John-Arne Røttingen – CEO, The Research Council of Norway



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John-Arne Røttingen, CEO of The Research Council of Norway shares his career journey from academia to industry, outlines his new role as Norway's Global Health ambassador and gives his thoughts on Norway's biotech and life sciences future.



Can you begin by introducing yourself?

I originally trained as a physician and started doing research during my medical studies, meaning I essentially did a combined medical degree (MD) and PhD program in cellular physiology at the University of Oslo. I later moved to Oxford University to study infectious disease epidemiology and global health before moving back to Norway to continue work on modelling the spread of infections and to carry out health systems and health policy research.

I lead the establishment of and headed the Norwegian Knowledge Centre for Health Services focusing on health technology assessment and translating research evidence to policy and practice as well as monitoring quality of care and patient experiences in Norwegian hospitals.

I then moved on to Harvard University, where I worked as visiting and later adjunct professor at the School of Public Health. After that, I went back into the Norwegian Institute of Public Health, where I initially headed the Institute's Division for Infectious Disease Control and later the merged Division for Infection Control and Environmental Health. These roles allowed me to combine my understanding of global health policy and infectious disease epidemiology.

During that period, I worked in with the World Health Organization (WHO) on innovation and access to medicines in an expert role and aiming to strike a balance between the incentives offered to innovators on the one hand, the interests of payers and healthcare systems on the other, and ensuring access to health technologies across countries of different purchasing power. You need to incentivize innovation to have any access at all, because you need the technology first, but then there is also a need for different policies to ensure equitable access.

Having collaborated with the WHO and worked in infectious diseases, I was involved in the global response to Ebola. There, I led the steering group which oversaw the trial of Merck [MSD globally]'s Ebola vaccine in Guinea. Building on that, WHO developed the R&D blueprint mechanism, with the aim of ensuring the WHO was better prepared for any future epidemics.

During that process, we began mobilising finance, with the aim of establishing a new organization able to independently finance and develop vaccines for epidemics. This later became the Coalition for Epidemic Preparedness Innovations (CEPI). The process of founding CEPI started at the World Economic Forum (WEF) in Davos in 2016 and the organization was then launched, with me as founding CEO, in 2017.

I have now been CEO of the Research Council of Norway for nearly four years. More recently, Norway's Minister of Development and Minister of Foreign Affairs have asked me to take on a new role as Ambassador for Global Health on behalf of the Norwegian government, starting in December 2020.

What does this new role as Norway's ambassador of global health entail?

This role sits at the intersection between politics and technical work. Norway is an important player in global health on the international stage and has been instrumental in establishing several global health institutions such as Gavi, the Vaccine Alliance 20 years ago and was also an early supporter of the Global Fund. More recently, Norway played a central role in setting up CEPI.

Norway is aiming to continue with a strong emphasis on global health and will strengthen the strategic view of our health development aid portfolio.

The outbreak of COVID-19 was probably the political impetus behind the Norwegian government's decision to create my new role. The pandemic acted as a political incentive for the government to act, to ensure it was able to contribute to equitable access of the technologies needed to control the spread of the virus. In the coming year, my main focus will be on COVID-19 and the international response to the pandemic; in particular, I will be focused on the Access to COVID-19 Tools Accelerator (ACT-A), as Norway and South Africa are chairing the ACT-A Facilitation Council.

ACT-A is a loose partnership made up of four different pillars, covering all technologies, including diagnostics and tests; therapeutics; vaccines; and other technology needs such as oxygen supplies, ventilation systems, and personal protective equipment (PPE), as well as ensuring these technologies can be delivered by the health systems of countries. Each pillar is being led by a global health organization. The vaccines side is being led by CEPI, GAVI and the WHO. The therapeutics pillar is being run by the Wellcome Trust and Unitaid. The diagnostics pillar is led by FIND and the Global Fund to Fight AIDS, Tuberculosis and Malaria. Finally, the World Bank and the Global Fund will manage the fourth pillar – the health systems connector.

What challenges have you faced in tackling COVID-19?

The first challenge we faced came down to the fact that there were no existing technologies. Nonetheless, the race to develop a vaccine has been fantastic. Almost 200 different vaccine candidates have been registered by the WHO, and there are now 40 candidates going through clinical trials – ten of which are already in Phase III. This all happened in less than a year.

The challenge now comes down to issues of supply and production capacity. The only way to ensure access is to expand production by expanding the market. I was an early advocate for risk-

based procurement deals, through which the procurer takes on the risk, and to pool these risks by collaborating in a joint global mechanism. Risk-based procurement deals allow production to start early. Starting production early gives us earlier access to vaccines. Risk-based procurement agreements also act to expand total production capacity by incentivizing the entry of other actors into the vaccine market. We formed the COVAX Facility as a means of entering into risk-based procurement agreements on the behalf of both self-financing and developing countries. If only rich countries had made risk-based procurement agreements, there could have been serious issues of limited supply.

What lessons did you learn from tackling Ebola?

The first lesson we learned is that it is possible to carry out research in a low-resource setting in the midst of a crisis – such as the situation we faced in West Africa. The second lesson we learned is that, if we had been better prepared, we could have entered into phase III trials much earlier. That was the reason we founded CEPI – to carry out development work up until Phase II ahead of an outbreak.

Institutions across the globe have done a lot of research into COVID-19 and evaluated a lot of different drugs. My concern now is that many of those trials have been too small and that there has been a lack of collaboration. I would have liked to see a higher proportion of patients in hospitals around the world enrolled in clinical trials. We could have learned a lot more through pragmatic trials of repurposed drugs before starting to test newly developed treatments.

On a country by country basis, Norway has had the highest proportion of all COVID-19 patients enrolled in clinical trials. Norway has experienced a smaller epidemic than most countries, due to its excellent healthcare system, but amongst patients admitted into hospital, a larger proportion than in any other country were entered into clinical trials.

The UK has also demonstrated that ability, but because the UK faced a much more devastating outbreak than many other countries, it has been able to collect evidence in record time. I would have liked to see more clinical trials in Europe and stronger collaboration between European countries.

Norway started early in initiating clinical trials and was the first country to recruit patients into the Solidarity trial. Norway has also been quite inventive in its efforts to expand its capacity for diagnostic tests using in-house technology from the Norwegian University of Technology. The

researchers at the Norwegian University of Technology found a more efficient way of extracting RNA from samples, meaning they could use less reagent in each test. That technology was then distributed to all Norwegian hospitals and was later commercialized and sold internationally.

COVID-19 has thrown up innumerable challenges but may also represent an opportunity to rethink the way we approach global health. What are your hopes for the future and how the global paradigm might be shifted?

I hope that the world starts to realise that global healthis not just about development, but that it is actually a global public good – particularly when it comes to health security and infectious diseases. Now, we need to create new mechanisms through which we can expand our capacity to detect and respond to infectious diseases and finance R&D. We can do so much more if we work together effectively. We can be faster and better prepared. We also need to upgrade our existing institutions. The COVID-19 pandemic is paving the way for this institutional reform.

What would you like our readers to know about Norway?

Norway has an emerging biotech and life sciences sector and I hope more and more talented people from across the world come to work here. It does not have the capacities that bigger countries can offer, but Norwegians have an excellent way of life. We work hard, but we work effectively, meaning that we have time to go out and have fun in nature and otherwise.

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