

WHO, WIPO, WTO Symposium stresses boosting manufacturing for non-communicable diseases

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Keynote speech delivered by Dr Jeremy Farrar - Chief Scientist WHO

Thank you very much for the opening speeches, introductions, Excellencies and colleagues

Director-General Ngozi, Director-General Daren Tang. Dr Tedros would have dearly loved to have been here, but on behalf of Assistant Director General Yukiko, a very warm welcome to everybody, it's a huge honour to join you this morning. I'd also like to give my thanks to Dr. Guy Fones, who's been so influential in helping us at WHO in preparing for this meeting, Guy, thank you very much indeed.

I'll hopefully pick up on a few of the themes that have already been mentioned in the opening remarks. I could not agree more with those opening remarks from DG Ngozi, Dr Tang and ADG Nakatani and perhaps now use the opportunity to broaden the themes. I believe we are on the cusp of an opportunity, an opportunity we must seize.

In this very uncertain and challenging world that we live in, it can be difficult to see over the horizon to a more optimistic and hopeful future. But that's what we must do, because it can be all too easy to get into a cycle where it's easy to give up, almost difficult to watch the news in the morning, and if it's difficult for those in my generation, I can promise you that for those younger than some of us in this room, it's even harder, a burden of anxiety, and a sense for perhaps the first time in many decades, that the future does not look as bright as the past. That is not an approach, or perspective in which we will address the challenges and forge a better world.

I was fortunate enough during this week to be in Stockholm for the Nobel Prize ceremonies and honoured to join the Nobel Dialogue on Monday, which was live streamed and is available on a social media channel if you wish to watch it.

There was a lesson that I took away there from a good friend, Sir Michael Marmot, who has led work for many decades, often as a lone voice on the social determinants of health. It was this. I used the word optimism. But on the panel, he corrected me and that it must be a sense of hopefulness. And he defined hopefulness as "Optimism plus Action". Optimism on its own is too abstract a concept, if you add action to that, we can make a difference. And in this very uncertain, difficult world, I think those of us fortunate to be in positions of agency and power need to make the case that optimism plus actions can indeed turn us to a brighter future.

I think this coming today of our three agencies, the WTO, WIPO and WHO is one opportunity to do that.

So, I thank you for hosting us and I look forward to working together with everyone here and beyond in the future to address our challenges and look over the horizon to a better world. We could debate what we think are the greatest challenges we face, in far too many parts of the world now, there is the tragedy of conflict going on devastating the lives of so many. But beyond these multiple and terrible conflicts, for this talk I will focus on two issues which I think are also driving the future which we must respond to.

In my view, the greatest threat to humanity this century is climate change and its impact on everyone, everywhere. But there is also, in my view, an underestimated trend that is now and will in the coming years affect every community and every country, and that is the demographic changes. These two changes are the key drivers that result in many of the other threats we face, from pandemics to biodiversity loss, urbanisation and the shifting pattern of infections and non-communicable diseases. I will focus here on the demographic changes of falling birth rates and aging populations, which together are having profound impacts on all aspects of societies as we heard earlier in the opening speeches, on the changing patterns of health and ill-health, and specifically the non-communicable disease agenda. As DG Tang said, this is no longer an issue for just some parts of the world, it is affecting every country in every part of the world. At the WHO this is a health agenda, but it's much broader than health. Because although we talk about the 40 million deaths,

often premature deaths each year, from non-communicable diseases, we underestimate the impact on people's lives of the non-communicable diseases, often during their working lives, whether it's mental health issues in all ages, but particularly the young, whether it is cardiovascular or neurological disease, diabetes, cancer or multimorbidity. These are the issues which are affecting our health in all our families, all our communities, but they are also affecting the economic opportunity and growth prospects for every country on earth. So, although we must focus on the 40 million deaths that are occurring every year, and do all we can to reduce this, we should also not ignore the morbidity, the illnesses that happen often prematurely, which leads to ill-health and often out of pocket health expenses but also all too often stops people contributing to their families, their communities and yes to the economy.

This is primarily a health agenda. But we would be wise not to separate this health issue from the broader societal impact and for communities that we're part of. Instead, we must increasingly put health into the social and cultural and economic context and prospects of countries if we are going to make the maximum difference but also if we are to convince people in the political and policy arena that this matters not just as a health agenda, but also for economic growth, trade, opportunity, jobs, and the well-being of all of our citizens. So, bringing these together through the WTO, WIPO, and WHO, is I believe the trilateral cooperation that needs to come together to address these issues.

In this uncertain world, there is also a shift in parts of the world, to the increasing and systematic undermining of institutions. Robust, responsive and well governed institutions are essential at national and global levels. We must not allow our critical institutions to be undermined, for people to lose trust in them, or for them to become dysfunctional or be destroyed. But we also cannot just respond by just saying these institutions are good, leave them and us alone. We must challenge ourselves to demonstrate in our institutions that we are anticipating and responding to the needs of the people that we serve and making a positive and tangible difference.

I'm not an economist, as you'll probably guess, but this week, the Nobel Prize for Economics, which is not something I had known before going to Stockholm, was awarded based on work that showed the crucial role that institutions have played through history in a country's economic, cultural, and societal growth.

The following question was asked by the Nobel Prize Laureates: Is it wealth that drives the creation of institutions, or is it institutions that help drive economic growth and opportunity? And the conclusion they reached was that it is the establishment of inclusive institutions that comes first and that these then help drive subsequent economic growth and opportunity. The conclusion being that well governed, inclusive institutions that work on behalf and for the communities remain critical to a country's future prospects and economic development, and indeed, therefore, of health of the sort of societies we want in the future.

For WHO, and as its Chief Scientist, I would, of course, argue this. But if you look at the great challenges of the 21st Century, demographic shifts, climate change, biodiversity, the rise of the non-communicable diseases, pandemics, antimicrobial resistance, I believe that science in its broadest context, from social sciences to behavioural sciences to economics to physics to chemistry to biology and life sciences, has a critical role to play, not in providing all of the answers, but in providing some of the answers to the way that we can address all of the great challenges of the 21st Century.

And we are living, in my professional life, in what I regard as a scientific golden age. COVID vaccines were a remarkable innovation. But please don't be fooled that COVID vaccines were developed in a year. The Nobel Prize for the development of the COVID vaccines was awarded for basic science work that was done in the 1980s. I was lucky enough to talk to Drew Weissman this week, who won for the Nobel Prize in 2023 for the science that led to the COVID vaccines. If we do not sustainably invest in our scientific ecosystems, from implementation to economics to institutions and careers, to basic and translational life sciences, if we do not invest over many, many years in people, in institutions, in teams that work together, within all our countries, we will not have the breakthroughs that matter when a crisis hits, and we will not use science to improve all our lives or address the great challenges of the 21st Century.

Perhaps most importantly, we must ensure that this scientific investment, works for everyone, all the time, and is part of the culture and the societies that we are part of. We must make sure this science, and our institution address the needs of our communities and societies tomorrow morning, next week, next month, next year. We would be wise not just to prepare the world just for future

crisis, such as pandemics. We should invest in science and culture and work within our societies and our communities for what matters to people all the time. This is the only way these investments will be sustained and the only way this work, our institutions can gain or regain the trust of our communities. And that's where the non-communicable disease issue and infectious diseases come together. I come from both communities, having originally trained as a neurologist and then in infectious disease. We need to bring these communities together and work on issues that matter to people every day, and be there when people need us, whilst also looking over the horizon to what is coming.

The only way of responding with national resilience to the inevitable future shocks that we will face is to have systems, institutions, public trust in what we do every week, every month, every year. You cannot establish manufacturing. You cannot establish trust. You cannot establish your links with society and communities just when a crisis hits. It is what you have before a crisis hits that really matters. And I think a major part of our job, is working with all our member states to encourage the fact that it is that sustained investment in people, in institutions, in health systems, and in the broad scientific agenda that will improve health. But it will also build national resilience, national security and crucially provide opportunities for economic growth and jobs for the next generation. We must reconnect our institutions with the very society and the cultures that we are part of.

The focus of this meeting is on Strengthening Manufacturing Capacities to Respond to the Non-Communicable Diseases Burden. I would counsel that science, technology and innovation are not just about new manufacturing of treatments and vaccines, they are crucially also about investing in prevention including through digital technology and data and allowing people to own their and their community's health and these innovations provide other opportunities to improve health and sustained economic opportunities.

So, I wouldn't frame manufacturing as being just about the development of future innovations which we regard as magic bullets. Instead, we must also include digital approaches, the prevention agenda, because no country on earth will be able to afford the healthcare of 2030, 2040, and 2050 with the demographic shifts unless we shift our balance of interest and work towards prevention as well as treatment and cures and much greater use of innovative patient centred digital approaches. But there is a problem in the scientific community of which I am part of, and that is: science is going on in a smaller number of countries and a smaller number of institutions where there is money. And if we are not careful, the reality is the scientific golden age will lead to greater inequality in the world rather than greater equality. This scientific golden age will yield incredible advances in all areas of health, but if we do nothing, those advances will only be available to a small number of people in a few countries.

So, what we talked about in the plenary opening talks about the distribution and democratization of science around the world is critical if we are to drive true innovation that is useful to all communities everywhere and we address the question of inequality. If we don't put equality at the heart of how we develop our science, innovation, and technological advances, then I fear that science, despite all of our desires, will lead to greater inequality because it will happen in a smaller number of places and perhaps concerningly will not just happen in the public and philanthropic sector or even in public listed companies, but instead in companies held in private hands where there is less transparency and less governance than there may be in public limited companies.

We are all for that innovation ecosystem in both the public and private sectors, but we need to make sure that the world's governments and the member states have access and transparency around what is developed in the public and in the private sector. WHO cannot shift this agenda on its own. We have many partners here from the NGO sector, civic society, as well as from governments, member states, and I think it is the coming together of the WTO-WIPO-WHO that can show that multilateralism can still work for everybody, and it can work for every society and community globally.

With the demographic shifts, the rise in non-communicable illness and multi-morbidity is not just a health issue, it is a societal issue, a productivity and economic growth opportunity and in many ways could be along with climate change the greatest challenge of our time and if we don't come together to address this growing problem at a global scale, we will be reacting to it and we will not use this scientific golden age for the benefit of the maximum number of people and ensure science contributes to greater global equity.

One of the key things we have been trying to do at the WHO this year – and we very much welcome the work with WIPO and WTO on this – is that instead of reacting to change as it happens, we should look forward and anticipate that change and prepare for it. None of us have a crystal ball of where science will take us. But we can see trends, and if we want to build greater equity into where those scientific advances are going to take us, we would be wise to anticipate those trends and instead of reacting to them, prepare for them.

I will give you a personal example of this. For 20 years I worked in Viet Nam and was very involved in the development of a treatment for malaria that came out of traditional Chinese medicine. Artemisinin combination therapy has revolutionized the treatment of malaria. We knew the effectiveness of those interventions at the end of the 1990s and yet we wasted, in my view, more than a decade in terms of preparing for that to be of use to everybody everywhere in the world. The delays cost many hundreds of thousands of people's lives. We must get better at anticipating where we see science taking us and work with all of our member states to have sight of what is coming and then prepare for the access, logistics, supply chains, the trust in the communities and public and the regulatory environment, the supplies, so that we don't spend a decade or more taking the scientific advances that happen and making them available to everybody in the world. The greatest thing that happened in COVID was not that mRNA was invented just in 2020. It was the fact that progress was anticipated and prepared for success, everything was done in parallel rather than in sequence, and the development of vaccines that started in January 2020 were available for vaccination in December 2020, tragically only then in some parts of the world. This was the radical anticipatory approach that speed up access to incredible science, working in different ways to ensure as soon as vaccines were shown to be safe and effective, they were also available. Tragically, this was not true equitably in all parts of the world, an issue we must learn from.

For the non-communicable diseases, we can anticipate now advances in prevention and treatment of cancer, diabetes, heart and brain illnesses, obesity, autoimmune diseases, treatment for genetic conditions like sickle cell disease, the science is amazing and is advancing at an incredible speed. We should now be anticipating these and ensuring we build equitable access into how that science develops, if not we will react and the example, I share above in malaria will be repeated with decades of delay or simply never available in many countries for cancer, for sickle cell or prevention and treatment of cardiovascular disease. I think the idea that trickle down science will work to drive greater health and economic equity is false, we need to actively push for science to be available and accessible and work for everyone, every day.

One way we are doing this at WHO is to align our Guidelines and our Pre-Qualification systems so that in future, we should never have a Guideline without a Pre-Qualified product and vice versa. And to have these available within twelve months. This is work we are doing very closely between many Technical Teams at WHO, the MHP Team working under ADG Yukiko and the Science Team. This is a major reform, which I anticipate will speed up equitable access to interventions that are proven to be safe and effective. We will also use this alignment to anticipate and prepare for scientific advances that we can see being developed and prepare for their use as well as to existing interventions. It will drive greater transparency and allow much greater predictability for the public and private sector developing new innovations. This is work that will be directly relevant to the non-communicable disease agenda and to this conference on strengthening manufacturing capacities. It is this anticipation and predictability that will allow regional manufacturers to prepare for these scientific advances. I believe it is through the non-communicable disease and the endemic infections affecting communities with the stable and sustained need for these interventions that will drive the long-term returns on investment necessary to sustain manufacturing. It will be the sustained investment in national scientific ecosystems that support this manufacturing capacity. Without national scientific ecosystems, manufacturing cannot be developed and certainly not sustained. It is easy to build a building, a manufacturing plant, a photo opportunity at an opening ceremony, but without a robust local scientific ecosystem to sustain it the plant will not wither and close.

The second piece of work therefore that we are doing, which I originally called a sprint, but we've now called a marathon, because things don't perhaps go quite as fast as one would think, is to ask two questions and work with member states who are interested.

The two questions are: Using domestic resources in member states, what are the mechanisms that have been tried, used, worked, and perhaps not worked around the world for supporting national and regional scientific ecosystems to drive health and provide opportunities for economic growth? There are many models around the world, and there is no one model that will work for everyone.

But there are lessons and principles to be learned about how you structure, how you support, how you fund and govern institutions, how you use your public and private sector investments and incentives to drive a scientific ecosystem that will improve health and provide economic growth and opportunity and jobs. It is this local scientific ecosystem that will sustain the distributed manufacturing capacity we all want to see.

The second question is how can countries structure their scientific advice into government, whether it's economics, finances, transport, or health? Because ultimately governments around the world need access to the best available evidence on which to make their decisions and that evidence and advice needs to be embedded into government systems all the time, not just when a crisis happens. The decisions made are political and so they should be, made by the political system in each country but it's important that governments have access to the best available information and within their own structures rather than making ad hoc policy decisions in the absence of evidence or relying on data derived in different contexts at a global level.

So these pieces of work – Guideline alignment with Prequalification and how scientific ecosystems can be sustained and supported with domestic funding and leveraging international funding – are, I believe, the way we're going to democratize science and make science and innovation more available to more countries in the world. In addition to the scientific role that it will play in driving health and economic growth, I also believe this will help address the issues of mistrust and misinformation because instead of relying on something which is happening in some other country, some other culture, and some other language, it will be local, with a greater sense of local ownership and local trust. I think this drive to democratization of science is going to be critical if we want a more equitable world. Science as part of all our societies has a critical role in this.

Finally, conferences and meetings. It is a privilege to live in Geneva. It's a privilege to walk into this incredible building today, meet with colleagues and see across the lake. It's a privilege to be asked to give a talk following DGs Ngozi, Tang, and ADG Nakatani on behalf of DG Tedros. It's a privilege to get on the train and go walking in the Alps. It was a privilege to be in Stockholm earlier this week, join the Nobel Prize ceremonies and contribute to the Nobel Dialogue. It's a privilege to meet all of you. And it's a privilege to give this plenary talk at the meeting of these three institutions WTO-WIPO-WHO.

But, we have started to believe, to pat ourselves on the back that it's warm words and these conferences that make the difference. Everybody in this room and everybody online, although we may not feel it sometimes, has power and has agency. The responsibility that comes with that agency, voice and influence is not what we say here. It is what we do when we leave this room, it's the actions we take over the next week, the next month, the next year. Do we live through and deliver on the warm words we spoke, and we heard? That is what we must hold ourselves to account for.

If we do not do this, and we rely just on the nice warm words that we speak, we will lose, or perhaps we have already lost the societies and communities that have entrusted us and our institutions to drive real tangible and positive change. I believe this is urgent and we must act. Now. It is not the warm words here. It's what you do. It's what I do when I leave this room that will make the difference. So, use your power and use your agency. It's a privilege to have both. But use it to make the world a better place, not just through our fine words, or for you in this room, but for everybody we serve.

That is the responsibility that comes with the privilege of power and agency.
Thank you.