Salle B, WHO Headquarters, Geneva, Switzerland

Concept note

Established in 2014, the Product Development for Vaccines Advisory Committee (PDVAC) is an independent standing WHO committee of experts that provides external advice to WHO's Department on Immunization, Vaccines and Biologicals (IVB), related to development of vaccine and monoclonal antibody products for infectious diseases. The committee's remit covers disease areas where there is substantial disease burden in low- and middle-income countries (LMICs), where none of these products currently exist, but where there is some ongoing research and development activity which may benefit from WHO guidance. This committee may also have a role where vaccines are already licensed, and development of improved products, including novel presentations or innovative immunization technologies is a priority for WHO.

In recent years, the strategic role of PDVAC has evolved to look beyond the most expeditious route to licensure for priority vaccine and technology candidates. The committee aims to anticipate the near- and long-term barriers and roadblocks to investment in product development, by developing approaches to ensure a clear understanding of country preferences and development of products that meet the needs of LMICs. Consideration of the full public health value (FPHVV) for vaccines and novel technologies is becoming an increasingly critical element of the PDVAC approach to identifying public health priorities. In addition, the PDVAC provides recommendations on the impact of cross-cutting activities that may benefit several candidates, such as novel manufacturing platform technologies or strategies, or strategies for informing the FPHVV of vaccines.

The Decade of Vaccines, and its accompanying Global Vaccine Action Plan (GVAP) are coming to an end in 2020, and work is already underway across global and regional stakeholders to define strategic goals for the next decade. Goals of the PDVAC 2019 meeting will include discussion of the strategic themes for determining R&D priorities and goals for 2021-30, as well as reviews of the status of, and product development needs for pathogen-specific candidates.

Objectives of the meeting

This will be the 6th annual meeting of PDVAC. The objectives for the 2019 meeting are to:

- 1. Review the progress of candidates against specific priority pathogens, as well as cross-cutting initiatives and delivery innovation development, over the last 12 months;
- 2. Consider strategic themes for determining R&D priorities and goals for 2021-30;
- 3. Identify areas where WHO's Initiative for Vaccine Research can lead and/or facilitate the R&D agenda for the next decade.

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Day 1: Wednesday 26th June 2019: What should be the post-2020 global strategic priorities for vaccine R&D?

| Time | Topic | Duration | Detail | Moderators, speakers & panelists | |
|---------------|---|---------------------|---|---|--|
| 8.00 | Registration & coffee | | | | |
| 8.15 – 8.30 | Welcome & Introductions | | | Martin Friede / David Kaslow | |
| 8.30 – 9.00 | Planning for the next decade | 20 +10 | Overview of the Immunization agenda 2030 – the 6 strategic pillars | Ann Lindstrand (WHO EPI) | |
| 9.00 – 10.00 | Post 2020 strategic planning for R&D and innovation | 10' 20' + 30' | Look back at lessons learned from GVAP Global R&D agenda & Strategic priorities for the next decade | Carolyn Deal (NIAID) Martin Friede (WHO)/ David Sarley (BMGF) | |
| 10.00 – 10.30 | Coffee | | | | |
| 10.30 – 12.45 | How is the perceived value of vaccines and associated | 5′ | Remarks: The Concept of the full public health value of vaccines (FPHVV) | Alejandro Cravioto (SAGE Chair) | |
| | technologies evolving? | 25' | Value attribution framework for Antimicrobial resistance & Roadmap | Holly Prudden & Matt Hasso (WHO) | |
| | | 15' | Value of vaccines that have high morbidity and low mortality | Maria Elena Botazzi (Baylor) | |
| | | 10′ ' | Value of vaccine delivery innovations | Birgitte Giersing (WHO) | |
| | | 10' | Manufacturer's perspective: Merck | Jeff Blue (Merck) | |
| | | 10' | Manufacturer's perspective: Biological E | Ramesh Matur (Biological E) | |
| | | 15' | Perspective of Gavi | Sophie Mathewson (Gavi) | |
| | | +45 min | Plenary discussion | Moderator: David Kaslow (PATH) | |
| 12.45 | Lunch | | | | |

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| 14.00 – 14.45 | Country stakeholder engagement in shaping the R&D | 5' | Remarks: The challenges of, but necessity for regional and country engagement in vaccine R&D agenda setting | Sinead Delaney-Moretlwe (Wits) |
|---------------|---|---------|--|---|
| | priorities and agenda – creating the pull | 10 min | The potential role of Total Systems Effectiveness | Birgitte Giersing (WHO) |
| | | +30 min | Panel discussion: | Moderator: Sinead Delaney-Moretlwe (Wits) - James Heffelfinger (WHO WPRO) - Beno Yakubo (NAFDAC) - Yanfeng Lim (CHAI) - Ole Oleson (EDCTP) - William Ampofo (Uni of Ghana) |
| 14.45 – 15.30 | Creating sustainable R&D models to ensure a healthy | 45' | Remarks: How do we create the line of sight to a healthy market for novel vaccine candidates and technologies? | Martin Friede (WHO) |
| | vaccine and tech pipeline | | Panel discussion | Moderator: Martin Friede - Jerome Kim (IVI) - Barney Graham (NIAID) - Peter Dull (BMGF) - Patrick Tippoo (Biovac) - Darin Zehrung (PATH) |
| 15.30 – 16.00 | Coffee | • | | - |

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| 16.00 – 17.30 | Reducing the risk of the 'second valley of death' for vaccines | 15' | Presentation: Is there a "second valley of death" for vaccines? Regulatory support of vaccine development: Perspectives from the EU regulators | David Kaslow (PATH) Klaus Cichutek (PEI) |
|---------------|--|------------|---|---|
| | | 25' 40' | Panel Discussion | Moderator: Cherry Kang (THSTI) Perspectives from: - Alejandro Cravioto (WHO SAGE) - Ann Ginsberg (IAVI) - Taryn Rogalski-Salter (Gates MRI) - Beno Yakubo (NAFDAC) - Marian Wentworth (MSH) |
| | | 40 | Open discussion | |
| 17.30 – 18.00 | Discussion & close | | What should be the R&D priorities for the next decade? Which of the six immunization agenda 2030 pillars do they map to? | David Kaslow and Birgitte Giersing |

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Day 2: 27th June:

| Time | Topic | Duration | Detail | Speakers | | |
|---------------|------------------|-----------|--|---------------------------|--|--|
| 8.30 - 10.30 | A year in review | 60' | - Overview of the major progress in vaccine product development and | Birgitte Giersing / Johan | | |
| | | + 60' | summary of IVR/PDVAC engagement for PDVAC priority pathogens | Vekemens / Sami Gottlieb | | |
| | | | - New data/major shifts | (all WHO) | | |
| | | | - New initiatives | | | |
| | | | - Looking ahead to next decade | | | |
| 10.30 - 10.50 | Coffee | | | • | | |
| 10.50 – 12.00 | RSV Vaccines | 15' | - Update on RSV vaccine pipeline and status | Ruth Karron (JHU) | | |
| | | 20' | - Resvax study results | Shabir Mahdi (RMPRU) | | |
| | | 10' | - Summary from WHO RSV TAG | Danny Feiken (WHO) | | |
| | | + 25' | | | | |
| 12.00 - 13.00 | Lunch | Lunch | | | | |
| 13.00 – 14.00 | RSV monoclonal | 5' | - Brief update on MAb pipeline | Ruth Karron (JHU) | | |
| | antibodies | 15' | - Medi8897 study results | John DeVincenzo (UTHSC) | | |
| | | + 40' | | | | |
| 14.00 – 15.00 | Tuberculosis | 10' | - Pipeline overview and status of late stage candidates | Ann Ginsberg (IAVI) | | |
| | | 20' | - WHO IVR activities on TB vaccines | Johan Vekemans (WHO) | | |
| | | +30' | | | | |
| 15.00 – 15.30 | Coffee | | | | | |
| 15.30 – 17.30 | Enteric vaccines | 15' + 15' | - Enteric burden of disease Working Group: report from 2018 workshop | Mark Jit (LSHTM) & Holly | | |
| | | | and overview of WG activities | Prudden (WHO) | | |
| | | 15' + 15' | - Status update on non-replicating rotavirus vaccines (NRRV) | Fred Cassels (PATH) | | |
| | | 15' + 15' | - Paratyphoid vaccine development | Andy Pollard (Oxford) | | |
| | | 15' +15' | - Update on iNTS vaccine development and outcomes of BMGF/WT | Duncan Steele (BMGF) | | |
| | | | consultation | | | |
| 18.00 | Cocktail | | | | | |

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Day 3: 28th June 2019 (morning - open session): Product development status and strategic issues for priority vaccines (cont)

| 8.30 - 09.30 | Group B Strep | 15' | - Update on WHO IVR activities on GBS vaccine development - Introduction to a public health public proposition for GBS vaccine | Johan Vekemans (WHO) | |
|---------------|-----------------|-------|--|----------------------------|--|
| | | 20' | - Economic considerations to inform estimation of the value of GBS vaccine | Mark Jit (LSHTM) | |
| 00 20 10 00 | | + 25' | | | |
| 09.30 – 10.00 | coffee | 1 . | T | T | |
| 10.00- 10.40 | Development of | 20' | Status of vaccine and manufacturing platform development | Melanie Saville (CEPI) | |
| | vaccines for | + 20' | | | |
| | epidemic | | | | |
| | response | | | | |
| 10.40 - 12.00 | Vaccine | 10' | The need for novel vaccine delivery approaches | Mark Papania (CDC) | |
| | Innovation | 25' | Update to the Vaccine Innovation Prioritization Strategy | Marion Menozzi-Arnaud | |
| | Prioritization | | | (Gavi) & Birgitte Giersing | |
| | Strategy | | | (WHO) | |
| | 0, | 15' | The PATH microarray patch (MAP) Center of Excellence & the Delivery technologies working group | Darin Zehrung (PATH) | |
| | | + 30' | Discussion | All | |
| 12.00 - 13.00 | Close/lunch | | | | |
| 13.00 – 17.00 | Closed session: | | | | |
| | Committee only | | | | |