon health products and resilient health systems.

Climate change is "the single biggest health threat facing humanity." - WHO

Study scope

- **Existing publications are either very generic and global, or relate to a very small and specific area**
- **Limited as a guide action**

Climate and Nature assessment: 10 key vital health products in global health

- Medicines for HIV, TB or malaria, malaria bed nets, diagnostics for TB, oxygen
- Representative of most product classes that are used in global health
- Assessment covers:
  - 8 value chain steps (from material acquisition to end of life and waste),
  - 6 types of climate and nature **impacts** (eg, carbon emissions to water pollution) and
  - 9 types of climate and nature related **risks** (such as flooding or extreme heat)
- Experts from 23 organizations, to ensure robust findings but also create collective ownership

Unitaid
SAVE LIVES FASTER

From milligrams to megatons:

A climate and nature assessment of ten key health products

November 2023

unitaid.org

Key findings

10 supply chains carbon emission is very large – over 3.5m tons / year, which is bigger than the emissions of the city of Geneva (2.6m tons in 2019)

20 main technical solutions

(e.g process improvement, product redesign, circularity improvements in manufacturing),

Reduce emissions by 70%, including 40% - avoid production cost increase – affordability;

Saving Lives without Costing the Earth

Study findings

Key findings: Bidirectional impact of Climate change and Health sector

Two sources of impact : <mark>*Health supply chain on Climate*</mark>
- *Release of toxic chemical waste at the point of **manufacturing***

*Smart and promising solutions, like **greener chemistry** – For a range of TB drugs, researchers in chemical engineering have been able*
> *Reduce raw materials use by 55-66% and increasing yield by 18-43%;*
> *Massive reduction in chemical waste and in carbon emissions, at a lower cost – a true win-win-win solution*

- *Waste at the **point of use or disposal**; for example, bed nets alone generate **57k tons of plastic waste** every year with currently almost no solutions in place for recycling*

ACT- Antimalarial **Malaria treatment, a product used by hundreds of millions of people every year** <mark>**Climate Change on Health Supply chain**</mark>

- **Cultivation in China, where artemisia annua is cultivated to produce one of the ingredients of the medication; the plant is sensitive to climate conditions, and contains less active ingredient if exposed to heat and dry weather**
- **Manufacturing in India; 75% of manufacturing sites are in two very dense industrials areas near Mumbai and Hyderabad, which happen to also be regions with flood risks**
- **Transport and Storage : to lose efficacy when exposed to excessive heat –exacerbated by climate change**

Nigeria: it has over 30% of the malaria burden today and at the same time, has a number of heat wave days is expected to increase by 2.5 by 2050)

Saving Lives without Costing the Earth

Looking ahead

- **Board-approved Climate and Health Strategy**
- **Mainstream climate action in our work and shape markets through R&D investments, procurement, incentives, regulations, technology transfers, studies and research**
- **Climate smart products : strong public health value, are relevant for affected communities, support our objectives for mitigation and adaptation, and are more sustainable than current products and interventions.**
- **Collaborative action of partners and stakeholders**

Link to report:
https://unitaid.org/assets/Report_From-milligrams-to-megatons_A-climate-and-nature-assessment-of-ten-key-health-products.pdf

How Unitaid defines climate-smart health products

Not harmful
Products that are not harmful to climate and nature, globally and locally, all along their life cycle – from minimized greenhouse gas emissions during manufacturing to responsible recycling.

Resilient
Products that can be manufactured, delivered, stored and used in a way that is resilient to climate and nature risks.

Responsive
Products that address the evolving needs of communities in low- and middle-income countries that are impacted by climate change, including health risks exacerbated by climate change and increases in infectious diseases.

Locally adapted
Products that are delivered as part of locally adapted interventions, based on local context and knowledge, delivered through community-led models, and produced regionally.

Open Mic Speaker 5

Christine Vatovec

USA

Planetary Health Lead, Osher Center for Integrative Health at the University of Vermont

THE UNIVERSITY OF VERMONT
OSHER CENTER
FOR INTEGRATIVE HEALTH

Connect with Christine on LinkedIn

Key Takeaways:
Christine Vatovec

"Decarbonizing the healthcare system: promising pathways and opportunities."

- The global healthcare sector is responsible for 5% of global greenhouse gas emissions. The U.S. healthcare sector is responsible for 8.5% of national greenhouse gas emissions. The majority of those emissions (80%) are coming from our supply chains. The number one contributor is pharmaceuticals (10%). (See: https://www.commonwealthfund.org/publications/explainer/2022/apr/how-us-health-care-system-contributes-climate-change)

- In the US, we use more pharmaceuticals than any other country, and yet we don't have better health. We have a lower life expectancy than the majority of our peer countries. We're downgraded now to 76 years of life expected for someone born today (See: https://www.cdc.gov/nchs/fastats/life-expectancy.htm). Our healthcare system currently in the US is very focused on sick care.

- We have the capacity within the healthcare system to improve planetary health. Through the integrative health field, whole person health can be promoted; moving away from a concept of treating illness and moving towards a system in which we are thinking about the whole person; the health of their physical body as well as mental, spiritual, community and social health.

- Focusing on whole person health will help us decarbonize the healthcare sector in the U.S. by preventing disease/keeping people healthy - the less time someone spends in the hospital, the lower the carbon footprint of care.

- A whole person health approach uses all available evidence-based tools to promote health and healing. There are a number of different therapeutic options from around the world that the allopathic U.S. system does employ, mainly because physicians are not trained to incorporate them even though there is a growing evidence base for their effectiveness in promoting health and/or treating disease (e.g. mindfulness meditation, acupuncture, Tai Chi, etc.). There are many different opportunities that are available to us that we can integrate into our healthcare system that would help decrease and decarbonize sick care.

Key Takeaways:
Christine Vatovec

"Decarbonizing the healthcare system: promising pathways and opportunities."

- In the USA, the American Public Health Association launched a campaign called "3-4-50"; three behaviors that cause the four diseases that kill 50% of Americans. The three behaviors are poor nutrition, sedentary lifestyle/lack of physical activity, and smoking.
- Through a whole person approach to healthcare, poor nutrition, for example, can be addressed by offering free farm shares to local farms where people who are food insecure can access local fresh fruits and vegetables, as is offered in Vermont and many other states. This has the added benefit of decreasing the number of food miles.
- Another example is helping with stress management to help people wean off of smoking, which can decrease the need for care in cancer care, heart disease, type two diabetes and lung disease, and therefore helps reduce the impact of that 50% of Americans who are receiving care in that realm.
- In palliative care, when people are offered an opportunity to speak with their physician about their own desires for the end of their life, they will have the opportunity to choose what's best for them. For example, for cancer patients, they may decide, when the time comes and it is no longer medically appropriate, to discontinue chemotherapy treatments. Evidence shows that those therapies in the weeks before death do not improve the person's wellbeing or longevity and can actually cause harm. Giving opportunities through palliative care to appreciate the whole person can help decrease harm to the person, but also decrease harm to the planet.

Decarbonizing the healthcare system: promising pathways and opportunities

Christine Vatovec, PhD
Planetary Health Lead, Osher Center for Integrative Health
University of Vermont, USA

What role does healthcare play in planetary health?

Planetary Health   Healthcare

- Global healthcare sector: 5% of GHG emissions
- U.S. healthcare sector: 8.5% of national GHG emissions
  - 80% supply chains
    - 10% Pharmaceuticals

References: Eckelman et al. 2020. *Health Affairs;* Furlong et al. 2017. *Science of the Total Environment.*
https://www.commonwealthfund.org/publications/explainer/2022/apr/how-us-health-care-system-contributes-climate-change

Opportunities for healthcare to promote planetary health

Planetary Health   Healthcare

Promote whole person health

1. Keep people healthy: Preventive care to keep people out the healthcare system = decreased ecological footprint of the system

2. Integrate all available tools to promote health and healing when a patient experiences disease (decrease reliance on pharmaceuticals)

Resources

Brick Exchange

https://exchange.scholarrx.com/brick/introduction-to-planetary-health

https://exchange.scholarrx.com/brick/climate-change-and-health

Medicine for a Changing Planet

https://www.medicineforachangingplanet.org/

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Additional key resources

- Climate Change's Mental Toll on Children
- Dying Green: A Journey through End-of-Life Medicine in Search of Sustainable Health Care
- Health Care's Climate Footprint: Saving Lives without Costing the Earth
- From milligrams to megatons: A climate and nature assessment of ten key health products
- Leveraging neuroscience for climate change research.
- MSF Logistique
- MSF response to Typhoon Haiyan
- Malaria anticipation project
- Lesotho drought study