

PVAC - POLIO ADVANCED COURSE IN VACCINOLOGY

**25 – 29 OCTOBER 2026
DOHA, QATAR**

Course Program

1. General objectives

The Polio Advanced Course in Vaccinology (PVAC) is designed to support critical decision-making in the global effort to eradicate polio. It equips low to mid-career health professionals with a comprehensive understanding of vaccinology and its application to polio eradication—covering immunology, epidemiology, regulatory frameworks, vaccine development, immunization strategies, program implementation, and the broader socio-political, ethical, financial and communication dimensions of eradication efforts.

Through a blend of evidence-based adult learning methodologies, scientific updates, real-world case studies, discussion of existing challenges and success, and access to an alumni network, PVAC intends to maximize both learning outcomes and long-term impact.

By the end of the course, participants should be able to:

- 1) **Apply global best practices and technical strategies** in Polio surveillance, case detection, outbreak response, and eradication efforts, with a focus on tailoring approaches to local epidemiological and health system contexts.
- 2) **Demonstrate competence in emergency preparedness and response** by designing and managing Polio-specific interventions, including program planning, resource mobilization, financial oversight, and supply chain logistics.
- 3) **Critically evaluate approaches to Polio eradication** and integrate innovative, forward-looking strategies that address emerging threats, including geopolitical instability, misinformation, and climate-related disruptions.
- 4) **Analyze and apply lessons learned** from historical and contemporary Polio eradication efforts to strengthen national and regional program sustainability, policy development, and health workforce training.
- 5) **Use scenario-based planning tools** to address complex emergencies involving Polio re-emergence in conflict zones, humanitarian settings, and post-disaster scenarios.
- 6) **Engage with global Polio eradication stakeholders** (including GPEI partners) to incorporate the latest scientific evidence, policy recommendations, and strategic frameworks into national plans and practices.

- 7) **Integrate risk communication and community engagement principles** into Polio eradication activities to enhance public trust, improve vaccine uptake, and respond effectively to vaccine hesitancy or misinformation.
- 8) **Join a pool of polio experts - PVAC Alumni Network** - to provide ongoing technical support to countries in need of support for surveillance, preparedness, and response.

With its 360° approach to vaccinology, PVAC bridges scientific knowledge and public health implementation, guiding participants through the complex process of translating epidemiological evidence into effective surveillance, immunization, and response strategies.

PVAC fosters cross-disciplinary understanding, expanding participants' expertise beyond their immediate field, encouraging global thinking, and introducing new technologies and approaches. This well-rounded education equips them with the leadership and technical skills necessary for impactful contributions to polio eradication.

Finally, PVAC offers a unique platform for professional exchange and networking, enabling participants to build lasting connections and collaboratively address challenges in the field. By learning from and with professionals across diverse backgrounds and institutions, PVAC alumni are well-positioned to support and advance the global polio eradication initiative at both the scientific and operational levels.

2. Course format

PVAC is structured as an intensive 5-day, in-person program, tailored for English-speaking low to mid-career health professionals from Africa and Asia.

Designed to be practical, dynamic, and highly interactive, the course combines scientific rigor with applied learning. Participants will engage in a variety of formats to ensure adequate understanding, real-world application, and valuable networking opportunities. Course components include:

- **Lectures:** Each lecture consists of a **25-minute** expert presentation followed by a **20-minute discussion**. Supplementary materials, including extended readings and recorded content, may be provided for those wishing to deepen their understanding of specific topics.
- **Interactive Working Groups:** Participants will be divided into small groups (4 to 5, depending on total attendance), each group will be guided by an expert facilitator. These sessions are designed to apply theoretical knowledge through case studies, scenario-based simulations, and practical exercises. Working group durations will range from 45 minutes to 90 minutes, depending on the topic and complexity of the activity.
- **Expert Panels:** Panels will feature 3 to 4 leading experts who will explore key issues through focused moderated talk (15–30 minutes), followed by an open discussion with participants.
- **Special Talk:** The course will include a special inspirational or thematic talk from a guest speaker.
- **Daily Wrap-Up and Q&A:** To reinforce learning and facilitate dialogue, each day will conclude with a collective 10–20-minute Q&A session involving all lecturers and facilitators, allowing participants to revisit and clarify key concepts as necessary.
- **Networking and Social Events:** Networking breaks and social events will be scheduled throughout the course to foster peer learning, build cross-regional connections, and support the formation of a strong PVAC alumni network.

3. 2026 Faculty

Speakers and facilitators:

- Ananda Bandyopadhyay - Gates Foundation, USA
- Ahmet Afşar - UNICEF, Kenya
- David Heymann - London School of Hygiene and Tropical medicine, UK
- Deo Nshimirimana - Independent Health Consultant, Burundi
- Edwin Asturias - Children's Hospital Colorado, USA
- Heather Monnet – Kinaura Partners, Switzerland
- Farhan Cyprian - Qatar University, Qatar
- Fiona Braka - World Health Organization, Ghana
- Giridhara Rathnaiah Babu - Qatar University, Qatar (PVAC - Course Director)
- Hebah Atef Mohammad Al-Khatib - Qatar University, Qatar
- Hemant Shukla - World Health Organization, Jordan
- Habib Hasan Farooqui - Qatar University, Qatar
- Isobel Blake - Imperial College, UK
- Jeevan Kumar Makam - UNICEF HQ New York, USA
- Kamel Senouci - University of Geneva, Switzerland (PVAC - Course Director)
- Katy Clark, GAVI, Switzerland
- Kathleen Duclos - Université de Geneve, Switzerland
- Lee Rasheed - Salma Consulting
- Louise Henaff - Université de Geneve, Switzerland
- Modjirom Ndoutabe – Independent expert, Tchad
- Mohammad Jamil Khatatneh, Laboratory supervisor, PRL, HP & CDC-MOPH, Qatar
- Mohamed Somane, Centre for Humanitarian Dialogue
- Naureen Naqvi -UNICEF, Afghanistan
- Ondrej Mach - World Health Organization, Switzerland
- Osman Yussuf, Centre for Humanitarian Dialogue
- Peggy Hanna – Polio TAG, WHO EMRO, Lebanon
- Ticky Esoh Ebongue - World Health Organization, Switzerland
- Suchita Guntakatta - Gates Foundation, USA
- Zubin Malhotra, Centre for Humanitarian Dialogue

Special guest speakers:

- Hamad Eid H A Al-Romaihi - Qatar MOH, Qatar
- Rose Gana Fomban Leke - University of Yaounde, Cameroon
- Ziad Memish - King Salman Humanitarian Aid & Relief Center, Saudi Arabia

4. Specific objectives for each session

DAY 1 – POLIO: HISTORY, CLINIC, VIROLOGY, IMMUNOLOGY & VACCINES

The purpose of this session is to explore the historical, epidemiological, virological, clinical, and immunological aspects of polio, leading to an understanding of the Global Polio Eradication Initiative (GPEI), its strategies and partners, and diagnostic interpretation. Real-world examples and interactive lab interpretation exercises are used to reinforce core concepts.

LECTURE 1 – History of polio and its eradication

- Describe the origin and historical spread of poliovirus.
- Describe the rational and global commitment towards polio eradication (past and current strategies).
- Identify key milestones, progress, and setbacks in the eradication of wild poliovirus (WPV) and circulating vaccine-derived polioviruses (cVDPVs).
- Rapid overview of socio-political and epidemiological challenges in remaining endemic areas (a more in-depth analysis will be covered in Lecture 16).

LECTURE 2 – Epidemiology of WPV and cVDPVs

- Provide an overview of the Global burden, incidence rates, and geographical distribution of Polio (WPV & cVDPVs).
- Explain how vaccines have supported the eradication strategy for both WPV and cVDPVs.
- Describe the epi impact of using various vaccines on the epidemiology (e.g. tOPV/bOPV switch).

LECTURE 3 – Poliovirus virology, evolution, and molecular surveillance

- Describe the structure, classification, and replication of poliovirus and related enteroviruses.
- Explain the genetic features that influence poliovirus transmission, neurovirulence, and vaccine attenuation.
- Describe how polioviruses evolve, including mutation, recombination, and vaccine-derived poliovirus emergence.
- Explain the role of genomic sequencing and molecular surveillance in polio eradication.

LECTURE 4 – Clinical manifestations, pathogenesis, and public health implications

- Describe the pathogenesis of poliovirus infection and factors that influence disease outcomes.
- Explain the spectrum and frequency of clinical manifestations, from asymptomatic infection to paralysis.
- Describe the diagnosis, management, and long-term consequences of poliovirus infection.
- Discuss how clinical disease patterns inform surveillance, outbreak response, and vaccination strategies.

WORK GROUP SESSION 1 - Interpreting lab results

- Explain how laboratories analyze samples and how to interpret laboratory data to identify viruses and poliovirus presence and type.
- Explain the development and interpretation of dendrograms to assess genetic relationships between poliovirus isolates.

- Discuss real-life scenarios to integrate epidemiological and lab findings in outbreak contexts.

LECTURE 5 – Immunology

- Explain the natural immune response to poliovirus and enteroviruses.
- Compare innate and adaptive immune responses in the context of polio infection and vaccination.
- Describe how acquired immunity informs vaccine strategy and protection.
- Briefly describe the challenges for vulnerable persons (including immunocompromised and Immunodeficiencies).

LECTURE 6 – Polio vaccines

- Describe different types of existing polio vaccines (IPV and OPVs) regarding composition, mechanism, and use.
- Present and explain immunization schedules.
- Explain their roles in routine immunization, outbreak response, and eradication campaigns.
- Explain types, efficacy, safety, production challenges for future vaccines (nOPV, particle non-infectious vaccines etc.).
- Describe Polio vaccination for vulnerable persons (including immunocompromised and Immunodeficiencies)
- Describe the epidemiological impact of using various vaccines on the epidemiology (e.g. tOPV/bOPV switch).

SPECIAL GUEST TALK – Presentation of SAGE and the Polio working group

- Presentation of the World Health Organization Strategic Advisory Group of Experts on Immunization (SAGE) and the specific polio working group
- Update on the polio vaccination recommendations from the SAGE group

LECTURE 7 – The Global Polio Eradication Initiative (GPEI) and its strategy

- Describe the structure, roles, and partnerships within the GPEI, including the links with the WHO SAGE.
- Present the role of accountability and governance in driving progress toward eradication including the functions of the GPEI Independent Monitoring Board (IMB), and the Polio Eradication Certification Committees (Global, Regional and National).
- Summarize how responsibilities, funding mechanisms, and global coordination are managed under GPEI.
- Explain the strategic goals and operational pillars of the current GPEI strategy.
- Present the status of implementation to date, including achievements and setbacks.
- Present the strategy's alignment with broader global health priorities and contextual challenges.
- Present GPEI possible future strategy options.

DAY 2 – POLIO OUTBREAK: FROM DETECTION TO RESPONSE

The purpose of this session is to provide a comprehensive understanding of GPEI Standard Operating Procedures (SOPs) for outbreak preparedness and response, including surveillance, risk assessment, vaccine logistics, budgeting, and campaign monitoring. Practical work group sessions are included to build capacity for real-time decision-making and implementation.

LECTURE 8 – GPEI SOPs: surveillance, detection, notification and investigation

- Explain the key components of polio surveillance, including Acute Flaccid Paralysis (AFP) surveillance and environmental surveillance (ES).
- Discuss the differential diagnosis of AFP (e.g. Guillain-Barré Syndrome, Malnutrition).
- Discuss other Paralysis viruses (e.g. EV71, EV68).
- Describe the role of immunodeficiency-associated vaccine-derived poliovirus (iVDPV) in surveillance and investigation.
- Highlight case investigation components

LECTURE 9 – GPEI SOPs: risk assessment and response

- Describe how to conduct a risk assessment for a potential or confirmed poliovirus outbreak.
- Explain the development and components of an effective Outbreak Response Plan (ORP).
- Illustrate the use of microplanning in tailoring response activities at the local level.

LECTURE 10 – GPEI SOPs: Polio vaccines logistics

- Describe key aspects of vaccine distribution and storage, including temperature-sensitive logistics (OPV vs IPV).
- Explain the process and importance of reverse logistics, including the handling of nOPV2 vials, stool samples, and other materials.
- Evaluate protocols for managing biohazards and medical waste during polio response campaigns.

WORK GROUP SESSION 2 – Preparing a risk assessment and a response plan

- Apply GPEI frameworks to develop a practical risk assessment based on a simulated outbreak scenario (POSE - Polio Outbreak Simulation Exercise)
- Apply GPEI frameworks to design a tailored response plan incorporating microplanning, surveillance findings, and risk prioritization.
- Apply GPEI frameworks to critically evaluate real-world case studies to identify strengths and gaps in response plans.

LECTURE 11 – GPEI SOPs: budget, financing, HR for the response

- Outline the recommended structure and key components of an outbreak response budget.
- Explain the process of financial planning, including digital payment systems (e-payments).
- Describe strategies for human resource surge planning, including recruitment, training, and deployment.
- Highlight integration needs in the perspective of decreasing funds for Polio.

WORK GROUP SESSION 3 - Preparing the budget and the HR surge for the response

- Develop a detailed outbreak response budget using sample data and SOP recommendations.
- Plan a human resource surge strategy, assigning roles and timelines for effective deployment.
- Evaluate potential financial and HR bottlenecks in outbreak response scenarios.
- Highlight integration needs in the perspective of decreasing funds for Polio.

LECTURE 12 – Monitoring and evaluation of the quality of the response

- Describe the types of data used to monitor preparedness.
- Describe response quality indicators (definition, collection, limitations etc.) and their role in continuous improvement.
- Introduce the concept and implementation of Outbreak Response Assessments (OBRA) for feedback and accountability.

WORK GROUP SESSION 4 – Outbreak response campaigns: management, monitoring & evaluation

- Simulate the coordination of a response campaign, including implementation monitoring tools.
- Use data to assess campaign effectiveness and identify areas for rapid improvement.
- Use response quality indicators to improve immunization rounds.
- Interpret OBRA results and propose corrective actions to strengthen surveillance and possible future responses.

DAY 3 – STRATEGIC, POLITICAL AND SOCIAL DIMENSIONS OF POLIO OUTBREAK RESPONSE

The purpose of this session is to examine the complex political, social, behavioral, and operational factors influencing the success of polio outbreak response. Through case studies, group work, and stakeholder discussions, participants will identify lessons learned, explore strategies for working in challenging contexts, and improve their ability to engage communities and manage cross-sectoral partnerships.

LECTURE 13 – Political engagement and resource mobilization at global, regional and country levels

- Present key drivers and barriers to securing political commitment for polio eradication.
- Explain challenges in mobilizing financial, human, and technical resources across levels.
- Discuss and present strategies to strengthen advocacy and sustain support in low-priority or transitioning countries.
- Illustrate with local initiatives as successful examples.

WORK GROUP SESSION 5 – Political engagement and resource mobilization for polio at the country levels

- Learn how to develop a stakeholder mapping and advocacy strategy to engage political leaders and donors.
- Design a country-level resource mobilization plan incorporating public and private sector contributions.
- Simulate a high-level policy dialogue to secure commitment and funding for national polio efforts.

LECTURE 14 – Engagement of communities and individuals in Polio surveillance and response (including addressing vaccine hesitancy)

- Explain the role of Social and Behavior Change Communication (SBCC) in building vaccine confidence and uptake.

- Describe the impact of gender dynamics in polio surveillance and polio response (including the roles of women, caregivers & frontline health workers)
- Identify culturally sensitive approaches to improve acceptance in different socio-cultural settings / different countries.

LECTURE 15 – Understanding and Addressing Vaccine Misinformation

- Explain the psychological and social factors that make individuals and communities susceptible to vaccine misinformation and disinformation.
- Describe how misinformation and disinformation can influence vaccine confidence, acceptance, and the implementation of polio immunization programs.
- Apply evidence-based strategies to prevent and respond to vaccine misinformation.

WORK GROUP SESSION 6 - Engaging communities and individuals

- Develop context-specific strategies to address vaccine hesitancy and misinformation using evidence-based risk communication and SBCC engagement approaches consistent with GPEI guidance.
- Design a community engagement plan based on a polio immunization scenario, that incorporates local context, trusted community actors, gender-sensitive approaches, and mechanisms for two-way communication.
- Develop tailored outreach messages and identify feedback mechanisms to build community trust, respond to concerns and support acceptance of polio vaccination

PANEL 1 – Lessons learned: determinants and challenges of a Polio outbreak response

- Present different country cases to identify the key determinants of successful outbreak response.
- Present challenges encountered during outbreak response and the solutions used to address them.

DAY 4 – POLIO ERADICATION IN CHALLENGING SETTINGS & PRESENT AND FUTURE STRATEGIES: INTEGRATION, INNOVATION AND ETHICS

The purpose of this session is to explore key operational and strategic dimensions of polio eradication, with a particular focus on surveillance and response in conflict-affected and insecure settings. Participants will examine adaptive approaches to maintaining access, surveillance and vaccination, alongside the roles of routine immunization, integration and polio transition. The session will also address poliovirus containment, emerging innovations and key ethical considerations, providing a broader perspective on the challenges and opportunities for achieving and sustaining a polio-free world.

LECTURE 16 – Polio surveillance and response in insecure areas and conflict settings

- Identify the operational and logistical challenges of polio surveillance and response in conflict-affected or inaccessible areas.
- Discuss adaptive strategies to ensure vaccine delivery, surveillance, and communication in fragile environments.
- Explore coordination mechanisms with humanitarian and local security partners to maintain access.

WORK GROUP SESSION 7 - Polio surveillance and response in insecure areas and conflict settings

- Apply risk-based planning to develop a response strategy for a conflict or insecurity-affected region.
- Simulate decision-making and coordination under field constraints (access, safety, mobility, trust).
- Learn how to identify key partners and tools that can support response continuity in insecure zones.

LECTURE 17 – Routine immunization, integration, and polio transition

- Describe how routine immunization contributes to polio eradication.
- Discuss the integration of other public health interventions within polio programs to improve overall health impact (and vice versa).
- Explain the concept of polio transition and how assets and infrastructure can be sustained or repurposed.

LECTURE 18 – Polio containment

- Explain the rationale and principles of poliovirus containment.
- Describe the global containment framework and national responsibilities.
- Present risks associated with containment breaches and required mitigation strategies.
- Briefly describe the challenges for vulnerable persons (including immunocompromised and Immunodeficiencies).

LECTURE 19 – Innovations in polio

- Present cutting-edge tools and approaches enhancing polio prevention, surveillance, and response (e.g. GIS, artificial intelligence, rapid diagnostics).
- Explain the impact and feasibility of integrating innovations into existing public health infrastructure.
- Present gaps in innovation uptake and proposed strategies to overcome barriers.
- Present faster sequencing detection methods developed at Imperial College

LECTURE 20 – Ethics and Polio

- Outline ethical challenges related to vaccine access, affordability, and funding mechanisms.
- Present the ethical arguments for and against mandatory immunization laws and policies.
- Outline professional ethics in cases where patients refuse immunization, including dismissal policies.
- Explain the ethical obligation to report Adverse Events Following Immunization (AEFIs) and provide transparent communication to patients and families.
- Present broader ethical issues including use of OPV, Polio programmatic impact on health systems, and prevention of sexual exploitation, abuse and harassment (SEAH) in immunization campaigns.

SPECIAL MENTORING SESSION IN GROUPS

- Participants will be subdivided in groups each supported by a specific mentoring theme and selected mentors

DAY 5 – COMMUNICATION & HUMAN STORIES IN POLIO ERADICATION

The purpose of this session is to explore effective communication tools during public health crises. Participants will also critically engage in a forward-looking debate on the future of the initiative. The day concludes with special guest presentation to share perspective in lived experience and human impact.

WORK GROUP SESSION 8 – Crisis communication

- Learn how to develop key messages for use during vaccine-related crises (e.g. AEFIs, supply shortages, hesitancy incidents).
- Simulate a media interview responding to a real-time polio-related event.
- Learn how to apply principles of transparency, empathy, and trust-building in communicating with affected communities, healthcare workers, and media.
- Evaluate real-world examples of successful and unsuccessful crisis communication in immunization contexts.

PANEL 2 - Polio eradication: is it time to rethink our eradication objective?

- Engage in a critical discussion on the feasibility and sustainability of achieving global polio eradication.
- Compare eradication with long-term control strategies and implications for public health priorities.

SPECIAL GUEST TALK – Women in Polio

5. Overall program

October 25 - DAY 1 – POLIO: HISTORY, CLINIC, VIROLOGY, IMMUNOLOGY & VACCINES			
Time	Topic	Objectives	Lecturer/facilitators
08:00 -8:30 Registration			
08:30 - 09:15	Opening: course's objectives, program, evaluation & logistic		- Giridhara Rathnaiah Babu - Qatar University, Qatar - Kamel Senouci - University of Geneva, Switzerland
09:15 - 09:40	Lecture 1: History of Polio and it's eradication	• Describe the origin and historical spread of poliovirus. • Describe the rational and global commitment towards polio eradication (past and current strategies). • Identify key milestones, progress, and setbacks in the eradication of wild poliovirus (WPV) and circulating vaccine-derived polioviruses (cVDPVs). • Rapid overview of socio-political and epidemiological challenges in remaining endemic areas (a more in-depth analysis will be covered in Lecture 16).	Giridhara Rathnaiah Babu - Qatar University, Qatar
09:40 - 10:00	Discussion	-	
10:00- 10:25	Lecture 2: Epidemiology of WPV and cVDPVs	• Provide an overview of the Global burden, incidence rates, and geographical distribution of Polio (WPV & cVDPVs). • Explain how vaccines have supported the eradication strategy for both WPV and cVDPVs. • Describe the epi impact of using various vaccines on the epidemiology (e.g. tOPV/bOPV switch).	Ondrej Mach - World Health Organization, Switzerland
10:25 - 10:45	Discussion	-	
10:45 - 11:10	coffee break		
11:10 - 11:35	Lecture 3: Poliovirus virology, evolution, and molecular surveillance	• Describe the structure, classification, and replication of poliovirus and related enteroviruses. • Explain the genetic features that influence poliovirus transmission, neurovirulence, and vaccine attenuation. • Describe how polioviruses evolve, including mutation, recombination, and vaccine-derived poliovirus emergence. • Explain the role of genomic sequencing and molecular surveillance in polio eradication.	Edwin Asturias - Children's Hospital Colorado, USA
11:35 -11:55	Discussion	-	
11:55 - 12:20	Lecture 4: Clinical manifestations, pathogenesis, and public health implications	• Describe the pathogenesis of poliovirus infection and factors that influence disease outcomes. • Explain the spectrum and frequency of clinical manifestations, from asymptomatic infection to paralysis. • Describe the diagnosis, management, and long-term consequences of poliovirus infection. • Discuss how clinical disease patterns inform surveillance, outbreak response, and vaccination strategies.	Edwin Asturias - Children's Hospital Colorado, USA
12:20 -12:35	Discussion	-	
12:35 -13:45	Lunch		
13:45 - 15:20	Working group session 1: Interpretating lab results	• Explain how laboratories analyze samples and how to interpret laboratory data to identify viruses and poliovirus presence and type. • Explain the development and interpretation of dendrograms to assess genetic relationships between poliovirus isolates. • Discuss real-life scenarios to integrate epidemiological and lab findings in outbreak contexts.	• Isobel Blake - Imperial College, UK • Farhan Cyprian - Qatar University, Qatar • Mohammad Jamil Khatatneh, Laboratory supervisor, PRL, HP & CDC-MOPH, Qatar

			• Hebah Atef Mohammad AlKhatib - Qatar University, Qatar • Edwin Asturias - Children's Hospital Colorado, USA
15:20-15:45	Lecture 5: Immunology	• Explain the natural immune response to poliovirus and enteroviruses. • Compare innate and adaptive immune responses in the context of polio infection and vaccination. • Describe how acquired immunity informs vaccine strategy and protection. • Briefly describe the challenges for vulnerable persons (including immunocompromised and Immunodeficiencies).	Ondrej Mach - World Health Organization, Switzerland
15:45 - 16:05	Discussion	-	Ondrej Mach - World Health Organization, Switzerland
16:05-16:30	coffee break		
16:30-16:55	Lecture 6: Polio vaccines	• Describe different types of existing polio vaccines (IPV and OPVs) regarding composition, mechanism, and use. • Present and explain immunization schedules. • Explain their roles in routine immunization, outbreak response, and eradication campaigns. • Explain types, efficacy, safety, production challenges for future vaccines (nOPV, particle non-infectious vaccines etc.). • Describe Polio Vaccination for vulnerable persons (including immunocompromised and Immunodeficiencies)	• Ananda Bandyopadhyay - Gates Foundation, USA • Ondrej Mach - World Health Organization, Switzerland
16:55-17:15	Discussion		
17:15 - 17:35	Special guest 1: Presentation of SAGE and the Polio working group	• Presentation of the World Health Organization Strategic Advisory Group of Experts on Immunization (SAGE) and the specific polio working group • Update on the polio vaccination recommendations from the SAGE group	Ziad Memish - King Salman Humanitarian Aid & Relief Center, Saudi Arabia
17:35 - 17:50	Discussion		
17:50 - 18:15	Lecture 7: The Global Polio Eradication Initiative (GPEI) and its strategy	• Describe the structure, roles, and partnerships within the GPEI, including the links with the WHO SAGE. • Present the role of accountability and governance in driving progress toward eradication including the functions of the GPEI Independent Monitoring Board (IMB), and the Polio Eradication Certification Committees (Global, Regional and National). • Summarize how responsibilities, funding mechanisms, and global coordination are managed under GPEI. • Explain the strategic goals and operational pillars of the current GPEI strategy. • Present the status of implementation to date, including achievements and setbacks. • Present the strategy's alignment with broader global health priorities and contextual challenges. • Present GPEI possible future strategy options.	• Suchita Guntakatta - Gates Foundation, USA • Kamel Senouci - University of Geneva, Switzerland
18:15 - 18:35	Discussion		
18:35 - 18:45	Interactive session 1: Q & A with lecturers Day 1	-	All speakers/ facilitators/ panelist present during the day
18:45 - 19:30	Self-presentation of participants (background, interests in life...)	-	Participants
19:30-21:00	Welcome reception		

October 26 - DAY 2 – POLIO OUTBREAK: FROM DETECTION TO RESPONSE

Timings	Topic	Objectives	Lecturer/facilitators
08:00 - 8:30	Registration		
08:30 - 08:45	Daily introduction		Course Directors
08:45 - 09:10	Lecture 8: GPEI SOPs: surveillance, detection, notification and investigation	• Explain the key components of polio surveillance, including Acute Flaccid Paralysis (AFP) surveillance and environmental surveillance (ES). • Discuss the differential diagnosis of AFP (e.g. Guillain-Barré Syndrome, Malnutrition). • Discuss other Paralysis viruses (e.g. EV71, EV68). • Describe the role of immunodeficiency-associated vaccine-derived poliovirus (iVDPV) in surveillance and investigation.	Hemant Shukla - World Health Organization, Jordan
09:10 - 09:30	Discussion	-	
09:30 - 09:55	Lecture 9: GPEI SOPs: risk assessment and response	• Describe how to conduct a risk assessment for a potential or confirmed poliovirus outbreak. • Explain the development and components of an effective Outbreak Response Plan (ORP). • Illustrate the use of microplanning in tailoring response activities at the local level.	Hemant Shukla - World Health Organization, Jordan
09:55 - 10:15	Discussion	-	
10:15 - 10:40	coffee break		
10:40 - 11:05	Lecture 10: GPEI SOPs: Polio vaccines logistics	• Describe key aspects of vaccine distribution and storage, including temperature-sensitive logistics (OPV vs IPV). • Explain the process and importance of reverse logistics, including the handling of nOPV2 vials, stool samples, and other materials. • Evaluate protocols for managing biohazards and medical waste during polio response campaigns	Ahmet Afşar - Unicef, Kenya
11:05 - 11:25	Discussion	-	
11:25 - 12:55	Working group session 2: Preparing a risk assessment and a response plan	• Apply GPEI frameworks to develop a practical risk assessment based on a simulated outbreak scenario (POSE - Polio Outbreak Simulation Exercise) • Apply GPEI frameworks to design a tailored response plan incorporating microplanning, surveillance findings, and risk prioritization. • Apply GPEI frameworks to critically evaluate real-world case studies to identify strengths and gaps in response plans.	- Hemant Shukla - World Health Organization, Jordan - Jeevan Kumar Makam - UNICEF HQ New York, USA - Deo Nshimirimana - Independent Health Consultant, Burundi - Modjirom Ndoutabe - Independent Health Consultant, Tchad
12:55 - 14:00	Lunch		
14:00 - 14:25	Lecture 11: GPEI SOPs: budget, financing, HR for the response	• Outline the recommended structure and key components of an outbreak response budget. • Explain the process of financial planning, including digital payment systems (e-payments). • Describe strategies for human resource surge planning, including recruitment, training, and deployment.	Ticky Esoh Ebongue - World Health Organization, Switzerland
14:25 - 14:45	Discussion	-	
14:45 - 15:45	Working group session 3: Preparing the budget and the HR surge for the response	• Develop a detailed outbreak response budget using sample data and SOP recommendations. • Plan a human resource surge strategy, assigning roles and timelines for effective deployment. • Evaluate potential financial and HR bottlenecks in outbreak response scenarios.	- Ticky Esoh Ebongue - World Health Organization, Switzerland - Modjirom Ndoutabe - Independent Health Consultant, Tchad - Katy Clark, GAVI, Switzerland - Hemant Shukla - World Health Organization, Jordan

15:45 -16:10	coffee break		
16:10 -16:35	Lecture 12: Monitoring and evaluation of the quality of the response	• Describe the types of data used to monitor preparedness. • Describe response quality indicators (definition, collection, limitations etc.) and their role in continuous improvement. • Introduce the concept and implementation of Outbreak Response Assessments (OBRA) for feedback and accountability.	Modjirom Ndoutabe - Independent Health Consultant, Tchad
16:35 -16:55	Discussion	-	
17:00 -18:30	Working group session 4: Outbreak response campaigns: management, monitoring & evaluation	• Simulate the coordination of a response campaign, including implementation monitoring tools. • Use data to assess campaign effectiveness and identify areas for rapid improvement. • Use response quality indicators to improve immunization rounds. • Interpret OBRA results and propose corrective actions to strengthen surveillance and possible future responses.	- Hemant Shukla - World Health Organization, Jordan - Jeevan Kumar Makam - UNICEF HQ New York, USA - Deo Nshimirimana - Independent Health Consultant, Burundi - Modjirom Ndoutabe - Independent Health Consultant, Tchad
18:30 -18:45	Interactive session 2: Q & A with lecturers Day 2	-	All speakers/ facilitators/ panelist present during the day
18:45 -22:00	Student time – free evening		

October 27 - DAY 3 – STRATEGIC, POLITICAL AND SOCIAL DIMENSIONS OF POLIO OUTBREAK RESPONSE			
Timings	Topic	Objectives	Lecturer/facilitators
08:00 - 8:30	Registration		
08:30 - 08:45	Daily introduction		Course Director
08:45 - 09:10	Lecture 13: Political engagement and resource mobilization at global, regional and country levels	• Present key drivers and barriers to securing political commitment for polio eradication. • Explain challenges in mobilizing financial, human, and technical resources across levels. • Discuss and present strategies to strengthen advocacy and sustain support in low-priority or transitioning countries.	- Heather Monnet – Kinaura Partners, Switzerland
09:10 - 09:30	Discussion		
9:30 - 10:30	Working group session 5: Political engagement and resource mobilization for polio at the country levels	• Learn how to develop a stakeholder mapping and advocacy strategy to engage political leaders and donors. • Design a country-level resource mobilization plan incorporating public and private sector contributions. • Simulate a high-level policy dialogue to secure commitment and funding for national polio efforts.	- Heather Monnet – Kinaura Partners, Switzerland - Kamel Senouci - Université de Geneve, Suisse - Deo Nshimirimana - Independent Health Consultant, Burundi - Habib Hasan Farooqui - Qatar University, Qatar
10:30 - 11:00	coffee break		
11:00 - 11:25	Lecture 14: Understanding and addressing vaccine misinformation	• Explain the psychological and social factors that make individuals and communities susceptible to vaccine misinformation and disinformation. • Describe how misinformation and disinformation can influence vaccine confidence, acceptance, and the implementation of polio immunization programs. • Apply evidence-based strategies to prevent and respond to vaccine misinformation.	Louise Henaff - Université de Geneve, Switzerland
11:25 - 11:45	Discussion		
11:45 - 12:10	Lecture 15: Engagement of communities and individuals in Polio surveillance and response (including addressing vaccine hesitancy)	• Explain the role of Social and Behavior Change Communication (SBCC) in building vaccine confidence and uptake. • Describe the impact of gender dynamics in polio surveillance and polio response (including the roles of women, caregivers & frontline health workers) • Identify culturally sensitive approaches to improve acceptance in different socio-cultural settings / different countries.	Naureen Naqvi - UNICEF, Afghanistan
12:10 - 12:30	Discussion		
12:30 - 13:45	Lunch		
13:45 - 15:00	Working group session 6: Engaging communities and individuals	• Apply GPEI guidelines to develop strategies to address vaccine hesitancy through culturally tailored SBCC activities. • Apply GPEI guidelines to design a community engagement plan based on a contextual case scenario, integrating gender-sensitive approaches. • Simulate outreach messaging and feedback mechanisms for building community trust.	- Naureen Naqvi -UNICEF, Afghanistan - Lee Rasheed - Salma Consulting - Louise Henaff - Université de Geneve, Switzerland - Peggy Hanna - TAG Polio ,WHO EMRO, Lebanon
15:00 - 15:50	Panel 1: Lessons learned: determinants and challenges of a Polio outbreak response	• Present different country cases to identify the key determinants of successful outbreak response. • Present challenges encountered during outbreak response and the solutions used to address them.	- Selected participants X 3-4 - Giridhara Rathnaiah Babu - Qatar University, Qatar (moderator)
15:50 - 16:20	Panel 1 -Discussion		
16:20 - 16:40	Interactive session 3: Q & A with lecturers Day 3		All speakers/ facilitators/ panelist present during the day

17:00- 17:30	Bus transfer to Souq Wahef
17:30 -19:30	Special social and cultural event
19:30	Bus transfer to hotel

October 28 - DAY 4 – POLIO ERADICATION IN CHALLENGING SETTINGS & PRESENT AND FUTURE STRATEGIES: INTEGRATION, INNOVATION AND ETHICS

Timings	Topic	Objectives	Lecturer/facilitators
08:00 - 8:30	Registration		
08:30 - 08:45	Daily introduction		Course Director
08:45 - 09:10	Lecture 16: Polio surveillance and response in insecure areas and conflict settings	- Identify the operational and logistical challenges of polio surveillance and response in conflict-affected or inaccessible areas. - Discuss adaptive strategies to ensure vaccine delivery, surveillance, and communication in fragile environments. - Explore coordination mechanisms with humanitarian and local security partners to maintain access.	Fiona Braka-World Health Organization, Ghana
09:10 - 09:30	Discussion	-	
09:30 - 11:10	Working group session 7: Polio surveillance and response in insecure areas and conflict settings	- Apply risk-based planning to develop a response strategy for a conflict or insecurity-affected region. - Simulate decision-making and coordination under field constraints (access, safety, mobility, trust). - Learn how to identify key partners and tools that can support response continuity in insecure zones.	- Zubin Malhotra, Centre for Humanitarian Dialogue - Osman Yussuf, Centre for Humanitarian Dialogue - Mohamed Somane, Centre for Humanitarian Dialogue - Lee Rasheed - Salma Consulting - Fiona Braka-World Health Organization, Ghana
11:10 - 11:30	coffee break		
11:30 - 11:55	Lecture 17: Routine immunization, integration, and polio transition	- Describe how routine immunization contributes to polio eradication. - Discuss the integration of other public health interventions within polio programs to improve overall health impact (and vice versa). - Explain the concept of polio transition and how assets and infrastructure can be sustained or repurposed.	Katy Clark - GAVI, Switzerland
11:55 - 12:15	Discussion	-	
12:15 - 12:40	Lecture 18: Polio containment	- Explain the rationale and principles of poliovirus containment. - Describe the global containment framework and national responsibilities. - Present risks associated with containment breaches and required mitigation strategies. - Briefly describe the challenges for vulnerable persons (including immunocompromised and Immunodeficiencies).	David Heymann - London School of Hygiene and Tropical medicine, UK
12:40 - 13:00	Discussion	-	
13:00 - 14:15	Lunch		
14:15 - 14:40	Lecture 19: Innovations in Polio	- Present cutting-edge tools and approaches enhancing polio prevention, surveillance, and response (e.g. GIS, artificial intelligence, rapid diagnostics). - Explain the impact and feasibility of integrating innovations into existing public health infrastructure. - Present gaps in innovation uptake and proposed strategies to overcome barriers.	Ondrej Mach - World Health Organization, Switzerland
14:40 - 15:00	discussion	-	
15:00 - 15:30	Lecture 20: Ethics and Polio	- Outline ethical challenges related to vaccine access, affordability, and funding mechanisms. - Present the ethical arguments for and against mandatory immunization laws and policies. - Outline professional ethics in cases where patients refuse	- Giridhara Rathnaiah Babu - Qatar University, Qatar

		immunization, including dismissal policies. • Explain the ethical obligation to report Adverse Events Following Immunization (AEFIs) and provide transparent communication to patients and families. • Present broader ethical issues including use of OPV, Polio programmatic impact on health systems, and prevention of sexual exploitation, abuse and harassment (SEAH) in immunization campaigns.	
15:30-15:50	Discussion		
15:50-16:15	coffee break		
16:15-16:30	Interactive session 4: Q & A with lecturers Day 4	-	All speakers/ facilitators/ panelist present during the day
16:30-17:15	Thematic groups mentoring		
17:15-18:45	Time for students		
18:45-19h00	Bus from hotel to Gala Diner		
19:00-21:30	Gala dinner		
21:30-21:50	Bus from Gala Diner to hotel		

October 29 - DAY 5 – COMMUNICATION & HUMAN STORIES IN POLIO ERADICATION

Timings	Topic	Objectives	Lecturer/facilitators
08:00 - 8:30	Registration		
08:30 - 08:45	Daily introduction	-	Course Director
08:45 - 09:15	WG8: Introduction to crisis communication	• Learn how to develop key messages for use during vaccine-related crises (e.g. AEFIs, outbreaks, hesitancy incidents).	Louise Henaff - Université de Geneve, Suisse
09:15 - 10:15	Working group session 8: crisis communication	• Simulate a press conference or media interview responding to a real-time polio-related event. • Learn how to apply principles of transparency, empathy, and trust-building in communicating with affected communities, healthcare workers, and media. • Evaluate real-world examples of successful and unsuccessful crisis communication in immunization contexts.	- Kamel Senouci - Université de Geneve, Suisse - Louise Henaff - Université de Geneve, Suisse - Kathleen Duclos - Université de Geneve, Suisse - Peggy Hanna - TAG Polio, WHO EMRO, Lebanon
10:15 - 10:45	coffee break		
10:45 - 11:45	Working group session 8: crisis communication - continued	• Learn how to develop key messages for use during vaccine-related crises (e.g. AEFIs, outbreaks, hesitancy incidents). • Simulate a press conference or media interview responding to a real-time polio-related event. • Learn how to apply principles of transparency, empathy, and trust-building in communicating with affected communities, healthcare workers, and media. • Evaluate real-world examples of successful and unsuccessful crisis communication in immunization contexts.	- Kamel Senouci - Université de Geneve, Suisse - Louise Henaff - Université de Geneve, Suisse - Kathleen Duclos - Université de Geneve, Suisse - Peggy Hanna - TAG Polio, WHO EMRO, Lebanon
11:45 - 12:45	PANEL 2 - Polio eradication: is it time to rethink our eradication objective?	• Engage in a critical discussion on the feasibility and sustainability of achieving global polio eradication. • Compare eradication with long-term control strategies and implications for public health priorities.	- Fiona Braka-World Health Organization, Ghana - David Heymann - London School of Hygiene and Tropical medicine, UK - Ondrej Mach - World Health Organization, Switzerland - Hamad Eid H A Al-Romaihi - Qatar MOH, Qatar - Kamel Senouci - Université de Geneve, Suisse (moderator)
12:45 - 14:00	Lunch		
14:00 - 14:25	Inspirational talk	Inspirational talk	Rose Gana Fomban Leke - University of Yaounde, Cameroon
14:25 - 14:45	Questions/discussion		
14:45 - 15:05	Interactive session 5: Q & A with lecturers Day 5		All speakers/ facilitators/ panelist present during the day
15:05 - 15:35	Evaluation of the course		-
15:35 - 15:50	Presentation of the PVAC Alumni platform		- Louise Henaff - Université de Geneve, Suisse - Kathleen Duclos - Université de Geneve, Suisse
16:00 - 17:00	Diploma ceremony		-
17:00	Closing		

6. Program Summary

PVAC 2026 - POLIO ADVANCED COURSE IN VACCINOLOGY - DOHA, QATAR						
	Sunday October 25	Monday October 26	Tuesday October 27	Wednesday October 28	Thursday October 29	
06:30	<i>Breakfast at hotel</i>	<i>Breakfast at hotel</i>	<i>Breakfast at hotel</i>	<i>Breakfast at hotel</i>	<i>Breakfast at hotel</i>	06:30
07:40						07:40
08:00	Registration	Registration	Registration	Registration	Registration	08:00
08:15						08:15
08:30	Opening: Welcome, course's objectives, program, evaluation & logistic	Daily introduction and Q&A	Daily introduction and Q&A	Daily introduction and Q&A	Daily introduction and Q&A	08:30
08:45		Lecture 8 : GPEI SOPs: surveillance, detection, notification and investigation	Lecture 13: Political engagement and resource mobilization at global, regional and country levels	Lecture 16: Polio surveillance and response in insecure areas and conflict settings	WG8 Lecture: Introduction to crisis communication	08:45
09:00						09:00
09:15	Lecture 1 : History of Polio and it's eradication					09:15
09:30		Lecture 9: GPEI SOPs: risk assessment and response			Working group session 8: crisis communication	09:30
09:45			Working group session 5: Political engagement and resource mobilization for polio at the country levels	Working group session 7: Polio surveillance and response in insecure areas and conflict settings		09:45
10:00	Lecture 2: Epidemiology of WPV and cVDPVs	Coffee break			Coffee break	10:00
10:15						10:15
10:30	Coffee break	Lecture 10: GPEI SOPs: Polio vaccines logistics	Coffee break	Coffee break		10:30
10:45					Working group session 8: crisis communication	10:45
11:00	Lecture 3: Virology of Polio and enteroviruses		Lecture 14: Interactive lecture Mis and disinformation and AI	Lecture 17: Routine immunization, integration, and polio transition		11:00
11:15						11:15
11:30		Working group session 2: Preparing a risk assessment and a response plan	Lecture 15: Engagement of communities and individuals in Polio surveillance and response (including addressing vaccine hesitancy)	Lecture 18: Polio containment	PANEL 2 - Polio eradication: is it time to rethink our eradication objective?	11:30
11:45						11:45
12:00	Lecture 4: Clinical manifestations of Polio and enterovirus infections					12:00
12:15						12:15
12:30						12:30
12:45						12:45
13:00	Lunch	Lunch	Lunch	Lunch	Lunch	13:00
13:15						13:15
13:30						13:30
13:45						13:45
14:00	Working group session 1: Interpretating lab results	Lecture 11: GPEI SOPs: budget, financing, HR for the response	Working group 6: Engaging communities and individuals and adressing missinformation	Lecture 19: Innovations in Polio	Special talk	14:00
14:15						14:15
14:30						14:30
14:45		Working group session 3: Preparing the budget and the HR surge for the response		Lecture 20: Ethics and Polio	Daily Q & A	14:45
15:00						15:00
15:15					Course evaluation	15:15
15:30	Lecture 5 : Immunology	Coffee break	PANEL 1 - Lessons learned: determinants and challenges of a Polio outbreak response	Coffee break	Presentation of the PVAC Alumni platform	15:30
15:45				Daily Q & A		15:45
16:00	Coffee break	Lecture 12: Monitoring and evaluation of the quality of the response			Diploma ceremony	16:00
16:15			Daily Q & A	Thematic groups mentoring		16:15
16:30	Lecture 6: Polio vaccines					16:30
16:45						16:45
17:00		Working group session 4: Outbreak response campaigns: management, monitoring & evaluation			Closing	17:00
17:15	Special guest : SAGE overview and update		Student time			17:15
17:30			Bus transfers			17:30
17:45				Student time		17:45
18:00	Lecture 7: The Global Polio Eradication Initiative (GPEI) and it's strategy					18:00
18:15						18:15
18:30		Daily Q & A	Special Social and Cultural Event			18:30
18:45	Daily Q & A			Bus transfers		18:45
19:00						19:00
19:15	Self-presentation of participants					19:15
19:30			Bus transfers			19:30
19:45						19:45
20:00		Student time /free evening		Gala Dinner		20:00
20:15						20:15
20:30			Student time /free evening			20:30
20:45	Welcome Reception / dinner					20:45
21:00						21:00
21:15						21:15
21:30				Bus transfers		21:30