In the era of AMR, Tuberculosis is a priority!

A discussion with Dr Soumya Swaminathan, WHO Chief Scientist, and former Deputy Director-General.

Question: The Executive Board adopted the big programme of one billion people under UHC with an emphasis on AMR and global health security.

Soumya Swaminathan: As Dr Tedros often says, you need all sectors for universal health coverage (UHC) and similarly you need UHC to make progress in any of the other Sustainable Development Goals (SDGs), so our focus is to help countries to strengthen their health systems in all their different aspects. WHO's role is going to be focussed on countries and what those countries need.

And we see that as a change in the way we operate, so we are no longer content just to produce guidelines, norms and standards, but to go a step further and ensure that they are adopted and implemented at country-level. And this will be done by ensuring that headquarters here in Geneva, and regional and country offices, are all working as one. So, for example, if a country doesn't have the technical expertise, it will be our responsibility to arrange that, either from headquarters or from a regional office. This is going to be challenging, a new way of working in addition to our normal work, but it will be very rewarding.

When we look at the causes of death in people between 30–69 years of age, TB is the fifth leading cause of death in India, after cardiovascular disease, strokes, cancers and chronic respiratory disease. It is the number one infectious cause of death in the reproductive age group globally, and so it is a matter of great concern for all of us.

Question: Who are your partners in these huge endeavors?

Soumya Swaminathan: We absolutely need to work with partners to avoid duplication, mobilize more people, try to leverage resources where they exist and create a common goal. That's where we need your input on how to use civil society groups towards this idea on the demand side of UHC, ensuring access and equity. How can WHO work more creatively with civil society partners?

Question: As was pointed out at the Executive Board itself by Dr Tedros' head of cabinet, the ministry of health (MoH) is rarely a leading powerful ministry in most countries, isn't that going to be a problem?

Soumya Swaminathan: In the past, health has not been high on the political agenda for any country, unlike infrastructure, energy or electricity. Healthcare infrastructure is never on the list of demands. That needs to change, we must realize the importance of good health – also in creating GDP – and making governments accountable. So it's elevating and brings up the question of placing health in the priorities list.

Health should not just be the business of the health ministry but should concern everyone as all policies affect health.

That's also a big change for us, as WHO normally works most closely with the ministries of health. However, with the triple billion targets, we will need to reach and engage with other ministries – finance, agriculture, education, environment – and so on.

And we have other UN partners.

Question: After the EB, I was reminded of the "3 by 5" initiated by Dr Jim Kim when he was head of HIV at WHO (long before the World Bank) and everyone laughed at the idea, but we mobilized civil society and it worked.

Soumya Swaminathan: Yes we need the same kind of mobilization for attaining universal health coverage, protection from outbreaks and emergencies and living healthier lives, the three billion.

Question: You were notably known in India as Secretary of Health Research and Head of the Indian Medical Research Council, for

your advocacy on Tuberculosis. TB results in half a million death a year, and lately you mentioned the importance of doing a national prevalence survey and also the importance of patients being aware of their disease

Now TB comes very much under UHC, because of access to health systems... But we would like to hear your thoughts?

Soumya Swaminathan: Most countries that have done TB prevalence surveys have come up with higher estimates than before. So that's why every year WHO estimates of new cases go up a little. So it is very important for India to start that in 2019, even if it takes two years. India is the highest burden country, hence a national effort on TB will change global statistics.

Tuberculosis is the most important infectious disease in terms of morbidity and mortality, its control is central to the effort on keeping down antimicrobial resistance.

Question: What are the main problems to overcome?
Soumya Swaminathan: The big issue is the involvement of the private sector, we don't have the same quality in the private sector as in the public sector. We have known that for a long time, indeed, I think that it's linked to UHC, because if people can go to a good public health centre and have confidence in the healthcare provided there, they may prefer that than going to a private provider, but the public centres will also have to be convenient, respectful and responsive.

We started the "Free TB Chennai project". It mobilizes private sector, does not try to take the patients away from them, but provides inputs to improve their quality of care.

It brings accountability in the sense that doctors have to report on the patients to get the drugs and free diagnostics. It reduces the out of pocket expenditures for the patients.

We have to see how these experiments will work. And it will be linked to active case finding, active civil society mobilization and involve all sectors of society.

So on the one hand, seeking more patients, but on the other hand, delivering more care, better quality care.

The municipal corporation of Chennai took the lead on this initiative. It took many years to get off the ground, beceause we wanted a sustainable model rather than an external funder providing incen tives, as was done in other places and people go back to their old ways when there are no more incentives.

Question: So do you think that there is need for more investments in public health in your country?
Soumya Swaminathan: Definitely. It has already been articulated in the national heath policy for the 2017 budget. Last year, the government launched the Ayushman Bharat programme, which provides insurance cover to the 500 million poorer people in India and also strengthens primary healthcare. Public investments in health overall are essential to implement UHC, as well as to control TB and MDR TB.

"Due to lack of guidance, most patients do not know what whether they have drug-sensitive or drug-resistant TB; they do not know what drugs they are taking; what are the possible side effects of the drugs; why they are taking them for that duration and what will happen if they stopped. So the role of counselling cannot be over emphasized.

Question: What of patients' access to diagnostics?
Soumya Swaminathan: Currently the programme provides free access to TB diagnosis as well as drug-resistance testing to all confirmed cases of TB. This is using molecular tests in most cases. So, this is a big improvement over the previous status.

Question: I was happy to see India adopted a national Infection Prevention and Control Program (IPC) because as someone working on AMR, I have noted that while IPC is supposed to be a priority in the Global Plan on AMR (GAPAMR) adopted in 2015, it is, to this day, a neglected issue by most countries. I was discussing this with Dr Matshidiso Moeti, WHO Regional Director for Africa, in the hallways of the WHO Executive Board meeting back in November, and I was glad to see she agreed fully and she was saying most countries in African health systems don't have any semblance of IPC?
Soumya Swaminathan: There is no doubt about the importance of infection prevention and control. The question is how do you incentivize facilities and health workers, how do you make sure that hospitals follow these programmes?

In India, the Kayakalp programme gives awards to the best hospitals and health centres based on cleanliness parameters. At the district level, several hospitals won awards and this created healthy competition.

It also creates awareness because there is a check list, but it's difficult to get people to do the right things on hand hygiene or disposal.

Ranking health facilities is good too. It will be good to have data on hospital acquired infections (HAI), and AMR on their websites, very few hospitals have agreed to do that...But it works: over a period of time you see rates going up or going down.

The models developed and lessons learned in implementation and expansion of HAI surveillance and IPC capacity building in India apply to other countries in South East Asia that also have a mix of public and private sector facilities, higher capacity referral centres in urban areas, and a large number of resource constrained healthcare facilities in both urban and rural areas. [This]...will improve the detection and prevention of AMR in India and other countries in the region.

Question: *"You started here with the awesome task as DDG to handle all programmes, now you've been tasked with a great opportunity as Chief Scientist to strengthen WHO. Could you elaborate for us on your vision?"*

Soumya Swaminathan:: For 70 years, WHO has been trusted as the world's standard setter for health. From our treatment guidelines to our Essential Medicines (and more recently, Essential Diagnostics) List, to the International Classification of Diseases, we set the standards that billions of people rely on. So, one may ask, why was there a need to create a separate science division now? Over the past year, under the leadership of Director-General Dr Tedros, the organization has been engaged in a process of self reflection and critical appraisal of our processes. This resulted in several new ideas and a realization that in order to be relevant and meet the needs of our member states, we need to radically redesign our major processes to refresh and modernize the organization.

The Science division has been created to underline the importance of WHO's role in providing evidence-based guidance on health, to strengthen it by ensuring our norms and standards are based on the best evidence, are driven by country needs and translate into health impact.

Further, there was a felt need to harness the power of science and innovation and to ensure that advances in technology could be rapidly introduced and scaled up in settings with the most pressing health needs and the least resources. Around the world, IT and digital tools are changing the way healthcare is delivered right across the continuum of care. For example, with the penetration of mobile phones in the most remote settings, it is now possible to leapfrog into an era of rapid information flow where data can be used to make decisions that no longer need face to face contact between patients and doctors. Artificial intelligence-based health applications are increasing rapidly and there is a need for a framework for regulation, validation and "prequalification", similar to the regulation of drugs, medical devices and vaccines. WHO has a unique role to play in advising countries on how to maximize the opportunities of digital technologies, while avoiding the pitfalls, and supporting countries to make decisions about how to prioritize, integrate and regulate them.

The new Science Division will ensure that WHO is ahead of the curve, setting the agenda, driving research and innovation and ensuring it works for people.

Another area where the Science Division can play a catalytic role is promoting R&D and innovation in areas where traditional approaches have not worked. In order to support the SDG3 and WHO's GPW13 goals of expanding universal health coverage, outbreak prevention and response and healthier lives, we would like to bring together the big global health funders and research agencies to work with WHO and programme staff and scientists from LIC and LMIC to undertake implementation research in a few areas with potential for high impact. These include research to strengthen primary care, cancer prevention and management, strategies to prevent and reduce AMR and chronic disease management. ∎

The above discussion was started with Garance Upham in 2018 for AMR Times and continued as Dr Swaminathan became Chief Scientist.

Dr Soumya Swaminathan, Chief Scientist, World Health Organization

Formerly, Secretary, Department of Health Research (Ministry of Health & Family Welfare), Government of India, & Director General, ICMR, Indian Council on Medical Research, she has vast experience in health research and research administration. She was also Director, National Institute for Research in Tuberculosis (NIRT), Chennai from August 2012 to August 2015.

After completing her MBBS from AFMC, Pune and MD in Paediatrics from AIIMS, New Delhi, further training included a Fellowship in Neonatology and Paediatric Pulmonology at the Children's Hospital of Los Angeles, University of Southern California, USA and a Research Fellowship in the Department of Paediatric Respiratory Diseases, University of Leicester, UK. She has spent over 25 years in health research, notably focussing on TB, and the role of nutrition and HIV-associated TB. She also served for two years as Coordinator, Neglected Tropical Diseases at TDR.

She holds many professional memberships such as International Union Against Tuberculosis and Lung Diseases; International Scientific Advisory Expert Group for the All-Party Parliamentary Group on Global Tuberculosis (APPG TB), UK; and Third World Organization of Women Scientists.

A fellow of three of India's science academies. She has over 230 publications in international and national journals and several book chapters.