EGHRIN
European Global Health Research Institutes Network

Horizon Europe: Global Health Position Paper

European Global Health Research Institutes Network (EGHRIN) – www.eghrin.eu

Background

The European Commission's proposal for Horizon Europe outlines a bold strategy to strengthen the EU's scientific and technological basis; boost innovation, capacity, competitiveness and jobs; deliver on citizen's priorities; and sustain European values.

This document, from the undersigned leading European academic institutions, responds to the Health "Cluster" within the Commission's proposal for Horizon Europe. We do this with specific reference to the case for investment in Global Health research. Jointly, the academic institutes have founded the European Global Health Research Institutes Network (EGHRIN). The network fosters collaboration on high quality research with global partners, including those from central and eastern Europe, within the network and with relevant stakeholders. It will also focus on consolidation of otherwise fragmented national research activities on global health.

The European Union and its member states have a long and impressive history of strong support for Global Health Research. As a result, there are many substantial achievements of which the EU can be justifiably proud. Many of these achievements have improved health and living standards among the most vulnerable populations in Low and Middle-Income Countries (LMICs), supporting local prosperity and improving global stability and security.

We live in an increasingly interconnected and interdependent world. Health threats do not respect international borders and solutions to them are more and more transnational. There is a strong case for continuing and expanding EU investment in Global Health Research for multiple reasons, many of which bring direct benefit to European citizens, as it:

- Strengthens European science and innovation, promoting European academic excellence
- Provides knowledge insights that can inform improvements in European health systems, including the development of cost-effective innovations for long-term sustainability of European health and care systems
- Provides an opportunity to innovate in the development of commodities and services, thus enhancing the competitiveness of the EU's health and care industry
- Strengthens global health security and fosters open societies
- Underpins European commitment to health as a human right and to health as an important ingredient of socio-economic development by addressing global inequities

The Health Cluster Proposal Themes within the Commission's Horizon Europe proposal already identify many of the key issues faced by populations worldwide. In particular, we believe the proposed

investments in infectious disease research, including on the threat of antimicrobial resistance (AMR), will have a significant impact on global public health. Extending the proposal to include Global Public Health research in the context of LMICs will further strengthen the impact of Horizon Europe. In addition, the inclusiveness of the current proposal would be strengthened by explicit mentioning of:

- Equity in service access and health outcomes
- Determinants of health, including poverty, relevant to both communicable and non-communicable diseases, which offer an opportunity to link explicitly with other clusters
- Maternal, Child and Women's Health
- Mental Health as a public health priority
- Road accidents and trauma and associated physical and mental health consequences, particularly in this era of sustained conflict in many regions

Below we make suggestions around Global Health research prioritisation for consideration within the six main themes. These six themes can serve as basis for further alignment between national and global health research, a process that could be coordinated by EGHRIN. This will contribute immediately to the EU's health agenda, while also contributing to the international health agenda and attainment of the SDGs.

We believe Europe could have a significantly greater footprint on the pathway towards universal health care and the achievement of the Sustainable Development Goals (SDGs) globally, through coordinated Global Health Research and Innovation (R&I) efforts that promote the development of robust, flexible, people-centred health systems to end communicable diseases; the development of effective measures to address the steady rise of non-communicable diseases; the achievement of universal health coverage; the provision of health services tailored to the needs of patients and consumers; and effectively addressing the social and structural determinants of health (see also: Lancet commission on global health and SDG, 2018[i]).

Key Priorities for Global R&I Investments

We strongly suggest key global health R&I priorities within the six EC intervention areas that deserve specific attention through funding and investments instruments via the Horizon Europe program.

1. Health throughout the life course

While the Commission's emphasis on ageing in this theme reflects an acknowledged global need, maternal, neonatal and child mortality continues to be a priority area for global health research. Globally, 7000 neonatal deaths occur every day, most in the first week of life. (Source: UNICEF[ii]).

Adolescence represents a critical period in health. Navigating it well sets the individual on a healthier life course, enabling full and productive contribution to society. Adolescents, particularly

in LMICs, are exposed to considerable risks, including in sexual health, HIV, exposure to drugs, and occupational and environmental hazards.

We therefore recommend that, in addition to the current priorities outlined in the proposal, this pillar also considers the following four priority areas for global health research:

- Survival - Addressing persistent neonatal, infant and maternal mortality
- Beyond Survival (child) – Ensuring that those who survive have the opportunity to thrive. This requires high priority research into child development, brain protection, disability and care.
- Beyond Survival (mother) - Reducing maternal morbidity so that mothers are better able to care for their children and return fully to productive lives.
- Healthy Adolescence – enabling young people to establish healthy lives, through research into promoting health and reducing harm.

While many of these research priorities would benefit whole populations, particular emphasis by the Commission should be given to the need for research that might benefit these specific vulnerable groups at critical stages in their lives. The benefit of health investments in (female) adolescents to promote their health and the health of their future children for example will be useful in the context of a life-course approach.

2. Non-communicable and rare diseases

In 2015, 70% of global deaths were due to NCDs (Source: WHO[iii]). The European Commission is commended for highlighting the importance of this category of illness, closely related to aging societies everywhere, and for listing NCDs as a distinct theme of study. We believe Horizon Europe should more explicitly acknowledge the disproportionate NCD burden among lower income countries and populations linked to ageing, globalization of life-styles and rapid urbanization. As such, in addition to the four main NCDs already included (cardiovascular diseases, cancers, diabetes and chronic lung diseases) we also suggest the addition of trauma and mental health.

Within this theme is also the particular challenge of ensuring access to services and affordable medicines for chronic conditions, which ideally would be highlighted within this theme and in the Health Systems theme.

3. Environment and Social Determinants

As with the rest of the Commission's proposal, this theme highlights the health challenges of a fast-changing global society. The importance of poverty and education as determinants of global public health and as major themes in the SDG agenda should be highlighted, as is the case for the economic, political and commercial determinants of health.

The global health research priorities for this theme should have a stronger emphasis on the health consequences of a changing world, including climate change, ageing populations, rapid urbanisation, globalization of life-styles and the role of different industries therein, and the social, economic, political and commercial determinants of health in the context of LMICs. The hazards identified in this theme do not respect national boundaries and as such the risks of inaction and the benefits of innovation are shared by all.

4. Infectious Diseases

Infectious diseases remain a hugely important health issue globally, and the main cause of death in LIC. Prevention, preparedness, early detection, treatment, cure and elimination of most major diseases have still not been achieved. The MDGs have left "unfinished business" with respect to the control of infectious diseases. The global achievements catalysed by the MDGs must not be lost due to complacency at this stage.

Along the broad lines of the Commission's proposal, we would like to highlight several key areas for investment:

- Effective health emergency preparedness for emerging and re-emerging infectious diseases globally
- Accelerate investments to counteract disease (re-)emergence, capitalising on the progress made by the European and Development Countries Clinical Trials Partnership (EDCTP2).
- Research and development of new and improved health tools and systems in LMICs that continue to have the highest infectious disease burden.
- Further investment in the research, development and late-stage evaluation (trials) of diagnostics, vaccines and drugs for the major poverty-related diseases (Tuberculosis, HIV and Malaria) and Neglected Tropical Diseases.
- International collaboration on research into anti-microbial resistance (AMR) is critical since many of these pathogens are showing increased resistance to treatments and are linked with health security.

5. Tools, Technologies and Digital Solutions for Health and Care

Safe and cost-effective health technologies and tools are needed to improve population health on a large scale. The Commission's emphasis on technological innovation highlights the potential of new technologies, use of digital technology and artificial intelligence on a global scale, yet it does not recognize the potential contribution of effective and affordable innovations. These are innovations developed for low-resource settings, which can eventually be of help also to the European Union health system, contributing to the sustainability of health and care systems. Therefore, we recommend inclusion of research on frugal innovation (to reduce the complexity and cost of goods) in the Commission's proposal.

6. Health and Care Systems

The Commission highlights the importance of making health systems accessible, cost-effective, resilient, sustainable and trusted to reduce inequalities within the EU. We believe that extending this focus beyond the EU and specifically towards LMICs will be of major importance towards achieving universal health coverage.

Therefore, we recommend increasing research investment harnessing the Global Public Health research expertise in Implementation Science, to study models and approaches for health and care in a wide variety of settings including those in low resource regions.

Six Priority Partnerships and Investment Instruments for Global Health Research & Innovation

We suggest that the six strategic thematic priorities for investments, as outlined above, be primarily addressed through six key mechanisms for partnerships and investments, in order to give Global Health R&I within the Horizon Europe program a new momentum.

1. R&I Missions

R&I missions under Horizon Europe should address societal challenges, be needs-driven, and include indicators to monitor societal impact. The required technological development should attract research and innovation activities that otherwise would likely not be undertaken by private actors, providing the justification and legitimacy for public intervention.

We welcome the proposal for a first health-related mission on curing paediatric cancer. We would like to ensure that a substantial amount is spend on fighting paediatric cancers in low- and middle-income countries, where the survival prospects for childhood cancer are extremely poor. Likewise, we would like to see that specific health angles in LMICs are also addressed in future health-related missions, such as health in the digital age, antimicrobial resistance (AMR), smart and healthy cities/communities.

A major R&I mission to fight **Poverty-Related and Neglected Diseases (PRND)** with substantial funding of at least € 1 billion could support all parts of the research and development chain, creating a new generation of candidates through basic research, supporting preclinical testing, clinical development, and other important elements of making new tools accessible to those in need.

2. EDCTP partnership on Global Health, including links to national health research systems and philanthropic funding.

It is essential to have a dedicated mechanism for funding Global Health research within Horizon Europe. Currently, EDCTP2 is the only dedicated mechanism for Global Health research of poverty-related infectious diseases within Horizon 2020. It has proven effective in funding and accelerating research and development (R&D) for PRND and received a positive interim evaluation in 2017. We believe that the newly proposed Industry partnership on Global Health should remain focused on development and uptake of new products for PRND, as there is a major need for such products and a clear role of European R&D in this field. Given the strategic importance of the current EDCTP2 mechanism, we have drafted a separate paper with in-depth consideration on how a new EDCTP3 partnership can be even more effective than EDCTP2 to address imminent poverty related and neglected diseases

3. Joint Programming Initiative on Antimicrobial Resistance (JPI-AMR)

Antimicrobial resistance (AMR) is a major obstacle to the treatment of infectious diseases, including tuberculosis, worldwide. Under the latest framework programmes a wide range of projects were funded focusing on basic research, strategies for the prudent use of existing antimicrobials, development of new antimicrobials, development of point of care diagnostics and vaccine development. Nonetheless the horizontal character of Horizon 2020 without disease specific calls has made it increasingly difficult to get AMR targeted research programs funded.

The Joint Programming Initiative on Antimicrobial Resistance (JPI-AMR) that started a few years ago, has financed important basic and preclinical research in the field of antimicrobial resistance. Already more than € 55 million has been invested by participating countries in research projects to date, thereby addressing a significant part of the AMR R&D challenge. While significant, this level of investment is dwarfed by the economic damage that AMR will cause if we do not curb the problem adequately (€ 100 trillion by 2050[iv]). With matching funds from Horizon Europe, the JPI-AMR funding mechanism could be made much more effective.

4. EU funded clinical trial networks

Over the years, the EU has funded various networks that could be efficiently used for efficient clinical trials. Examples include the clinical trial capacity that was built under ECDTP, and networks like TB-PAN-NET, COMBACTE and PREPARE for clinical trials in the field of infectious diseases and emerging epidemics. Beyond this, infectious clinical trial infrastructure has been built in Europe that would benefit from international expansion, such as for example multicentre childhood cancer trials. Further support to harmonise and further integrate these networks would be helpful in ensuring that clinical trials become more efficient.

5. IMI/Industry partnership on health innovation

IMI is currently Europe's largest public-private partnership. IMI's research agenda today has a strong focus on chronic diseases such as cancer, asthma, respiratory diseases and diabetes. While these are threats to European public health, and thus of economic interest to the European

pharmaceutical industry, we believe that IMI could be much more inclusive with regards to the health needs of LMICs.

With the newly proposed Industry partnership on *health innovation, for the rapid development, deployment and safe use of medical treatments, devices and technologies enhanced by digital technologies,* we call upon the Commission to ensure that ownership of the agenda is not exclusively that of corporate Europe. SMEs, Product Development Partnerships (PDPs) and universities, where true product innovation to fight many of PRNDs is taking place, should also be treated as partners

We call upon the Commission to ensure that the new partnership becomes more inclusive with regards to participation of partners from LMICs, to ensure that efforts towards equitable access become the default in IMI programs, and that SMEs, PDPs and academia are regarded in IMI agenda setting.

6. Invest-EU

The Invest-EU Programme will bring together under one roof the multitude of EU financial instruments currently available to support investment in the EU, making EU funding for investment projects in Europe simpler, more efficient and more flexible. We understand that existing funding instruments, such as InnovFin/Infectious Disease Finance Facility, will be integrated in this new mechanism.

Investment in higher-risk activities such as Global Health R&I is still inadequate. The resulting underinvestment in Global Health R&I is damaging to the health of global citizens and weakens the industrial and economic competitiveness of European companies. SMEs and PDPs play a crucial role in product development to fight PRNDs. However, they face challenges when accessing financing instruments because of their perceived high risk and lack of sufficient collateral benefit.

We call upon the Commission to ease the requirements for these instruments. Also, the current EU's instruments are not well aligned with instruments of other large funders. As a consequence, many products are not developed beyond early phases, as there are no suitable funding mechanisms to support such studies, which generally become more costly and hence more risky at later stages of development.

We also call upon the Commission to support new investments in phase II and phase III studies, which can take the form of soft-loans or equity investments, which are aligned with other global funding instruments (as well as instruments from other DGs such as DG-SANTE and DG-DEVCO). A relevant new initiative is a proposal for an AMR impact fund to fill the gap in funding of phase II and III clinical trials, which has been recently proposed by WHO at the World Investment Forum in Geneva[v]. With a target size of 1 billion EURs, projected returns of 2-3%, and targeted

investments from both private and public stakeholders, such a fund could have a very significant impact on Global Health R&I, especially when other PRNDs are included.

Summary of recommendations

In summary, the Horizon Europe proposal provides a strong foundation for another decade of European excellence in health research that must include addressing the major challenges in Global Health. As the Commission starts developing the Horizon Europe strategy it is critically important to make sure that Global Health research priorities are recognised and can therefore be adequately funded.

As beneficiaries of Horizon 2020 and previous framework programs, this group of leading global health research institutes in Europe knows from first-hand experience how essential the EU framework programs are to building sustained international R&I collaborations that enable us to effectively conduct the research urgently needed to tackle today's Global Health challenges.

While Horizon 2020 is officially "open to the world", third-country participation has declined significantly when compared to FP7, especially with regards to parties from LMICs[vi].

We believe that the instruments proposed in Horizon Europe can be much better channeled towards effective Global Health R&I impact and would therefore like to suggest to revisit the proportion of funding directly available to health research, to consider embedding research in the LMIC context more overtly and, importantly, to explicitly referencing Global Health Research within each of the main health themes.

As a final comment we would like to call for a financial increase for the health cluster within the 2nd pillar of Horizon Europe, which according to current plans adds up to € 7.7 billion. While this represents a minor budget increase (of € 300 million) in absolute terms, in relative terms, the share of the overall budget spent on health R&I would decrease from currently 9.7% under Horizon 2020 to 8.1% under the suggested Horizon Europe program. We support the vote from the ENVI committee in support of a 9.7% budget for the health cluster. Within the health cluster, a specific allocation of 10% to Global Health R&I is needed to help resolve some of the complex and urgent global health challenges Europe and the world as a whole are facing.

We believe that our suggestions enhance universal health care and the achievement of the Sustainable Development Goals globally and contribute to the strengthening and impact of EU's domestic health agenda. The suggested strategic investments and considerations regarding partnerships and investment instruments will support R&I for PRND, which saves lives, combats ongoing epidemics, can prevent future catastrophic outbreaks, delivers on the SDGs, and has a substantial economic return on investment for Europe, while creating quality jobs and driving scientific excellence.

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Annex 1. List of EGHRIN institutions (in progress)

In alphabetical order

• Amsterdam Institute for Global Health and Development, University of Amsterdam

Amsterdam, Netherlands

• Barcelona Institute for Global Health (ISGlobal), University of Barcelona

Barcelona, Spain

• Centre for Global Health, University of Milan, Milan, Italy
• Center for International Health, Ludwig-Maximilians-Universität, Munich, Germany Centre for Social Medicine and Global Health, Lund University, Lund, Sweden
• George Institute for Global Health, University of Oxford, Oxford, UK
• Global Health at Julius Center, University of Utrecht, Utrecht, Netherlands
• Imperial College London, London, UK
• Institute for Global Health, Heidelberg University, Heidelberg, Germany
• Institute for Global Health, University College London, London, UK
• Institute for Tropical Medicine, Antwerp, Belgium (*)
• Leiden University Medical Center, Leiden University, Leiden, Netherlands
• London School of Hygiene and Tropical Medicine, London, UK (*)

(*) no LERU affiliation

[i] Margaret E Kruk et al. High-quality health systems in the Sustainable Development Goals era: time for a revolution. Lancet Glob Health 2018; 6: e1196–252

[ii] http://www.who.int/gho/child_health/mortality/neonatal_text/en/

[iii] https://www.who.int/gho/ncd/mortality_morbidity/en/

[iv] Jim O'Niell - Tackling drug-resistant Infections globally: Review on Antimicrobial Resistance Final report and Recommendations; -final report and recommendations 2016. https://amr-review.org/sites/default/files/160525_Final%20paper_with%20cover.pdf

[v] http://worldinvestmentforum.unctad.org/session/fostering-investment-in-the-development-of-new-antibacterial-prevention/

[vi] Implementation of the strategy for International Cooperation in Research & Innovation, https://ec.europa.eu/research/iscp/pdf/policy/inco_strategy_2nd-report_fact-sheet.pdf