

Support biomedical research of aging in the WHO Decade of Healthy Ageing - Write to WHO!

It is exciting that the World Health Organization demonstrates its support for confronting the struggles of aging. It is equally exciting to find that the WHO is open to listen. Upon reading the Zero Draft, here are some concerns to contribute regarding the direction proposed for the Decade of Healthy Ageing.

1) A substantial proportion of economic, social, and financial efforts for ageing populations should go to **biological and clinical interventions** to slow and reverse the damage of aging: i.e., preventive, regenerative, and curative medicine. It has been demonstrated that targeting the biological “Hallmarks of Aging” can extend the healthy lifespan of mice by 30%. Drugs to mimic these effects in humans are urgently needed.¹ Instead of palliating symptoms of age-related disease, we have decades of research uncovering therapeutics that extend healthy lifespan and ‘compress morbidity’ -- reducing the burden on the global healthcare system by reducing the number of years spent in poor health.

2) Efforts to develop elderly friendly socio-physical environments should be **very minimal**. Investment in elderly friendly socio-physical environments, albeit benefits elderly quality of life, nonetheless, decreases overall human flourishing by proliferating and supporting the non-productive years of life. For example, individuals in retirement homes battling age-related diseases and healthcare costs, as opposed to contributing meaningfully to society. We want a future where we improve the quality of life by making people physically and mentally healthy longer, from a biological point of view first.

3) With respect to these first two points, the ‘age gracefully’ trend that appears throughout the zero-draft may be misplacing the main emphasis and effort for the future of the aging society. By which is meant, framing this priority may have the effect of emphasising the normalisation of ageing-related ill health as a non-medical issue and organisations funding it that way. Building better spaces, services, and culture for declining is what we want to dissuade from when we argue for improving health with better biomedical research and interventions. It is urgent and essential to rectify what matters first. We want a healthy future with people who are **biologically healthier, longer**.

The statement “this requires a shift in focus away from considering healthy ageing as the absence of disease” contradicts the three immediate earlier points “The extent of the beneficial opportunities that arise from increasing longevity will depend heavily on one key factor: health”, “Good health adds life to years. Longer and healthier lives must be our next greatest achievement”, “Poor health does not need to dominate older age”. It is difficult to determine how the WHO sees the concept of health based on this line of reasoning.

4) The **only** environmental developments that can make sense to us are those that are essentially built to effectively test and measure the effects of such biomedical innovation (making it easier to diagnose, measure biological health, etc.)

5) With a biological perspective in mind, "Decade of Healthy Longevity" may be more appropriate over "Decade of Healthy Ageing" because biological ageing does not tend to improve health.

Suggestions for additional indicators for measuring progress on healthy ageing/longevity:

- Mortality rates in each country at 65-74, 75-84, and 85+ (they should decrease)

¹ Campisi J et al. (2019) **From discoveries in ageing research to therapeutics for healthy ageing**. Nature. DOI: 10.1038/s41586-019-1365-2

- Mortality from major diseases in each country and prevalence of these diseases, by the same age tranches (at least by main types such as: neurodegenerative, cancer, cardiovascular, *etc.*)
- Track funding of biomedical research and development against ageing-related conditions (as a percentage of R&D expenditures, and of GDP).
- Number of countries which have specialized program on R&D on biomedical research on ageing

Additional text below for reference.....

B. OUR RESPONSE TO THE ZERO-DRAFT

Areas to be added/deleted

Biomedical solutions should not be ignored in the Zero Draft. R&D in the areas of biological ageing and ageing-related disease is an important long-term strategy for health and the quality of life in older people . Therefore, the work and cooperation from biomedical and clinical research in these areas by the WHO, the WHO parties, and non-governmental stakeholders should be explicitly stated as an agenda item for the Decade of Healthy Ageing. There is a growing consensus among experts about the need to make R&D for healthy longevity a part of the global WHO agenda.

Activities

The Agenda for the Decade of Healthy Ageing, and its section “Fostering research and innovation” should be significantly strengthened with biomedical and clinical research agenda. In fact, a separate section should be developed on biomedical research and innovation on ageing.

Pathogenic processes of aging, biomarkers of aging, aging-ameliorating biomedical innovations, new medicines, genetic and cell therapies should become the main focus. It is necessary to move away from disease-specific approaches and develop long-term biomedical solutions.

There should be clinical practice guidelines developed to prevent and treat not only aging-related diseases, but degenerative aging as a pathological process

A Platform for partnering

Among the tasks for the national and international partners, we propose that the WHO should encourage the WHO parties to invest in biomedical research on aging and longevity:

- encouraging financial support for public investment as well as financial support and tax benefits for companies developing new therapies in the spheres of aging and longevity, including targeted support of relevant clinical trials.

- encouraging medical research institutions to initiate and conduct basic research alongside small and large clinical trials, including therapies with high potential health benefits, but with expired patents;
- include biomedical research for longevity in national research plans and programs.

<http://longevityalliance.org/?q=decade>

Measuring success

Suggestions for additional indicators for measuring progress on healthy ageing/longevity:

- Mortality rates in each country at 65-74, 75-84, and 85+ (they should decrease)
- Mortality from major diseases in each country and prevalence of these diseases, by at the same age tranches and prevalence where available (at least by main types such as: neurodegenerative, cancer, cardiovascular, etc. other; prevalence should decrease with time, but a better diagnosis can temporarily increase them)
- Track funding of biomedical research and development against ageing-related conditions (as a percentage of R&D expenditures, and of GDP).
- Number of countries which have specialized program on R&D on biomedical research on ageing

The principal feature of ageing is a progressive increase of the risk of deterioration of health and the organism's intrinsic capacity. Ageing is acknowledged by the WHO as a risk factor of diseases, as evidenced by the extension code [XT9T "Ageing-related"](#) in the International Classification of Diseases 11 in 2019. Ageing-related is defined as "caused by pathological processes which persistently lead to the loss of organism's adaptation and progress in older ages."

The first paragraph in the section "Longer lives" needs to include biomedical research and innovation among the reasons behind increased healthy life expectancy.

In the section "Longer and healthier lives," specifically in the fifth paragraph, it should be stated that solutions for improving physical or cognitive health should be preferred, as much as possible, to solutions that extend life without improving physical or mental health.

This is not addressed in the Zero Draft.

Obstacles for healthy ageing

The principal feature of ageing and older ages is progressive increase of the risk of deterioration of health and the organism's intrinsic capacity. Ageing is acknowledged by the WHO as a risk factor of diseases by including the extension code [XT9T "Ageing-related"](#) into the International Classification of Diseases 11 in 2019. Ageing-related is defined as "caused by pathological processes which persistently lead to the loss of organism's adaptation and progress in older ages".

The first paragraph in the section “Longer lives” needs to include biomedical research and innovation among the reasons behind increased healthy life expectancy.

In the section “Longer and healthier lives”, in particular in the fifth paragraph, it should be stated that solutions that will improve physical or mental health should be preferred, as possible, to solutions that extend life without improving physical or mental health.

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Main recommendations

A separate section for biomedical R&D for ageing-related diseases and longevity should be developed.

The WHO should form a special unit to ensure global coordination on biomedical research on ageing. Similar to the Human Genome Project, there is an ongoing global effort under the aegis of the WHO, should be established. There should be an international working group to monitor and set global priorities for both fundamental and translational research on ageing.

Considering the tasks for the Member States, national regulators should facilitate investment into aging-ameliorating therapeutical developments, including financing clinical developments and access to the aforementioned therapies. Care providers, people in community care, and retirement homes should be encouraged to become involved in clinical trials on aging-ameliorating interventions with good ethical profiles and high benefit/risk ratios.

More relevant document

The text should include a stronger emphasis on the extension of healthy lifespan by biomedical means.

The Zero draft should include "Strategic objective 5: Improving measurement, monitoring and research on Healthy Ageing" of the WHO's Global strategy and action plan on ageing and health in its entirety.

It is necessary to support large cohort and other studies of biomarkers of aging, which are needed to monitor and develop adequate health solutions. Low- and middle income countries should also be involved in multinational research projects and clinical trials to ensure genetic diversity, global R&D cost reduction and expertise transfer.

While there has been significant progress in this area, especially in frailty biomarkers, consensus on the biomarkers of aging still requires more research. Personalized analysis should be integrated into the biomarker systems to significantly contribute to health developments.