

# RCPE symposium – Global Health

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The Global Health symposium addressed some of the defining challenges faced by our community globally. Speakers discussed a variety of topics including the introduction of new vaccines, the rise of syndemic theory and urgent priorities for maintaining planetary health. The symposium served a global audience with 25 sites attending remotely from across the world.

## Session 1 – Introducing new vaccines: key considerations

The symposium began with a talk by Professor Neil Ferguson (London) on mathematical modeling techniques that have extrapolated from trial data to understand the factors behind variable vaccine efficacy. These models have successfully predicted how the effectiveness of Sanofi's dengue vaccine, Dengvaxia™, varies by local transmission intensity.<sup>1</sup> Professor Andrew Pollard (Oxford) discussed the development of conjugate vaccines for enteric fever to explain how WHO expert panels review new vaccines and formulate guidelines for their use. Dr Hope Johnson (Global Alliance for Vaccines and Immunizations) then gave an overview of how Gavi's investment strategy has evolved over time, including a greater focus on horizon scanning to anticipate future vaccine investments.

## Session 2 – Introducing new vaccines: challenges

Professor Heidi Larson (London) gave a compelling talk about the ongoing challenge of vaccine hesitancy. Maintaining the success of immunisation programmes requires expansion into various fields such as politics and social behaviour to understand the risk perception of vaccines. Professor Larson also showcased the Vaccine Confidence Project which aims to

survey, understand and maintain public trust in the safety of vaccines.<sup>2</sup> Professor Kåre Mølbak (Copenhagen) elaborated on these themes discussing the experience of Denmark with human papilloma virus (HPV) vaccination. Spurred on by a controversial television documentary in 2015, Denmark has suffered a derailment of its HPV vaccination programme due to public concerns over safety. Professor Mølbak illustrated how innovative approaches, including embracing social media, can help reorientate illness narratives and counteract misinformation.

The morning sessions concluded with the Ambuj Nath Bose Lecture delivered by Professor Sir Brian Greenwood (London) who praised progress in tackling malaria, with childhood mortality from malaria dropping by over half since the year 2000.<sup>3</sup> While success has been driven by effective investments in preventative measures, particularly insecticide treated nets, Professor Greenwood stressed that the burden of disease remained high. While new developments such as the RTS,S vaccine, gene drive mosquitoes and new antimalarial drugs provide promise, funding commitments must be maintained for continued success.

## Session 3 – Syndemics

The afternoon sessions began with Professor Stephen Tollman (South Africa) providing examples of syndemics from sub-Saharan Africa, where non-communicable diseases have risen rapidly in parallel with HIV. Dr Alexander Tsai (Massachusetts) explained how the difference between mutual causality and co-occurrence of disease alters the fundamental understanding of syndemics.<sup>4</sup> In the USA, an unprecedented opioid crisis has led to a rise in mortality due to drug overdoses, suicide and liver disease. These syndemics have both mutually causal and synergistic qualities.

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## Session 4 – New frontiers in global health

The final session of the day delved into the increasingly topical issue of planetary health. The great acceleration of global development has taken a toll on the earth's natural systems and research now needs to be reoriented to help preserve our planet. Dr Saskia Heijnen (Wellcome Trust) emphasised the importance of this topic, discussing the work of the Wellcome Trust and how the priority area of 'Our Planet, Our Health' has created a strong understanding of the interdependence between the health of the population and the planet. Professor Sir Andy Haines (London) discussed this issue further with a focus on the challenges in safeguarding the planet's health. While advances in global health have led to improvements in living standards worldwide, modern lifestyles are at risk as shifts in natural systems are likely to cause declines in human health.<sup>5</sup> These shifts may also cause displacement of populations and contribute to an increase in conflicts, pushing previously stable communities into poverty.

### Take home message

We have made incredible progress in improving our health globally by continuing to develop vaccines and deploy new tools in the fight against diseases such as malaria. However, the threats to our health as a global community are changing. Social dynamics influence vaccine hesitancy and contribute to the rise of syndemics while the consequences of global advancement create new threats to the planet's health. This symposium highlighted the need to continue to identify, research and address these specific challenges to maintain progress in this field.

## References

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