



Co-Development Workshop

Global Health

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Agenda

- Updates on new challenges
- Geneva Health Forum (27th – 29th May, 2024)
- Update on workshop & stakeholder discussion
- Workshop evaluation plan
- Evidence statements introduction
- Timeline

New challenges/updates on challenges

- **Swiss TPH:** Improvement of the management of malaria and the impact of interventions
- **CERN & Atta Bhatti:** Occupational safety of health care professionals from radiation exposure
- **Global Society of Humanitarian Paediatrics:** Update on challenge

Geneva Health Forum



- **27th – 29th May, 2024**
- 1.5 hours time slot for CERN to present on **27th May: 4 – 5:30pm**
- Proposal to present on workshop and partners to present on the challenges

Duration	Presentation
10 mins	Introduction to CERN
10 mins	Introduction to GHF workshop
30 mins	Presentation of each challenge by the partners (5 mins x 5)
Rest of the session	Interactive session – evidence statements discussions, opportunity for new challenges

- Thoughts/suggestions?

GHF workshop: 24th – 25th October, 2024

Part 1: Diagnosis

- Evidence safari
 - Evidence discovery or evidence safari: raise awareness about the multitude of topics each area might address. Get the conversation going about where there is a potential gap in the evidence that requires further research.
- Problem Framing
 - Root cause analysis: Visualize the potential causes of a problem together and learn from others. Identify the most pressing issue by voting on the root causes.
 - How might we: Rephrase the root cause of the problem into an opportunity – How might we collaborate to make things better?

Part 2: Problem solving

- Ideation
 - The Six Thinking Hats technique: gets you to look at a problem in six different ways. It takes you and your team beyond any instinctive positions, so that you explore a range of perspectives.
- Prioritization
 - Refine research questions and help to categorize/prioritize them.

White Hat

Data, facts information known or needed



Red Hat

Feelings, hunches, instinct and intuition



Black Hat

Difficulties, potential problems, why something may not work



Yellow Hat

Values and benefits, why something may work



Blue Hat

Manage process, next steps, action plans

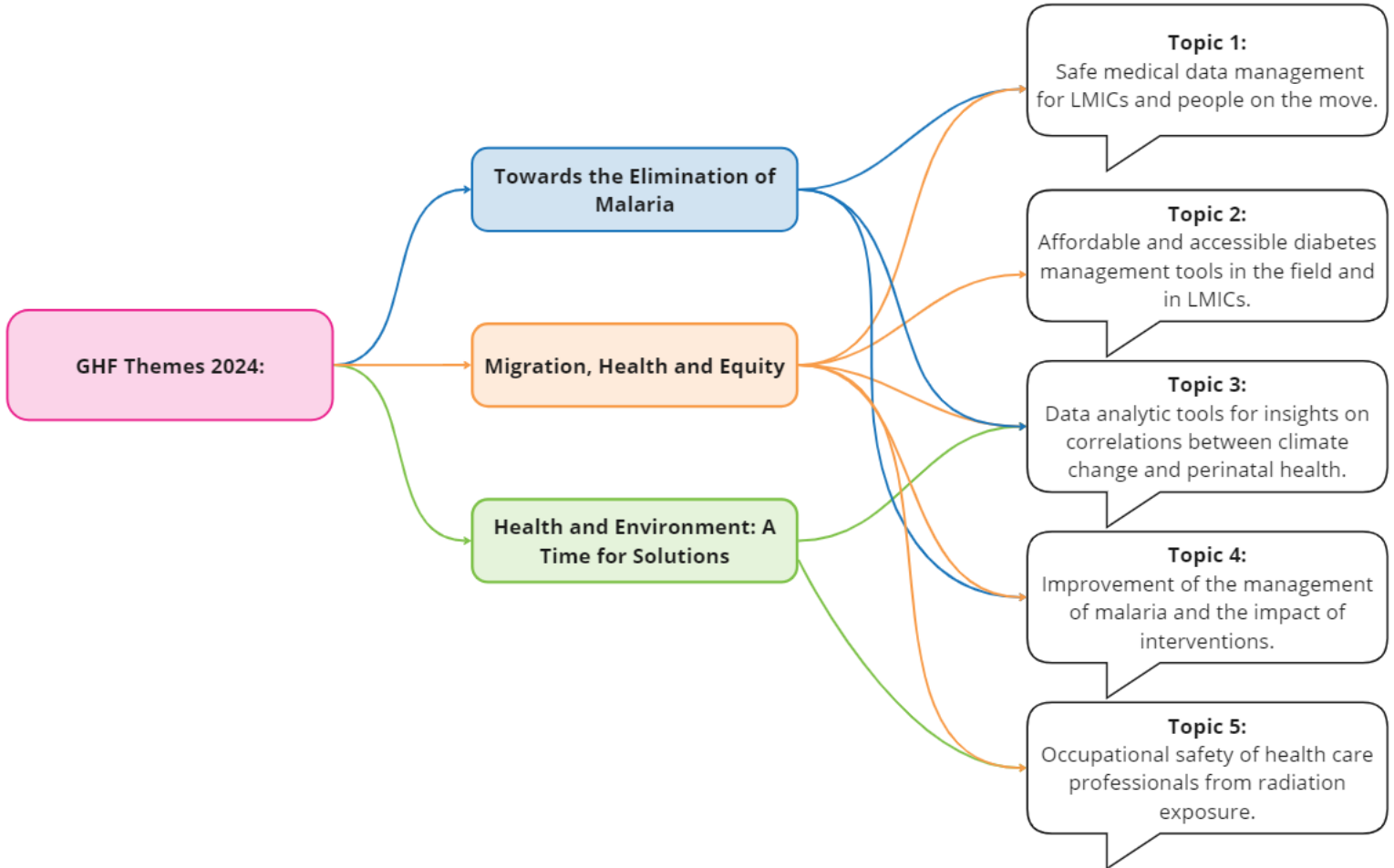


Green Hat

Creativity, solutions, alternatives, new ideas



Clustering of the challenges



- **HUG, GHSP & MSF**
- **MSF**
- **TdH (+UniGe)**
- **Swiss TPH & Dorian Job/Yenni Febrina**
- **Atta Bhatti & CERN**

Topic 1: Safe medical data management for LMICs and people on the move.

Challenge: Medical data management across borders in LMICs and in the field is manual and nondigital, increasing the socioeconomic gap between third world countries and rest of the world.

Pain points:

- No current solution for access and safely transfer of medical data across borders.
- No shared record between agencies for common good.
- Lack of data sharing across borders, servers and agencies for people on the move.
- Lack of digitization of medical records.
- Lack of standardization, and incompatible data records.
- Lack of trust.

HUG
Hôpitaux
Universitaires
Genève

Gavi
L'Alliance du Vaccin

World Health
Organization

unicef

Immunize.org

EPFL

gdhub
Genevo Digital Health Hub

PATH
19A091120

IUCN

Topic 2: Affordable and accessible diabetes management tools in the field and in LMICs.

Challenge: Technological advancements to improve diabetes management remain inaccessible to people in remote settings, areas of conflict and population displacement.

Pain points:

- Existing solutions remain expensive and commercially available
- Lack of open source solutions.
- Lack of solutions adapted to heat, dust, lack of internet connection, power access or other environmental conditions.
- Lack of solutions adapted to target population in remote locations, areas of conflict or people on move.



TIDEPOOL



Beta Bionics

Topic 3: Data analytic tools for insights on correlations between climate change and perinatal health.

Challenge: Policymakers need information and tools for understanding the correlation between climate change and the health of mothers and newborns and to plan and make informed decisions to protect vulnerable populations.

Pain points:

- Lack of research on impact of climate change on nutrition, vector spread and air quality amongst mothers and newborns.
- Access to local data to use in predictive data analysis.
- Lack of insight in correlation between climate change and perinatal health.



Topic 4: Management of malaria and the impact of interventions

Challenge: Utilizing malaria knowledge and epidemiological data assessment is crucial for devising tailored control strategies that are effective both regionally and globally

Pain points:

- Late diagnosis of malaria leads to a high mortality rate in the affected communities
- Gap in ensuring that extensive malaria data constantly amassed, is used effectively for influencing malaria control initiatives
- Absence of a standard definition of essential data and a global dataset for malaria-related information
- Lack of real-time assessments and evidence-based intervention derived from model simulations of malaria control dynamics



Topic 5: Occupational safety of healthcare professionals from radiation exposure

Challenge: As the utilization of radiation-based diagnostic tools and treatments becomes more widespread, addressing and mitigating radiation exposure among medical professionals is critical.

Pain points:

- Ionizing radiation, a common diagnostic & treatment tool in clinical practice, is responsible for the greatest dose of radiation to medical professionals
- Radiation exposure to health care professionals is not detected in real time
- Need for material research and modern designs to precisely detect and protect from radiation exposure
- Gap in the education on radiation exposure training to clinical teams



NHS



Evaluation plan

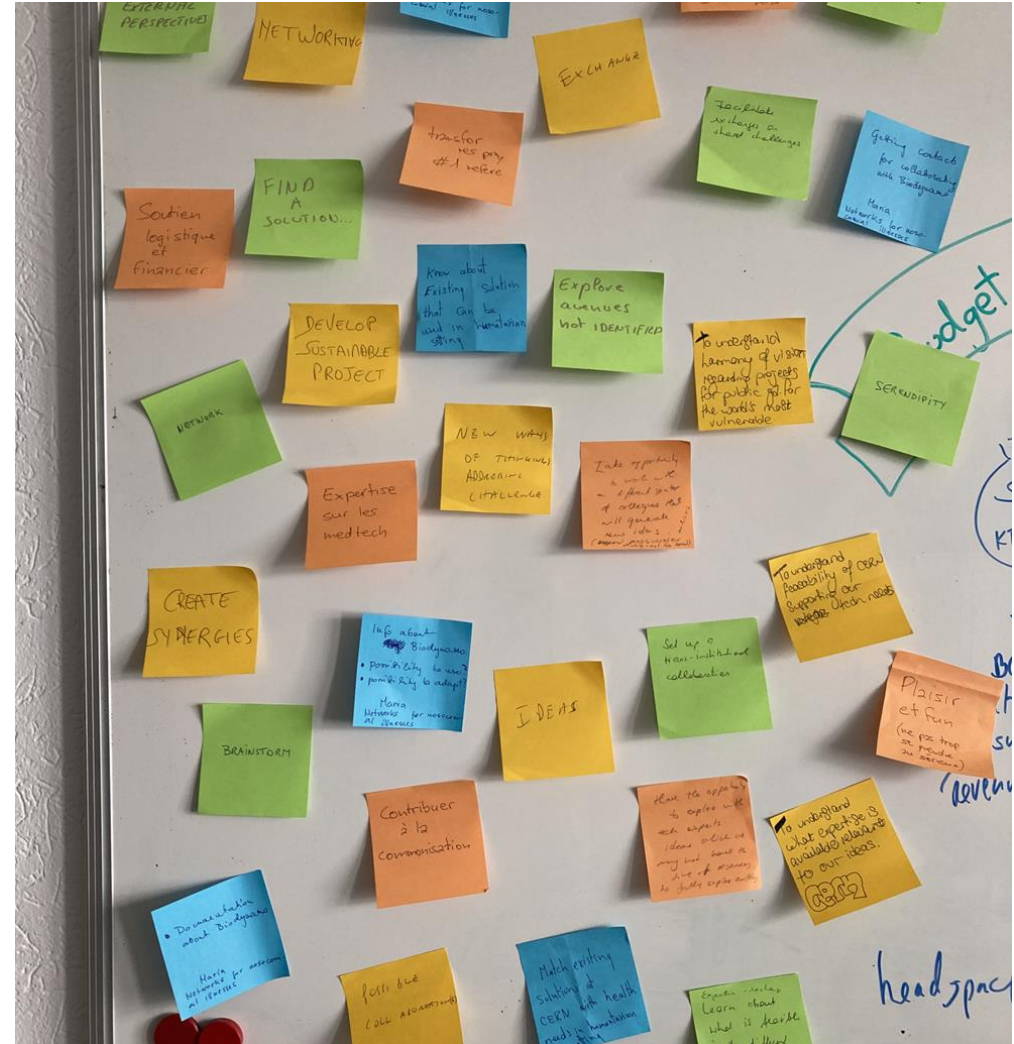
1. Partners expectations

CERN:

- Increase the visibility of CERN as a potential partner for other organizations working in the field of Global health;
- CERN is an enabler for innovations in global health through collaboration with multiple stakeholders to maximize the impact of technology on society;
- Identify at least one concrete challenge for future collaborative projects.

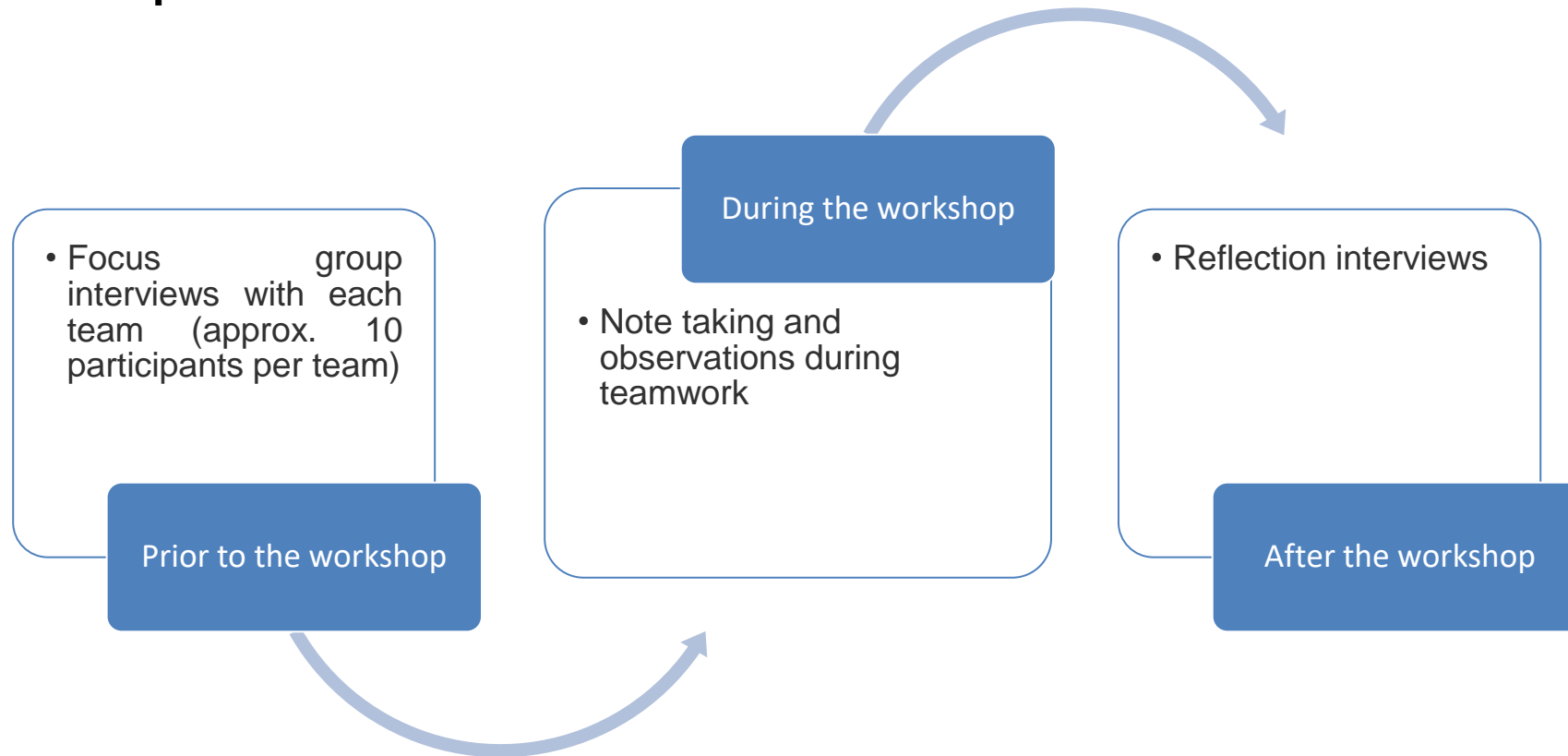
What are your expectations and interests in joining the CERN GH workshop?

What do you think about the impact of your proposed challenges? Who will benefit from it?



2. Research design

To measure the impact indicators in collaboration projects



- *Interviews will follow research protocol in accordance to the Norwegian research council*
- *Interviews are anonymous, no details of participants are shared with outside party without prior consent.*

Evidence statements

- The aim is to compile evidence surrounding the challenge in a collaborative and visual way
- Gives the workshop participants a chance to examine background research and get a common fact base
- Evidence is presented through easy to digest infographic-style evidence cards.



Source: policylab.gov.uk

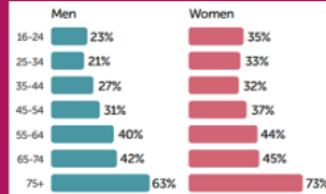
Example of evidence discovery

Balance and functional exercises **reduce:**

- the rate of falls by **24%**;
- the number of people experiencing one or more falls by **13%**.

Sherrington C, Fairhall NJ, Wallbank GK, Tiedemann A, Michaleff ZA, Howard K et al. Exercise for preventing falls in older people living in the community. Cochrane Database Syst Rev. 2019

Proportion of people meeting neither aerobic nor muscle strengthening guidelines:



<https://www.ageing-better.org.uk/sites/default/files/2019-03/The-state-of-ageing.pdf>; NHS Digital, (2018), Health Survey for England, 2017-based

Intervention studies to test whether relationships between lifestyle factors and health are causal, rather than just correlative are needed, in particularly looking at sleep and physical activity. Detailed understanding of negative effects of sedentary time could allow the development of targeted advice.

House of Lords - Ageing: Science, Technology and Healthy Living Report - Science and Technology Select Committee

54% of people over 65 (approx. 11,800 people) are overweight or obese in Camden. This is **31%** higher than the working age population.

Camden Public Health GP dataset 2015



Evidence Statements Sustaining physical activity

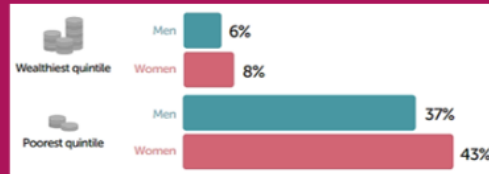
People with fewer social connections are less likely to be active.

Lübs, L, et al. (2018) 'Cross-sectional and longitudinal factors influencing physical activity of 65 to 75-year-olds: a pan European cohort study based on the survey of health, ageing and retirement in Europe', BMC Geriatrics, vol. 18 no. 94.

During lockdown 1 in 5 50-70 year olds said their physical health has worsened. More than 1/3 (36%) of 50-70 year olds said that their mental health also deteriorated.

Centre for Ageing Better and Ipsos MORI (2020), 'The experience of people approaching later life in lockdown'.

Proportion who are physically inactive aged 50 or over:



<https://www.ageing-better.org.uk/sites/default/files/2019-03/The-state-of-ageing.pdf>
J. Abell and N. Amin-Smith et al (2018), The Dynamics of Ageing: Evidence from the English Longitudinal Study of Ageing, Wave 8: 2002-2016

Health, wellbeing and fitness products and services on the market, **rarely target older consumers**, especially not those on lower incomes who are generally less likely to be physically active.

NICE, (2019), Physical activity: encouraging activity in the general population, NICE quality standard

Confidential – please do not share

Responses from participants

10min - Evidence discovery: part II



Confidential – please do not share

Next steps

- Stakeholder mapping from the partners is complete – thank you for your contributions !
- Next steps:
 1. Presentation of the workshop to the CERN Medical Applications Project Forum
 2. Addition of CERN experts to the stakeholder mapping list
 3. Finalizing on potential attendees/people to invite
 4. **Evidence statements for the evidence safari**

Timeline for GHF workshop – completed so far

Timeline of activities related to the workshop		
<i>When</i>	<i>What</i>	<i>Who</i>
Prior to 28 th March	Selection of challenges and partners •Dialogue between organizers and partners on challenges •Each team will have to send in a list of additional participants proposals (stakeholder mapping)	Partners
	Screening and selection of challenges	Organizers
	Coordination meeting to define the final list of themes and additional participant proposals	Partners + Organizers
Prior to 12 th April	Prioritization of the stakeholders mapped and addition of CERN technical experts to the lists	Organizers
w/c 25 th March - 19 th April	Coordination meeting to give updates on evidence mapping prior to the workshop •Organise in-person meeting for partners to network and update on workshop •Option to meet partners individually to catch up on evidence mapping	Partners + Organizers

Timeline for GHF workshop – next steps

Timeline of activities related to the workshop		
<i>When</i>	<i>What</i>	<i>Who</i>
Immediately after in person meeting (9 th April - onwards)	<ul style="list-style-type: none"> •Sending out invites to key stakeholders identified •Regular updates on stakeholder engagement to partners 	Organizers
Prior to 3rd May	Delivery of evidence statements – deadline 26th April	Partners
	<ul style="list-style-type: none"> •Finalization of participant teams •Creation and presentation of evidence statement cards 	Organizers
TBC	<ul style="list-style-type: none"> •Preparation meeting with the facilitator from each team 	Facilitator from each team + organizers
24 th - 25 th Oct	Workshop at CERN	Everyone

Fundraising efforts

- We are looking for sponsorship for the co-development projects that spin off from the workshop
- The aim is to secure sponsorship prior to the workshop, to encourage the workshop participants and to kickstart on co-development projects ASAP
- Any contacts, suggestions, and feedback are welcome



BACHEM

Lonza



Nestlé



Benefits	Bronze	Silver	Gold
Social impact and enhanced reputation	✓	✓	✓
Logo on the slides used during the event	✓	✓	✓
Optional promotion material on the day of workshop	✓	✓	✓
Stand on the day of the reception		✓	✓
Opportunity to present a challenge to be addressed in the open topic session		✓	✓
Acknowledgement as the silver sponsor by the workshop facilitator at the beginning of the event		✓	
5-minute company presentation on the day of the reception			✓
Acknowledgement as the gold sponsor by the workshop facilitator throughout the event			✓
1 custom pre-event email communication to workshop attendees to boost engagement during the workshop			✓
Company name in related communication (workshop promotion, post-workshop content)			✓
Opportunity for a 60-second interview of an attendee from the sponsor entity regarding the workshop, uploaded on the CERN Innovation Partnerships LinkedIn page			✓
Cost (CHF)	25000	50000	125000

Get involved

1. **Participation:** Insight and expertise in a respective topic is essential for designing and co-developing an equitable solution.
2. **Sponsoring of workshop:** Sponsoring travel expenses of participants coming from abroad, ensures that multiple perspectives are taken into account when designing solutions for global health.
3. **Funding a spin-off research project/solution:** Committing to funding a future research project, broadens your company's impact on global health.

Anticipated outcomes of the workshop

1. Co-development of research ideas to be the basis of new projects addressing an identified need.
2. Set up collaboration groups/teams with all the key stakeholders to drive the project forward and address the identified met need.