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Using science, technology and innovation to close the gap on Sustainable Development Goal 3, good health and well-being

Statement submitted by

Ms. Joannie Marlene Bewa
Physician, Board Chair of Women in Global Health
United Nations Young Leader for the Sustainable Development Goals

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Dr Joannie Bewa, MD, MPH

Physician & Researcher, University of South Florida

Founder, Global Health and International Development Program (GHID)

Thank you for the invitation to join the 24th session of the UN Commission on Science and Technology for Development (**CSTD**) annual session on "Using science, technology and innovation to close the gap on Sustainable Development Goal 3 on good health and well-being.

As a medical doctor and researcher at the University of South Florida college of public health in the US and Founder of the Young Beninese Leaders Association in Benin, my research work started with exploring scientific approach to help improve maternal health, including feasibility study to develop digital solutions, critical leading causes of death in Benin Republic. My work is around producing evidence in maternal, sexual and reproductive health globally but also engaging stakeholders on health-related issues such as gender in health, supporting health care workers and innovation in health.

- Around the world, every day, approximately 830 women die from preventable causes related to pregnancy and childbirth.
- 99% of all maternal deaths occur in developing countries.
- Young adolescents face a higher risk of complications and death as a result of pregnancy than other women.

- The overall pooled prevalence of adolescent pregnancy in Africa is between 9.2 to 21.5%
- There are health inequities and disparities, and Science Technology and Innovation can play a critical role toward equity in reaching SDG3, Universal health coverage and beyond.

Context, political will, social and economic status, infrastructure matter in addressing Health. Frontier technology are at the intersection of radical forward thinking and real-world implementation and they do define the future of health, economy, climate change, sustainable development and beyond. **Developments in frontier technologies can provide opportunities for developing countries especially in Africa to accelerate their efforts to strengthen their national health systems.**

- Science, innovation and technologies have been proven effective in prevention, early detection, treatment, disease surveillance, preparedness and response, health systems strengthening and policy making efforts.
- These include improving access and quality of care, improving health literacy among patients and health professionals with a direct impact on reaching universal health coverage.
- I have seen efforts made by the ministry of numeric digital economy in Benin in as well as other country in building strong innovation and science ecosystems which I believe are drivers of innovation. In Benin, mobile health is rising and improving access to care and health information. Talented innovators exist and are revealed on the continent. In other countries, drones are sued to deliver bloods, AI

and data mining used to predict outbreak, and new contraceptive technology developed.

- What cannot be timely measured in real time cannot be immediately addressed, nor prioritized. Strengthening Electronic health information systems is critical, generating and capturing such data at service delivery points are needed for subsequent analysis and decision making. There is a need to support adoption and strengthening health governance.
- The example of COVID19 innovations in contact tracing, vaccine development, testing, 3 D printings, artificial intelligence (AI) and data mining processes are illustrative.
- Machine Learning, not only help automate health data analysis using algorithms that examines patterns in data; Signal Processing used in settings that are limited in resources to collect digital data when combined with machine learning and cloud computing data. Voice Activation technology in LMIC help underserved and individuals with low literacy levels to access health information.
- Digital payments_ in health sector_ to reach the poor populations that need them and can address issues with financial systems that make efficient transactions difficult.

We are in a pandemic and I would like to quote the recently released report of the independent panel on pandemic preparedness and response established by the World Health Organization Director General, which made strong recommendations on a wide range of subtopics including science to help accelerate vaccine production, covid 19 test and therapeutics including oxygen.

There are risks associated with frontier technologies in healthcare but also opportunities:

- Data Breaching and Cybersecurity
- Technology dividends may not be equally shared for countries without policy interventions which can further widen inequalities.
- Increasing the digital divide
- Innovation, diffusion and adoption of technologies
- Interoperability across systems and technologies

However, it is critical to develop strategies for clear deployment and adoption of innovation building on socio-behavioral science and theories such as the diffusion of innovation. Funding science and locally developed knowledge will make a difference, funding scientists including women in science and health will help address gender inequity in health care and innovation. Let's leverage the opportunities for policy making and coordination and make long term and sustainable investment.

In conclusion, I recommend a 3 steps approach:

- **Reach** the most vulnerable populations and ensure equitable access to health care and engage countries less visible in science, technology and innovation capabilities.
- **Preach** and urge stakeholders to invest in sciences, technology and innovation programs overall, especially in the health sector.
- **Teach** and strengthen human capacity around the most in demand skills in sciences, technology and innovation.