WHO Science Council meeting
Geneva, Switzerland
29-30 June 2023
Report
Contents
1. Background ................................................................................................................................. 4
2. Key discussions ............................................................................................................................ 5
  2.1. WHO and the Science Council ................................................................................................. 5
  2.2. Genomics and mRNA reports ................................................................................................. 5
  2.3. Next priority topics .................................................................................................................. 6
  2.4. Council operations .................................................................................................................... 6
  2.5 Closing ....................................................................................................................................... 7
3. Next steps ....................................................................................................................................... 7
4. Participant list ............................................................................................................................... 8
1. Background

Globally we are experiencing a period of unparalleled change, uncertainty, and growing inequality inextricably linked to our ability to achieve Health for All. From climate change and changing demographics, the rise of non-communicable diseases and the continued challenge of infections and drug resistance, to transformative artificial intelligence technologies and the vast and diverse data being generated as never before. Science has a central role in all of these areas.

In 2021 World Health Organization’s (WHO) Director-General, Dr Tedros Adhanom Ghebreyesus, established the WHO Science Council, a group of distinguished scientists from around the world, to work with WHO's Chief Scientist on priority health issues and to advise WHO on scientific breakthroughs and innovations that can help WHO and its member states to improve global health.

Following their first two years of successful operation, including the publication of the Council’s first formal report on *Accelerating access to genomics for global health*, and a soon-to-be published second report on *mRNA Technology for improving global health*, WHO convened the Council’s second in-person meeting on 29 and 30 June 2023 in Geneva, Switzerland. This meeting was an opportunity for the Council members to learn more about the research agenda and priorities across all of WHO and to hear about how the organisation is implementing the recommendations from the their first report. Crucially, it was also an opportunity to discuss the next potential topics for the future direction of the Council.
2. Key discussions

2.1. WHO and the Science Council

The second in-person meeting of the WHO Science Council was opened by WHO chief scientist Jeremy Farrar and Science Council chair Harold Varmus. They reflected on the role of science pre, during and post-COVID-19 and its impacts beyond health on the economy and global geopolitics. The key to an effective pandemic response was strong multinational and multilateral collaboration, which will also be essential for addressing the emerging challenges of climate change, migration, clean water, the shifting demographic, and future pandemics.

During the pandemic, public trust in WHO improved, in part because science played a critical role in the organisation’s response. But the diagnostic and vaccine science deployed during the pandemic was not built in 12 months, it relied on decades of research, highlighting the critical role of science and research during peacetime, not only during crises.

Science is at the heart of WHO and exists across the organisation, not only in terms of the biomedical sciences, but across the whole breadth of scientific disciplines. Science is key to bridging the inequity gap and ensuring the benefits of emerging health technologies are shared equally. The WHO Science Council has a key role in advising WHO on these emerging opportunities and the considerations needed to ensure equitable advances. This role was emphasised by WHO Assistant Director Generals of the organisation during the meeting, who also reminded the Council that the organisation has a responsibility to its 194 member states.

WHO is committed to improving links across the three levels of the Organization and is increasing its focus on country offices and ensuring impact within countries. The Science Council has a key role here by considering country activities and impact in their next report to help them in making informed decisions on investments and priorities.

2.2. Genomics and mRNA reports

Since the publication of the Science Council’s first report in 2022, the Secretariat has been working to implement the recommendations on genomics within the organization. The Secretariat is in the advanced stages of securing financial resources to support these activities, a key element of which will be regional and country engagement, facilitated through regional workshops and dedicated regional genomics focal points. The expanding programme of work on genomics will also ensure close collaboration with existing areas of work across the Organization that involve genomics, including the International Pathogen Surveillance Network, which was presented during the meeting. The establishment of a Technical Advisory Group on Genomics (TAG-G) is also underway.

With the Council’s second report on mRNA technology for global health submitted for the DG’s consideration, there was a discussion around its publication and dissemination. The promotion
of the report and the actions that follow it should be managed as a collaborative effort between WHO teams, including colleagues from Science, Medicines and Health Products, and Immunization, Vaccines and Biologicals. The report raises some important issues and priority challenges to focus on as first steps, including intellectual property and cold chain requirements.

2.3. Next priority topics

A critical objective of this meeting was for the Council to discuss potential focus areas for their next report and deliver a shortlist of these ideas to the WHO Chief Scientist for his consideration and selection. A number of topics and ideas were raised over the two days, by the council and by WHO staff, including top future technology ideas identified in the foresight studies (eg. remote diagnostics, AI-assisted interpretation of medical images, printed organs, drugs resisting resistance). The topics discussed could be broadly grouped into three overarching thematic areas:

- Artificial Intelligence, Digital Health and Information Technologies, including social science approaches and ethical considerations
- Implementation Science to address social and commercial determinants of health, access to health, and health inequities, mitigation of impact of climate change
- Establishing research ecosystems as a national scientific endeavor- helping countries strengthen their national research capacity

Based on these discussions, it was decided that the next report will focus on information technologies and digital health, and will give important consideration to the other two themes, striking a balance between neither too broad or too narrow in focus.

The Secretariat will refine the topic, with input from colleagues across the WHO, to identify a tangible cross-cutting area, within the broader area of information technologies and digital health for the topic of the next Science Council’s endeavor. They will ensure the topic meets a real need within the organisation and doesn’t duplicate existing efforts, also considering alignment with the UN SDGs, in particular SDG 3.

Country and regional perspectives will also play a key role in the development of the next report. The WHO’s 14th General Programme of Work planning will be taking place over the next few months, and it will be important to engage the new regional directors (for four out of six regions).

2.4. Council operations

The Science Council agreed to a schedule of quarterly meetings, with at least one in-person meeting per year, and two depending on feasibility. The Secretariat will explore the possibility of alternating in-person meeting between Geneva and other locations.
The Science Council Secretariat will continue to maintain monthly meetings with the SC Chair and Vice-Chair.

The SC Secretariat will share a short questionnaire with all SC members, to assess the current operations and identify future efficiencies.

2.5 Closing

WHO Director General closed the meeting, thanking the council for their continued support and commitment. The organisation is keen to see the genomics report make an impact, particularly within countries, in line with WHO’s renewed focus on countries. The DG thanked the Council for their latest report on the potential of mRNA technologies, which he will review and provide feedback on.

The DG was happy to hear the council have given a lot of thought to the topic of digital health and encouraged close collaboration with the Digital Health team, and the UHC, HEP and WHE divisions. He encouraged the Council to ambitiously target the World Health Assembly 77 in May 2024 to have a draft of their report to facilitate a member state consultation during a side event or roundtable.

The DG encouraged the idea of a non-Geneva based meeting for the next in-person convening of the Council. He asked the Council to consider convening a meeting of the WHO Collaborating Centres, perhaps also involving the WHO academy, to explore the opportunity of a WHO Science Forum.

Finally, the Council members were encouraged to act as ambassadors for science at WHO, and use their individual roles of the Council’s members and their voices and access to their relevant government ministries to strengthen the voice of science.

3. Next steps

The Secretariat is committed to the continued implementation of the recommendations from the Council’s Genomics report, particularly for insuring impact at the country level. The DG will review the mRNA report and provide feedback to the Council.

Based on the discussions during this meeting, the WHO Chief Scientist and Secretariat will formulate a more refined focus area for the Council’s next report, in the area of digital health, AI and implementation science for global health.

On the suggestion of the WHO DG, the Council aims to hold a member state consultation to feed into their next report on the margins of the 77th World Health Assembly in May 2024.

WHO DG confirmed that Council membership can be expanded to add new members with additional expertise areas per the terms of reference.
4. Participant list

**WHO Science Council**

**Harold Varmus, Chair**
Lewis Thomas University Professor of Medicine at the Meyer Cancer Center of Weill Cornell Medicine; Senior Associate Member, New York Genome Center, United States of America (USA)

**Adeeba Kamarulzaman, Vice Chair**
President & Pro Vice Chancellor of Monash University Malaysia; Past-President, International AIDS Society, Malaysia

**Salim Abdool Karim**
Director of the Centre for the AIDS Programme of Research in South Africa (CAPRISA), South Africa and Professor of Global Health, Columbia University, USA

**Mary-Claire King**
Professor of Genome Sciences and Medicine, University of Washington, USA

**Jean William Pape**
Director and Founder of Haitian Group for the Study of Kaposi Sarcoma and Opportunistic Infections (GHESKIO), Haiti

**Firdausi Qadri**
Senior Director of the Infectious Diseases Division at the International Centre for Diarrhoeal Disease Research, Bangladesh

**Cesar G. Victora**
Emeritus Professor of Epidemiology, Federal University of Pelotas, Brazil

**Yongyuth Yuthavong**
Senior Specialist, National Centre for Genetic Engineering and Biotechnology (BIOTEC), National Science and Technology Development Agency, Thailand

**Apologies** (with remote connection)

**Edith Heard**
Director General of the European Molecular Biology Laboratory, Germany; Professor, Collège de France, France

**Abla Mehio Sibai**
Professor of Epidemiology and Dean, Faculty of Health Sciences, American University of Beirut, Lebanon

**WHO headquarters leadership team**

**Tedros Adhanom Ghebreyesus**
Director General

**Jeremy Farrar**
Chief Scientist

**Bruce Aylward**
Assistant Director-General, Universal Health Coverage, Life Course
Samira Asma  
Assistant Director-General, Data, Analytics and Delivery  
Hanan Balkhy  
Assistant Director-General, Antimicrobial Resistance  
Catharina Boehme  
Assistant Director-General, External Relations and Governance  
Chikwe Ihekweazu  
Assistant Director-General, Division of Health Emergency Intelligence and Surveillance Systems in the Emergencies Programme  
Yukiko Nakatani  
Assistant Director-General, Access to Medicines and Health Products  
Jérôme Salomon  
Assistant Director-General, Universal Health Coverage, Communicable and Noncommunicable Diseases  

WHO Science Council Secretariat Team  

Anna Laura Ross  
Head, Secretariat for the Science Council  
Unit Head, Emerging Technologies, Research Prioritization, and Support  
Danny Sheath  
Technical Officer, Secretariat for the Science Council  
Veronique Bruniquel  
Assistant, Secretariat for the Science Council  

Other WHO Participants  

Elena Ambrosino  
Consultant, Genomics  
Francesco Branca  
Director of Nutrition and Food Safety  
Ana Maria Henao-Restrepo  
Technical lead for the R&D blueprint for emergency response  
Marion Laumonier  
Technical officer, Emerging Technologies, Research Prioritization, and Support  
Katherine Littler  
Co-Unit Head, Health Ethics and Governance  
Oyuntungalag Namjilsuren  
Unit Head, Department of Communications  
Olufemi Oladapo  
Unit Head, Maternal and Perinatal Health
Thidar Pyone
Technical Officer, Chief Scientist’s Office

Kumanan Rasanathan
Director, Alliance for Health Policy and Systems Research
Human Reproduction Programme

John Reeder
Director of Research for Health
Director of TDR, the Special Programme for Research and Training in Tropical Diseases

Andreas Reis
Co-Unit Head, Health Ethics and Governance