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**STRATEGY FOR SCALING UP HEALTH INNOVATIONS
IN THE WHO AFRICAN REGION**

Report of the Secretariat

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EXECUTIVE SUMMARY

1. With the increasing rate of globalization, innovation has become a key differentiating transformative feature that defines long-term sustainable impact on improving the quality of life of the world's population. There is an even greater demand for Africa to intensify its innovation effort to address its contextual challenges. The demand for innovation is even higher in the health sector where health outcomes are poor, despite global progress in reducing deaths among mothers and children, and fighting infectious diseases. Worse health outcomes are experienced in fragile contexts and among marginalized groups.
2. Maintaining the current trajectory will not suffice to meet health demands and to address major gaps that still exist in the majority of African countries. Therefore, Africa should strive to develop high-quality health systems powered by continuous innovation to respond to changing population needs. Several studies have underscored the unprecedented opportunities for Africa to deliver good quality health care by leveraging emerging technologies and innovations.
3. However, the majority of Member States in the African Region lack the capacity to create sustainable demand and scale up health innovations to meet the needs of their most vulnerable citizens. A regional strategy geared towards supporting the development and scaling up of locally appropriate innovative health solutions is urgently needed for better health outcomes in the African Region.
4. This strategy presents an opportunity for Member States to strengthen their innovation systems to make them responsive to the innovation needs of the African Region. Success in developing a functional innovation system that harnesses and scales up new and improved innovations will be a key determinant in achieving UHC and the health-related SDGs.
5. The Regional Committee reviewed and adopted this strategy.

INTRODUCTION

1. Innovation is broadly defined as a new solution with the transformative ability to accelerate impact.¹ This entails introducing a new product or modifying an existing one; new processes for delivering services and products; improved ways of working with new and diverse partners; or new social, business and organizational models. In the context of health care, innovation is aimed at enhancing life expectancy, quality of life, diagnostic and treatment options, as well as the efficiency and cost-effectiveness of the health system.

2. The twentieth century witnessed transformation in global health driven by innovations, leading to increased life expectancy and quality of life.² A similar trend is envisaged as new technologies and non-technological innovations continue to improve the provision of health care at a rapid pace. The advent of artificial intelligence, genomics, stem cell research, surgical robotics, telemedicine and mobile health applications continues to contribute towards the improvement of health-care delivery systems.³

3. Despite potential returns, a study by the World Bank group reported that African countries invest far less in innovation (approximately 0.01% per capita) than advanced countries.⁴ The report showed that the majority of African countries lack, to varying degrees, strong institutions, skilled human capital, appropriate infrastructure, technology and creative outputs, and market and business sophistication. The 2019 Global Innovation Index⁵ showed that only seven sub-Saharan countries⁶ are ranked among the top 100.

4. Effectively harnessing opportunities presented by emerging technologies and non-technological innovations requires a comprehensive strategy that creates an enabling environment to stimulate and nurture creativity for sustainable impact. Therefore, national governments and other key stakeholders, including the private sector, must collaborate to leverage resources, time and efforts to build and manage national innovation systems for sustainable and inclusive development.

¹ Development Innovation Principles in Practice: Insights and Examples to Bridge Theory and Action. https://static1.squarespace.com/static/5b156e3bf2e6b10bb0788609/t/5e1f09eec7a87d3abb5e1878/1579092477655/8+Principles+of+Innovation_FNL.pdf. (Last accessed March 2020).

² Health and Development in the 20th Century https://www.who.int/whr/1999/en/whr99_ch1_en.pdf?ua=1. (Last accessed March 2020).

³ Health and Healthcare in the Fourth Industrial Revolution. http://www3.weforum.org/docs/WEF_Shaping_the_Future_of_Health_Council_Report.pdf. (last accessed March 2020).

⁴ The Innovation Paradox Developing-Country Capabilities and the Unrealized Promise of Technological Catch-Up. <https://openknowledge.worldbank.org/bitstream/handle/10986/28341/9781464811609.pdf?sequence=4&isAllowed=y> (Last accessed March 2020).

⁵ Global Innovation Index 2019 Creating Healthy Lives—The Future of Medical Innovation https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2019.pdf (Last accessed March 2020).

⁶ Botswana, Kenya, Mauritius, Rwanda, Senegal, South Africa, and United Republic of Tanzania.

SITUATION ANALYSIS AND JUSTIFICATION

Situation analysis

5. In an increasingly globalized world, innovation has become a key differentiating feature that defines long-term sustainable impact. Innovation has, however, been the privilege of developed nations given the high research and development costs and investments in human capital that are required. Notwithstanding the innovation shortfall, there is also an increasing demand for African innovations that stem from the extreme need to find immediate, sustainable solutions for critical challenges on the continent.

6. Health indicators in the African Region, for instance, have the lowest scores despite global progress in reducing deaths among mothers and children, increasing life expectancy and fighting infectious diseases.⁷ Health outcomes are even worse in fragile contexts, rural areas, urban slums, and conflict zones, and among marginalized groups, including poor people and those with disabilities. Emerging socioeconomic dynamics and epidemiological changes related to unplanned rural-urban migration, and climate change are contributing to an increase in the burden of disease.⁸

7. The Lancet Commission on the future of health in sub-Saharan Africa⁹ underscored the need for Africa-based and home-grown innovations to deliver better health outcomes. The key message of the Commission is that the opportunities ahead cannot be unlocked with more of the same approaches and by keeping to the current pace, but countries are rather encouraged to chart their own sustainable innovative path to improve the health of their citizens.

8. An expert consultation meeting convened by WHO in the African Region on Scaling Health Innovations in Africa¹⁰ underscored the need for Member States to make strategic shifts that prioritize innovation to deliver health care and respond to changing population needs. The review on health research and innovation by the development agency of the African Union, AUDA-NEPAD¹¹ noted the lack of systematic approaches at national level in setting priorities and coordinating the scaling up of high-impact innovations in Africa.

9. The inaugural WHO Innovation Challenge¹² launched in October 2018, which unearthed more than 2400 innovative solutions¹³ demonstrated the potential that exists on the continent for developing innovations to solve Africa's health challenges. The use of Zipline medical drones to deliver lifesaving medical products in Rwanda¹⁴ and Ghana¹⁵ has demonstrated the impact innovation

⁷ United Nations. The Sustainable Development Goals Report 2019 <https://unstats.un.org/sdgs/report/2019/The-Sustainable-Development-Goals-Report-2019.pdf> (Last accessed March 2020).

⁸ Non-Communicable Diseases and Urbanization in African Cities: A Narrative Review <https://www.intechopen.com/online-first/non-communicable-diseases-and-urbanization-in-african-cities-a-narrative-review>. (Last accessed March 2020).

⁹ The path to longer and healthier lives for all Africans by 2030: the Lancet Commission on the future of health in sub-Saharan Africa [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(17\)31509-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)31509-X/fulltext). (Last accessed March 2020).

¹⁰ <https://oasiswebsoft.com/our-founder-joins-who-consultation-team/> (Last accessed March 2020).

¹¹ Health Research and Innovation Strategy for Africa (HRISA) 2018-2030. <https://www.nepad.org/publication/health-research-and-innovation-strategy-africa-hrisa-2018-2030> (Last accessed March 2020).

¹² WHO Africa Innovation Challenge: Promoting African Solutions for Africa's Health. <https://www.afro.who.int/media-centre/events/world-health-organization-africa-innovation-challenge-promoting-african>. (Last accessed December 2019).

¹³ Winners of inaugural WHO Innovation Challenge announced. <https://www.afro.who.int/news/winners-inaugural-who-innovation-challenge-announced>

¹⁴ Drones Are Now Delivering Critical Medical Supplies in Rwanda <https://www.globalcitizen.org/fr/content/drones-now-deliver-medical-supplies-rwanda/>

can achieve when properly harnessed. The way forward is for Member States to play catalytic roles by creating evidence-based policies, strategies and incentive mechanisms to support uptake and integration of promising innovations within national health systems.

Justification

10. Innovation has been identified as a critical component in accelerating the achievement of universal health coverage (UHC)¹⁶ and the Sustainable Development Goals (SDGs).¹⁷ The WHO Thirteenth General Programme of Work, 2019-2023 (GPW 13)¹⁸ and the United Nations SDG Decade of Action underscore the importance of innovation as a transformative approach to accelerating progress towards the achievement of both UHC and the SDGs.

11. Therefore, Member States need to build capacities and institutional mechanisms to harness and manage innovations that are tailored to local needs. To achieve this goal, countries urgently need to develop dynamic and integrated strategies geared towards supporting the development and scale-up of locally-tailored innovations to accelerate and sustain better health outcomes in the African Region.

THE REGIONAL STRATEGY

12. Aim, objectives and targets

Aim

13. To effectively harness and scale up high-impact innovations that address unmet health needs and accelerate health outcomes.

Objectives

- (a) To foster development, identification and selection of appropriate health innovations and technologies based on needs assessments and local priorities.
- (b) To develop and implement effective policies and incentive mechanisms.
- (c) To create and operationalize innovative financing models, including non-fiscal and de-risking mechanisms.
- (d) To continually infuse new innovative ideas into the existing innovation platforms.
- (e) To foster implementation research for health innovation for local contexts and sustainability.
- (f) To develop and maintain a skilled workforce through rolling out training packages and tools.

¹⁵ Zipline's drone delivery of medical products expanded into Ghana. <https://www.pharmaceutical-technology.com/news/zipline-ghana-medical-supplies-drones/>

¹⁶ Innovation and universal health coverage. <https://unitaid.org/assets/Special-Report-Innovation-in-universal-health-coverage.pdf> (Last accessed May 2020).

¹⁷ Science, Technology and Innovation for the SDGs. <https://www.un.org/development/desa/indigenouspeoples/science-technology-and-innovation-for-the-sdgs.html>. (Last accessed May 2020).

¹⁸ Thirteenth general programme of work 2019–2023. <https://www.who.int/about/what-we-do/thirteenth-general-programme-of-work-2019---2023> (Last accessed May 2020).

Targets

By 2023

- (a) 80% of Member States have performed needs assessments to identify critical gaps in their health systems that need support with innovations and designed the corresponding target product profiles.
- (b) 75% of Member States have developed policies and incentive frameworks to stimulate development of high impact health innovations.
- (c) 50% of Member States have developed analytical tools to assess the economic and social impact of innovations to support decision-making.
- (d) 80% of Member States have established high-level coordination mechanisms to facilitate the scaling up of innovations that meet the needs of the most vulnerable populations.

By 2025

- (a) 80% of Member States have developed national patent systems to fully reflect the flexibilities provided in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS),¹⁹ including those recognized in the Doha Declaration on the TRIPS Agreement and Public Health.
- (b) 75% of Member States have established national regulatory mechanisms that fast-track the review of the science and maturity of innovations.
- (c) 60% of Member States have a clear approach to engaging other key stakeholders, including the private sector, to support the scaling up of locally developed health innovations.

By 2030

- (a) 80% of Member States have well-functioning country-level forums and innovation hubs to support the generation of innovations and knowledge management.
- (b) 80% of Member States have adopted educational and training approaches and other investments needed to support the development and effective diffusion of new health innovations.
- (c) 90% of Member States have established and operationalized mechanisms that foster joint learning and sharing of best innovation practices.

¹⁹ Amendment of the TRIPS Agreement. https://www.wto.org/english/tratop_e/trips_e/wtl641_e.htm (Last accessed February 2020).

Guiding principles

14. **Leadership for innovation:** Shaping the innovation agenda is the primary responsibility of national governments. This includes proactive leadership in defining priority innovations informed by local needs.
15. **Innovation pipeline:** Priority should be given to innovations that are locally-generated, with a focus on supporting the poorest and most vulnerable, in order to achieve lasting development impact.
16. **Access to health care:** This entails supporting the scale-up of innovations that improve global access to quality health care in the context of universal health coverage.
17. **Collaboration and partnership:** The goal is to foster the spirit of collaboration among key stakeholders, including civil society, the private sector and other actors, to work together to design and realize path-breaking improvements in service delivery, products and policies.
18. **Inclusive innovation for all:** Mainstream community engagement, including people with disabilities and special groups, in the design and adoption of innovative solutions, by supporting them with tools and resources as innovators.
19. **Gender mainstreaming and equity:** Mainstream participation of women in innovation development, including by making available tailored funding to encourage women's participation in the health innovation space.
20. **Intelligent risks:** Take intelligent risks by experimenting with the use of evidence-based approaches and ensuring a “no harm” effect.

Priority interventions

21. **Establishing country innovation scaling platforms at the highest national level:** An institutional oversight platform, among other functions, is required to set priorities and help coordinate the scaling up of high-impact innovations. This approach is essential for creating an enabling environment for large-scale investment, building major infrastructure, and boosting knowledge to use and adapt technology.
22. **Establishing an innovation management information system:** Member States should leverage existing platforms like the WHO Digital Health and Innovation online datastore²⁰ to register, track and publish innovations at country level. The Digital Health Atlas is a WHO global technology registry platform aiming to strengthen and improve coordination of digital health solutions at country level.
23. **Aligning policies across different sectors to facilitate the development and scaling up of health innovations:** Member States need to develop coherent, intersectoral policies for innovation that are flexible enough to include different policy approaches and different forms of innovation and associated activities.²¹

²⁰ The World Health Organization Digital Health atlas. <https://digitalhealthatlas.org/en/-/> (Last accessed May 2020).

²¹ Fostering Innovation: The Policy Challenge <https://www.oecd.org/berlin/45331377.pdf> (Last accessed December 2019).

24. **Developing evidence-informed strategies for implementing decisions:** There is need for a more explicit performance and impact measurement strategy that consistently assesses the benefits of government expenditures for each innovation. Member States should generate evidence on the science and impact of new and improved health innovations to inform implementation decisions. Evidence should include cost-benefit analyses, return on investment, and trade-offs in consideration of maximizing the effectiveness of the overall system.
25. **Establishing incentive mechanisms for innovations linked to the needs of vulnerable communities:** When developing a portfolio of approaches, Member States should ensure sustainable access to new interventions, particularly innovations with limited commercial markets, that serve marginalized populations. For instance, Member States should directly support development of innovations that meet the needs of vulnerable populations by collaborating on advanced research and development.
26. **Developing an ethics and risk management process:** Member States should develop guidelines on risk management that describe how to assess, manage and mitigate risks associated with various types of emerging technological innovations. Member States should reduce the technical, commercial and financial risks associated with innovation through funding research and development, demonstration projects and insurance liability caps.
27. **Establishing a mechanism to facilitate information flow among stakeholders:** Member States should make information available, including preferred product characteristics, to meet market expectations, access to information regarding patents,²² potential approaches to navigate regulatory pathways, and innovation priorities to inform resource requirements including incentives.
28. **Ensuring integration of new products and services in the health system:** Member States should create opportunities to collaborate with researchers and product developers early in the development process to enable innovations to be integrated within health systems. This approach prepares governments to make necessary investments that facilitate the process of integration, which may require new infrastructure and processes.²³
29. **Institutionalizing innovation training for all stakeholders in health:** Health workers, including community health workers, should participate in capacity-building training to develop the skills needed for adoption and scaling up of new technologies. An innovation toolkit should be developed to provide innovation management skills. After the training, health workers will be able to provide ongoing monitoring and feedback on the performance of adopted innovations especially with regard to access, quality, efficiency and patient experience.²⁴
30. **Optimizing the regulatory environment:** Member States should develop regulations and standards that can serve as incentives to facilitate quicker adoption and scaling up of health innovations. For instance, they can design an intellectual property system that is favourable for local innovators and for public health.

²² The role of intellectual property in local production in developing countries; Opportunities and challenges. https://www.who.int/phi/publications/int_prop_role_local_prod_opportunities-challenges.pdf?ua=1 (Last accessed December 2019).

²³ Ackerman, E., & Strickland, E. (2018). Medical delivery drones take flight in East Africa. *IEEE Spectrum*, 55(1), 120-125.

²⁴ How do we ensure that innovation in health service delivery and organization is implemented, sustained and spread? http://www.euro.who.int/_data/assets/pdf_file/0004/380731/pb-tallinn-03-eng.pdf (Last accessed December 2019).

31. **Ensuring access to new technologies in rural areas:** Member States should adopt emerging technologies with a potential to leapfrog health interventions that benefit hard-to-reach areas, especially rural areas with limited access to health services.

32. **Establish health innovation financing mechanisms through public-private partnerships:** Member States should create a financing mechanism in collaboration with the private sector, dedicated to scaling up innovations that meet the needs of the most vulnerable populations and promote linkages and adaptation of worldwide technological experiences.

33. **Fostering a culture of innovation:** National leaders should support innovation efforts by their citizens, even when those efforts do not yield the desired results. Reward and special recognition of sustainable ideas or solutions crowdsourced through innovation competitions is one way of encouraging and fostering the spirit of innovation, especially among young people.

Roles and responsibilities

34. Member States should:

- (a) commit adequate resources, including increasing domestic funding to support the implementation of this strategy;
- (b) provide leadership, management and advocacy, including:
 - (i) setting up governance and management mechanisms at the highest level;
 - (ii) developing accountability agreements among collaborating partners and organizations;
 - (iii) developing performance agreements among partners, including the use of sanctions for breaching processes and procedures; and
 - (iv) providing sustained support to participating organizations;
- (c) build and ensure strong political support at the different tiers of the health system to facilitate adoption of locally developed, innovative solutions that suit local contexts.

35. WHO and partners should:

- (a) develop and disseminate technical guidance to support implementation of this strategy, including development of standard operating procedures (SOPs), and monitoring and evaluation;
- (b) facilitate synergies and complementarity in partnerships for the implementation of this strategy in the context of the Global Action Plan for Healthy Lives and Well-being for All;²⁵
- (c) catalyse mobilization of domestic and external resources, and support the development of an investment case to strengthen local institutional capacities to scale up health innovations;
- (d) establish a regional team of experts to build country capacity to identify and select health innovations through rigorous needs assessment and priority-setting based on gaps in health systems, disease burden, cost-effectiveness, affordability and scalability;

²⁵ Stronger collaboration, better health: global action plan for healthy lives and well-being for all <https://www.who.int/publications-detail/stronger-collaboration-better-health-global-action-plan-for-healthy-lives-and-well-being-for-all>. (Last accessed December 2019).

- (e) conduct capacity-building activities to build local manpower on innovation and innovation management.

RESOURCE IMPLICATIONS

36. Implementation of this strategy will require national and international commitment. The level of funding needed by WHO to support implementation will be estimated based on the number of Member States requesting technical and financial support.

37. Member States should cost, mobilize and allocate financial and human resources to implement their plans. They should create sustainable mechanisms for partner coordination in order to pool resources from partners and make optimal use of the opportunities created by the private sector, civil society organizations, development partners and other sectors.

MONITORING AND EVALUATION

38. A comprehensive monitoring and evaluation tool and framework, with a set of indicators for monitoring both region-wide and country targets, will be developed by 2021. These shall be used by WHO to evaluate implementation of the strategy every two years. WHO will support Member States to regularly review the implementation of this strategy.

39. A progress report on the implementation of the regional strategy will be presented to the WHO Regional Committee for Africa every two years starting in 2023.

CONCLUSION

40. This regional strategy will mark a shift towards advancing affordable access to quality care and enhancing equity by improving health outcomes, particularly among people living in the lowest-resource settings. Success in developing a functional innovation system that harnesses and scales up new and improved innovations will be a key determinant in achieving UHC and the health-related SDGs.

41. The opportunities to accelerate health outcomes in the African Region cannot be unlocked with the same approaches or by keeping the current pace. Therefore, a strategic approach based on people-centred health systems that can be adapted in line with each country's specific needs remains critical. With sustained commitment to good governance and health investment, cross-sectoral action, and leadership geared towards development and the use of innovations, closing the health gap in a generation is well within reach in Africa.

42. The Regional Committee reviewed and adopted this strategy.