

# FUTURE AGENDA FOR BURDEN OF DISEASE STUDIES

15/09/2023 • 4<sup>th</sup> Working Group meeting, Tallinn, Estonia

# What is a research agenda?

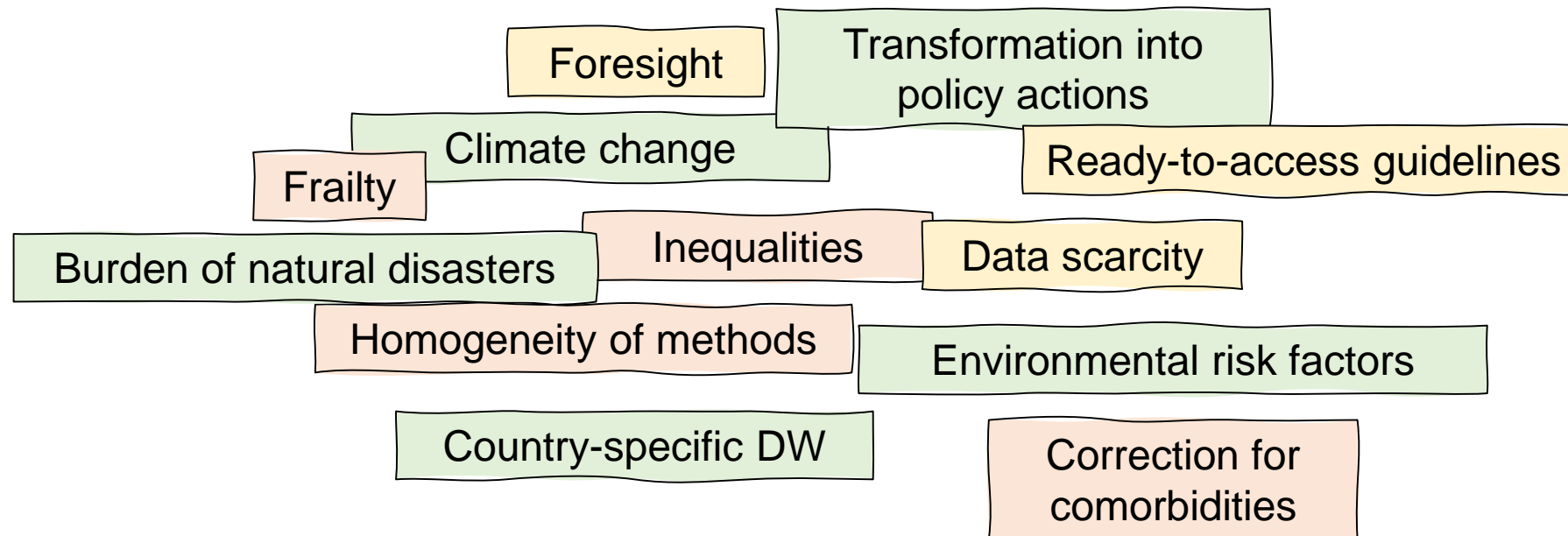


## Program / list of research themes

- To identify research priorities
- To identify gaps
- To guide new areas of investigation

# Why we need a research agenda?

Problems and expansion are many in BoD framework



There is a need to streamline efforts given the limited resources

# How we prepare a research agenda?



- Reviewing alliance goal and identifying possible research topics.
- Reviewing types of research and evidence.
- Investigating research examples.
- Reviewing the properties of research questions.
- Prioritizing research questions.
- Refining questions.
- Building the research agenda.
- Closing and next steps.

# Activities

Plass et al. *Archives of Public Health* (2022) 80:148  
<https://doi.org/10.1186/s13690-022-00900-8>


Archives of Public Health

**METHODOLOGY**

**Open Access**



## Estimating risk factor attributable burden – challenges and potential solutions when using the comparative risk assessment methodology

Dietrich Plass<sup>1\*</sup> , Henk Hilderink<sup>2</sup>, Heli Lehtomäki<sup>3,4</sup>, Simon Øverland<sup>5</sup>, Terje A. Eikemo<sup>6</sup>, Taavi Lai<sup>7</sup>,  
Vanessa Gorasso<sup>8</sup> and Brecht Devleesschauwer<sup>8,9</sup>

Charalampous et al. *Archives of Public Health* (2022) 80:91  
<https://doi.org/10.1186/s13690-022-00860-z>


Archives of Public Health

**SYSTEMATIC REVIEW**

**Open Access**



## A systematic literature review of disability weights measurement studies: evolution of methodological choices

Periklis Charalampous<sup>1\*</sup> , Suzanne Polinder<sup>1</sup>, Jödis Wothge<sup>2</sup>, Elena von der Lippe<sup>3</sup> and Juanita A. Haagsma<sup>1</sup>

# Activities

Gorasso et al. *Archives of Public Health* (2023) 8  
<https://doi.org/10.1186/s13690-023-01119-x>

 COST Action CA18218  
European Burden of Disease Network



## SYSTEMATIC REVIEW

### Burden of diseases in European countries: a systematic review


Vanessa Gorasso<sup>1,2\*</sup>, Joana Nazaré Morgado<sup>3</sup>, João Vasco Santos<sup>6,7,8</sup>, Jane Idavain<sup>9</sup>, Carlos Rodrigo Sarmiento<sup>12,13</sup>, Vera Pinheiro<sup>7</sup>, Brecht Devleesschauwer<sup>1,17</sup>, Dietrich Plass<sup>4</sup>

## Standardised Reporting Of Burden Of Disease studies: the STROBOD statement

Item number	Domains and description of the recommended items	Reported on page number
<b>TITLE</b>		
1	Identify the study as a burden of disease assessment by including key words (e.g., YLL, YLD, DALY, burden of disease etc)	
<b>ABSTRACT</b>		
2	Provide a summary of objectives, study setting, methods (including data sources and key DALY design choices), results (including point estimates and, if applicable, uncertainty intervals), and conclusions.	
<b>INTRODUCTION</b>		
3	Present the study question(s) and its relevance for health policy or practice decision-making.	
<b>METHODS</b>		
<b>Study setting</b>		
4	Report for which health cause(s) the burden was calculated. This can be an outcome, and/or a risk factor, etc. Provide a case definition, for example, in terms of an internationally recognized classification system such as the ICD.	
5	Report the reference population and any stratification of the study population? for the burden of disease assessment, i.e., the population for which the burden has been calculated. This may include the geographical location (e.g. country or Province/State), and whether the general population or a specific subset of the population of the geographical location was considered.	

Health Association.  
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original work is properly cited.

## Reporting of burden of disease studies in health sources and

Periklis Charalampous <sup>1</sup>, Vanessa Gorasso<sup>2,3</sup>, Dietrich Plass<sup>4</sup>, Sara M. Pires<sup>5</sup>, Elena von der Lippe<sup>6</sup>, Alibek Mereke<sup>7</sup>, Jane Idavain<sup>8</sup>, Katarzyna Kissimova-Skarbek<sup>9</sup>, Joana Nazaré Morgado<sup>10</sup>, Che Henry Ngwa<sup>11</sup>, Isabel Noguer<sup>12</sup>, Alicia Padron-Monedero<sup>12</sup>, María José Santi-Cano<sup>13</sup>, Rodrigo Sarmiento<sup>12,14</sup>, Brecht Devleesschauwer<sup>3,15</sup>, Juanita A. Haagsma<sup>1</sup>, The COST Action CA18218 Participants\*

# How we prepare a research agenda?



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# Reviewing the properties of research questions



## What's next?

As we are approaching the end of the lifespan of the COST Action, we want to reflect upon the future of our network. With this survey, we want to collect your thoughts on how we should move forward.

### Burden of Disease research agenda

What are the limitations or pitfalls of the burden of disease methods as used today?

La tua risposta \_\_\_\_\_

What are the possible expansions of the burden of disease framework? In other words, what are other domains that could be part of the burden of disease framework ?

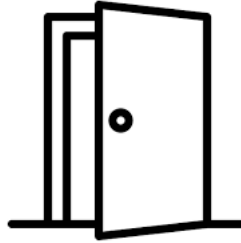
La tua risposta \_\_\_\_\_



# Reviewing the properties of research questions

From the survey...

Transparency and availability



Refining the current methods



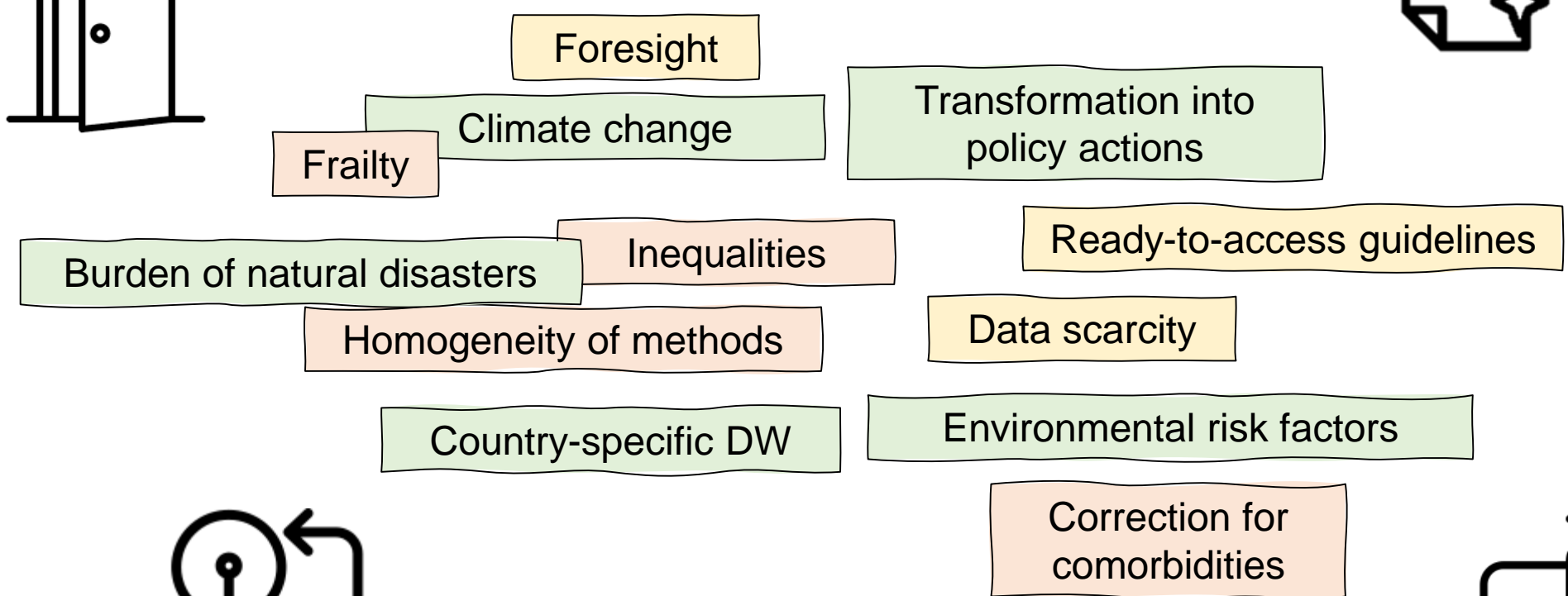
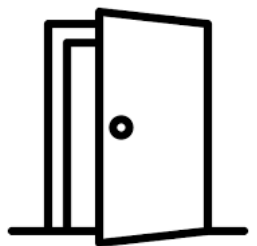
New applications



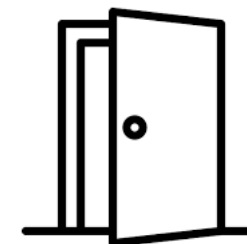
Topics



# Reviewing the properties of research questions



# Prioritizing research topics



Which aspects of transparency and availability of the BoD framework would you prioritize?

- |   |   |         |   |   |         |
|---|---|---------|---|---|---------|
| 2 | Transparency of methods   | 744 pts | 4 | Availability of ready-to-use tools for estimation | 478 pts |
| 1 | Availability of primary data source                                     | 620 pts | 3 | Availability of easy-to-access guidelines         | 440 pts |
| 6 | Discussion on limitations and application of the methods                | 561 pts | 5 | Availability of a universally recognized standard | 408 pts |
| 8 | Focus on the political actions possible with BoD estimates              | 494 pts | 9 | Facilitate data sharing                           | 376 pts |
| 7 | Guidelines for implications of estimates in the decision-making process | 479 pts |   |   |         |

# Prioritizing research topics



Which refining of the current methods of the BoD framework would you prioritize in the research agenda?

- 1 Correction for commorbidities 1133 pts
- 4 Account for multiple exposures to environmental stressors 1079 pts
- 3 Discussion on the exposure-response function form 946 pts
- 2 Country-specific disability weights (DW) 918 pts
- 5 Improve sustainability of estimates 641 pts
- 6 Applying the International Classification of Functioning 483 pts

# Prioritizing research topics



Which new applications should be prioritized to be included in the BoD framework?

- |          |   |          |          |   |         |
|----------|---|----------|----------|---|---------|
| <b>7</b> | Social determinants of health   | 1062 pts | <b>1</b> | Applying Artificial Intelligence methods                  | 559 pts |
| <b>2</b> | Integration in economic evaluation of interventions                                   | 921 pts  | <b>6</b> | Foresight   | 542 pts |
| <b>3</b> | Using BoD estimates to extrapolate the parameters of health care services/utilization | 620 pts  | <b>8</b> | Monetization of DALY                                      | 514 pts |
| <b>4</b> | Impact of health system organization (pricing and reimbursement) on BoD               | 577 pts  | <b>5</b> | Creating taxonomies or propose Common Data Elements (CDE) | 205 pts |

# Prioritizing research topics



Which topics would you prioritize in the estimation of BoD?

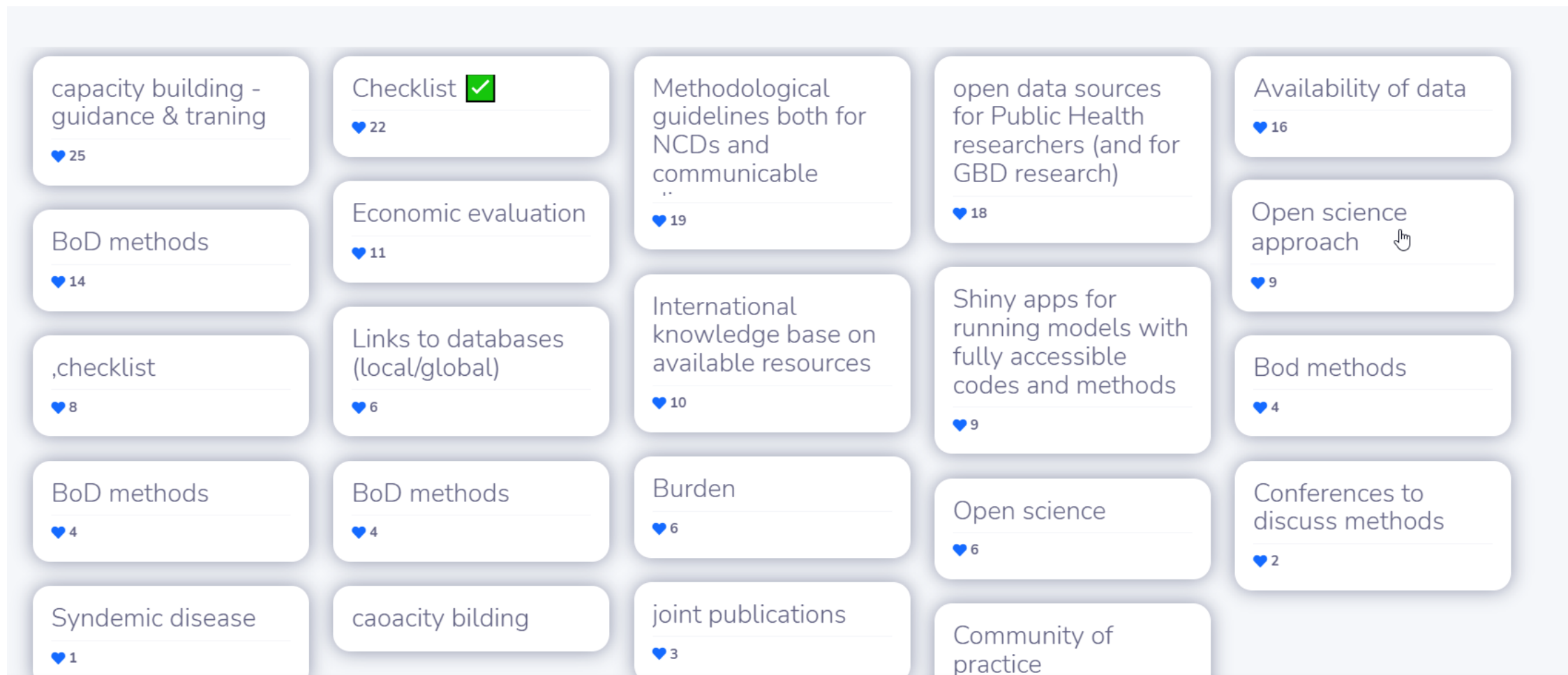
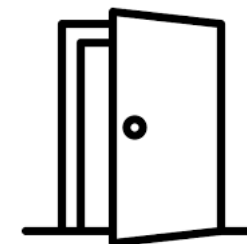
2	Burden of Sindemics (i.e. burden of clusters of diseases, or risk factors, that are frequently ...)	709 pts	10	Comparative healthcare systems	479 pts
3	Burden of natural disasters	628 pts	6	Children and maternal health	475 pts
9	Focus on novel risk factors (i.e. climate change)	613 pts	7	Environmental-caused conditions	428 pts
5	One health	551 pts	8	Frailty	379 pts
1	Elderly-specific disorders	530 pts	4	Burden of violence and/or terrorism	308 pts

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# Refining research questions





# Refining research questions



# Refining research questions



Social determinants of health

♥ 25

Economic evaluation and monetization

♥ 14

Health Impact Evaluation

♥ 12

Data linkage

♥ 9

Social determinants

♥ 8

Health Impact Assessment

♥ 8

The ethical question behind the economic evaluation

♥ 8

Health impact assessment

♥ 7

Health impact assessment

♥ 7

paf and pif

♥ 6

Commercial determinants of health

♥ 6

Improve inter-country comparability

♥ 6

educational attainment in DALY calculation

♥ 5

Identifying the low-hanging fruit (least action for most DALYs saved)

♥ 4

Burden stratified by SES

♥ 4

Burden calculation to strengthen national/regional preparedness for response in case of an emergency

♥ 4

PAF for social determinants

♥ 4

Sub-national analysis (European)

♥ 3

Soc determinants of health

♥ 3

Dynamic models

♥ 3

health spending

♥ 3

Index of Multiple Deprivation

♥ 2

Soc determinants of health

♥ 2

Burden stratified by ses

♥ 2

Burden

♥ 2



# Refining research questions



Mental health ♥ 14	one health ♥ 12	climate change ♥ 12	Rare diseases ♥ 10	Joint exposure to risk factors ♥ 10
natural disorders ♥ 7	Metric for one health ♥ 6	Climate change ♥ 6	Aging population ♥ 6	sustainable healthcare ♥ 6
AMR ♥ 5	Commercial determinants of health ♥ 5	Injuries ♥ 5	Natural disasters ♥ 5	burden of infodemics ♥ 4
Poverty ♥ 4	Not only gap also health gains ♥ 4	Climate change ♥ 4	Ultra process food ♥ 4	Burden of PAF ♥ 4
Digital health ♥ 4	vector borne diseases ♥ 4	Climate change x10000 ♥ 4	Towards unified vision of health ♥ 3	Heat waves impacts ♥ 3

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# Develop the research agenda

To be summarized in a **commentary**\*

 **BMC** Part of Springer Nature

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\*Everyone who is in the meeting will be considered as a co-author

# THANKS FOR YOUR CONTRIBUTION