World Health Organization

# Improving Vaccine Effectiveness Studies: A vital step before the next pandemic

14 September 2023

**14:00 – 18:30 CET**

## Agenda



R&DBlueprint

Powering research
to prevent epidemics

## BACKGROUND

Valid and rigorous observational vaccine effectiveness studies are needed, especially during an epidemic or outbreak, to advance evidence-based programmatic and policy decisions. The goal of this consultation is to summarize critical issues in vaccine effectiveness studies with discussions on best practices and standards. Epidemiologic and statistical experts will explore aspects of study design and analysis regarding the follow components – sources of bias, methods to address bias, and transparent reporting and synthesis.

**Improving Vaccine Effectiveness Studies: A vital step before the next pandemic**

World Health Organization

**Chairperson: Lindsey Baden (Harvard University, US)**

| Time | Topic | Speakers |
|---|---|---|
| 14:00 – 14:10 | Opening Remarks | Michael J. Ryan (WHO) |
| 14:10 – 14:20 | The need for standards for vaccine effectiveness studies | Philip Krause |
| 14:20 – 14:30 | Considering factors that may influence protective results of vaccination | Ira Longini (University of Florida, US) |
| **Session 1. Sources of Bias in Vaccine Effectiveness Studies** | | |
| 14:30 – 14:40 | Confounding | Joseph Lewnard (Berkeley, US) |
| 14:40 – 14:50 | Healthy Vaccinee Bias | Tracy Hoeg (UCSF, US) |
| 14:50 – 15:00 | Misclassification | Paolo Eusebi (University of Perugia, Italy) |
| 15:00 – 15:10 | Selection Bias | Korryn Bodner (Unity Health Toronto, Canada) |
| 15:10 – 15:20 | Biases specific to the TND | Eric Tchetgen Tchetgen (Univ. Pennsylvania, US) |
| 15:20 – 15:30 | Differential depletion of susceptible people | Rebecca Kahn (Harvard Univ., US) |
| 15:30 – 15:40 | Waning Immunity | Noam Barda (Univ. of the Negev, Israel) |
| 15:40 – 16:10 | **Panel Discussion**<br>- Can we assess the size and direction of the bias?<br>- How can we recognize the potential biases and plan to address them in the design of observational studies?<br>- What standards should all observational studies adhere to? | Moderated by Lindsay Baden (Harvard Univ., US)<br><br>Ben Cowling (University of Hong Kong)<br>Cheryl Cohen (University of the Witwatersrand, South Africa)<br>Cynthia Whitney (Emory, US)<br>Chongsuvivatwong Virasakdi (Prince of Songkla University, Thailand)<br>Greg Poland (Mayo Clinic, US)<br>Hector Izurieta (FDA, US) |
| **Session 2. Methods to Address Bias** | | |
| 16:10 – 16:30 | Design – use of large public databases | Vajeera Dorabawila (NY Dept Health, US)<br>Ron Brookmeyer (UCLA, US) |
| 16:30 – 16:40 | Target trials to avoid design-related biases | William Hulme (Univ. of Oxford, UK) |
| 16:40 – 16:50 | Conducting Observational Studies | Jennifer Verani (CDC, US) |
| 16:50 – 17:00 | Analysis | Matt Hitchings (Univ. of Florida, US) |
| **Session 3. Reporting and Synthesis** | | |
| 17:00 – 17:10 | Sharing results and primary data | Vasee Moorthy (WHO) |
| 17:10 – 17:20 | Transparent discussion of limitations in analysis and Interpretation | Lori-Ann Linkins (McMaster Univ., Canada) |
| 17:20 – 17:30 | Discussion of reproducibility and generalizability | Emily Ricotta (NIH, US) |
| 17:30 – 17:40 | Randomization during vaccine deployment | Prof Sir Richard Peto (Univ. Oxford, UK) |
| 17:40 – 18:20 | **Panel Discussion**<br>- How can we report and synthesize studies to assess and correct for bias? | Moderated by Peter Figueroa (Univ. of West Indies, Jamaica) |

| Time | Topic | Speakers |
|---|---|---|
| | - What standards should all observational studies adhere to? | Biswas Bijit (All India Institute of Medical Sciences, Deoghar)<br>George Gao (Univ. of Chinese Academy of Sciences)<br>Jeffrey Morris (Univ. of Pennsylvania, US)<br>Karla Soares (Cochrane)<br>Narenda Arora (Inclen, India) |
| 18:20 – 18:30 | **Main conclusions** | |
| | **END OF MEETING** | |