

Highlights from the Meeting of the Strategic Advisory Group of Experts (SAGE) on Immunization 5-8 October 2026

(The full report will be published in the Weekly Epidemiological Record on 18 December 2026, and only the wording of the full report should be considered final)

Session 1

Report from the Department of Immunization, Vaccines, and Biologicals.

- **Immunization evidence-informed decisions under threat.** Evidence-informed decisions face threats from geopolitical fragmentation and rising nationalism; misinformation; falling public trust as a general social shift; yet resource constraints increase the need for evidence-driven prioritization by governments.
- **Greatest risks towards immunization IA2030 goals.** The Big Catch-Up reduced serious vaccination backlog across 2019-2024 cohorts, but persisting high numbers of zero-dose children, dropout rates, and uneven vaccination coverage threaten achievement of IA2030 goals.
- **Sustaining the gains and maturity of national immunization programmes.** SAGE encouraged countries to employ structured decision-making tools, such as the GRADE Evidence-to-Decision frameworks, to systematically inform and transparently document the evidence supporting their policy decisions.
- **Safeguarding evidence-informed immunization policy and programme** requires dedicated investments to bridge the gap between rapid vaccine development and the evidence needed to drive downstream vaccine policies, access and use.
- **Positioning SAGE for the future.** SAGE must adapt its processes to meeting evolving evidence, policy needs, and funding environment. Artificial intelligence can support this work, but only with clear standards and human responsibility governing its use.

Report from Gavi, the Vaccine Alliance

- **Important progress with persistent equity gaps:** Gavi-eligible country immunization programme performance exceeded the strategy period targets for number of children immunized and breadth of protection; over 95 million girls receiving HPV vaccine by end-2025, surpassing the 86 million target. However, targets for reducing zero-dose¹ children and achieving coverage with three doses of diphtheria tetanus and pertussis containing vaccines (DTP3) were not met.
- **Gavi funding shortfalls will require vaccine prioritization and optimization:** There is a significant shortfall in covering the cost of the Gavi 2026-2030 strategy (Gavi 6.0) requiring countries

¹ Children who have not received the first dose of diphtheria, tetanus and pertussis containing vaccines.

to prioritize within allocated Gavi funding budgets. SAGE expressed concern about the separation between guaranteed and discretionary budgets for vaccines. Noting the important role of National Immunization Technical Advisory Groups (NITAG) in making decisions underpinning country Gavi applications, SAGE emphasized the need to ensure adequate funding of NITAGs to enable evidence-informed prioritization decisions.

- **Risks to existing immunization programmes and achieved gains:** SAGE noted that currently available Gavi funding is insufficient to maintain use of vaccines currently included in national immunization programmes, which jeopardizes country gains achieved to date and may undermine trust in vaccine programmes. SAGE recommended that the upcoming Gavi Board ‘Upcalibration’ exercise include maintaining existing vaccine programmes in countries as a priority principle for allocation of additional funding.
- **Acceleration of introduction of diphtheria-containing vaccine booster doses as part of national immunization programmes.** SAGE urged Gavi to explore options to support the introduction and scale up of diphtheria-containing vaccine booster doses in eligible countries in the Gavi 6.0 period to mitigate the risk of disruptive outbreaks and reduce the need for outbreak response vaccination.

Reports from the WHO Regional Offices

- **Reaching missed children remains a priority:** Zero-dose and under-vaccinated children require targeted outreach, catch-up vaccination and follow-up, particularly in conflict-affected settings and areas experiencing recurrent outbreaks.
- **Integration can reduce missed opportunities:** Linking outbreak response with catch-up immunization, and vaccination with primary health care and maternal and child health services, can extend protection and support completion of vaccination schedules.
- **Better surveillance and data use are essential:** Priorities include strengthening disease and vaccine safety surveillance, improving data quality and analysis, strengthening safety surveillance for adverse pregnancy outcomes of maternal vaccination, and using local surveillance and vaccine coverage evidence to target vaccination interventions and monitor progress.
- **Sustaining gains requires national ownership and reliable financing:** Greater political commitment, increased domestic investment, clarity in roles and responsibilities, coordinated partnerships, and financing planning to transition away from external funding are needed to protect and sustain core immunization functions and advance disease elimination goals.

Session 2

Ebola vaccines

- **Continuing challenges to Bundibugyo virus disease (BVD) outbreak control.** SAGE expressed concern about the high proportion of deaths occurring in the community, particularly among young children, indicating lack of contact with the health system and outbreak response. SAGE also expressed concern about the impact of insecurity and population displacement in the Democratic Republic of the Congo (DRC), which continues to hinder access to care, disrupt surveillance and response activities, and delay the critical research needed to inform the outbreak response.

- **Rapid progress in BVD-specific vaccine development and preparations for the TUMAINI randomized controlled trial (RCT) in the DRC.**² SAGE welcomed accelerated development of BVD-specific vaccines and welcomed the single protocol, adaptive platform design of the TUMAINI RCT which will enable efficient evaluation of both the BVD-specific vaccine candidates and Ervebo®.
- **Immunogenicity, animal, and observational studies of Ervebo® cannot substitute for robust evidence of vaccine efficacy derived from RCTs.** SAGE emphasized that finding from immunogenicity studies demonstrating that Ervebo® elicits cross-reactive antibodies against Bundibugyo virus are not sufficient to assess clinical protection against BVD. SAGE also cautioned that results of observational studies are subject to significant potential biases and confounding and therefore serve to complement but not replace the need for evidence on vaccine efficacy from randomized trials. Hence, SAGE reiterated the urgency of generating robust evidence on vaccine efficacy through the TUMAINI RCT for informing future policy decisions and the need to avoid actions that could delay, undermine, or jeopardize its successful conduct and completion.
- **SAGE highlighted the importance of proactively planning the pathway from the demonstration of vaccine efficacy against BVD to regulatory authorization, policy recommendations, vaccine access, and implementation.** Early engagement with relevant regulatory authorities and other key stakeholders should be initiated before efficacy results become available, to facilitate timely regulatory and policy decisions and rapid vaccine access should a vaccine candidate evaluated in the TUMAINI RCT demonstrate efficacy against BVD. These discussions should explicitly address regulatory and access pathways for all populations included in the trial, including pregnant and lactating women and children, to ensure that these populations are not inadvertently excluded from timely access to an effective vaccine.

Session 3

Yellow fever vaccines

- **Fractional-dose yellow fever vaccination elicits an immune response that is non-inferior to that of a standard dose** at 28 days in adults and children aged two years and older, but seroconversion rates at 10 days is less consistent, particularly in children; the evidence on long-term durability of protection in children remains limited.
- **Use of fractional doses of yellow fever vaccine for outbreaks may be continued.** For reactive outbreak response, SAGE reiterated the 2017 recommendation allowing the use of a one-fifth fractional dose in persons aged ≥ 2 years when vaccine demand exceeds supply.
- **For preventive vaccination campaigns, a one-fifth single fractional dose of yellow fever vaccine may be used in persons aged 2 to 59 years** when vaccine supply, financial or other programme constraints would otherwise limit the timely implementation, scale or coverage of vaccination.

² Study of Vaccines Against Bundibugyo Virus Disease in Contacts of Cases in the Democratic Republic of the Congo (TUMAINI) (<https://clinicaltrials.gov/study/NCT07842107>, accessed 12 October 2026).

- **For routine and catch-up vaccination in children a standard dose of the vaccine should be used** because the evidence on the immunogenicity and long-term durability of protection following fractional dosing is currently insufficient in this age group.

Session 4

Human papillomavirus (HPV) vaccines

- **A single dose schedule is the most efficient immunization strategy for cervical cancer prevention in girls aged 9—14 years.** Based on a review of updated evidence, SAGE recommends HPV vaccination of girls aged 9—14 years using a single dose schedule; this was identified as the most efficient approach to achieve the primary goals of the global strategy for cervical cancer elimination.
- **Countries may consider routine vaccination of girls aged 4—8 years** with a single dose of HPV vaccine, if this is likely to result in increased vaccination uptake and coverage.
- **HPV vaccination scope may be sequentially expanded to additional target groups.** Based on the predicted efficiency of vaccination in preventing cervical cancer using a mathematical model, vaccination using a single-dose schedule may be expanded to include the following target group in the following order of priority, with due consideration to cost-effectiveness: (i) catch-up vaccination of women aged up to 25 years (ii) catch-up vaccination of women aged up to 30 years; (iii) routine vaccination in boys aged 9—14 years ; (iv) catch-up vaccination of males up to 20 years of age. Other considerations, notably local epidemiology, consideration of disease outcomes beyond cervical cancer, programmatic feasibility and equity may guide programme prioritization decisions on vaccination of boys.
- **Immunocompromised people should continue to receive at least two doses:** two doses for people living with HIV/AIDS when it is well-controlled (CD4+ cell count > 350 cells/mm³) and three doses should be used for severely immunocompromised people

Session 5

Mpox vaccines

- **Mpox remains a global concern**, with transmission patterns varying by setting and the greatest risk of severe outcomes among young children and severely immunocompromised individuals.
- **Evidence to date indicates that licensed mpox vaccines are effective and have a reassuring safety profile in healthy adults.** Important evidence gaps remain in children, pregnant women and severely immunocompromised individuals.
- **During mpox outbreaks, SAGE recommends targeted vaccination of people at risk of infection** in affected communities, including children; people exposed through sexual networks; contacts of people with mpox; and health and outbreak response workers with repeated exposure.

- **Preventive mpox vaccination may be considered in those at high-risk of infection or severe disease.** Groups to consider include people at increased risk of sexual exposure to mpox and their partners, people with advanced HIV disease or other immunocompromising conditions, laboratory personnel working with orthopoxviruses and health workers at risk of occupational exposure. Preventive vaccination for children in settings where local epidemiology indicates a risk of infection may be considered within a research setting.
- **Critical research is required to inform future policy recommendations.** Priority research should focus on disease epidemiology and transmission dynamics in children, age-specific disease burden and severity, vaccine effectiveness and safety in paediatric populations, duration of vaccine-induced protection, and the safety and immunogenicity of coadministration with other routinely administered childhood vaccines.

Session 6

Diphtheria-containing vaccines for outbreak prevention and response

- **SAGE expressed concern about the resurgence of diphtheria outbreaks,** particularly in the WHO African and Eastern Mediterranean regions, reflecting persistent immunity gaps due to inadequate three dose primary-series coverage and the absence or low uptake of WHO-recommended booster doses which extend duration of protection.
- **Closing immunity gaps through high coverage of the primary diphtheria vaccine series, booster doses and catch-up vaccination strategies are needed to prevent outbreaks.** SAGE strongly emphasized increasing the coverage with the primary series of diphtheria toxoid-containing vaccines and prioritize the introduction and scale up of boosters in national immunization programmes.
- **A comprehensive response package is required for diphtheria outbreak control.** SAGE highlighted that effective diphtheria outbreak control requires a comprehensive response package, including diphtheria antitoxin, antibiotics, infection prevention control measures, and strengthened surveillance, in order to minimize morbidity and mortality and rapidly curtail outbreak size by interrupting transmission.
- **Recovered cases and close contacts should be vaccinated.** SAGE recommended ensuring that recovered cases are vaccinated and close contacts are up to date with age-appropriate diphtheria toxoid-containing vaccines.
- **SAGE recommended that countries may consider outbreak response vaccination campaigns** to rapidly close immunity gaps and reduce disease burden, particularly when implemented within weeks of outbreak detection, focused on low-coverage areas, reaching unvaccinated and under-vaccinated populations, and achieving high coverage. A single well-executed round is predicted to provide most of the benefits from a campaign approach and must be followed by routine immunization strengthening in these areas to raise coverage and address remaining gaps.

Session 7

Poliomyelitis

- **SAGE expressed serious concern about ongoing WPV1 transmission in Afghanistan and Pakistan and persistent circulating vaccine-derived poliovirus type 2 (cVDPV2) transmission in Africa**, despite repeated novel oral poliovirus type 2 vaccine campaigns, while noting that the number of cases in 2026 is higher than during the corresponding period in 2025, with Afghanistan accounting for the majority of cases and emphasizing the need to strengthen routine immunization and reach zero-dose children.
- **SAGE reaffirmed the importance of progressing towards safe cessation of bivalent oral poliovirus vaccine (bOPV)** from routine immunization, while recognizing that eradication-related triggers may delay the current timeline.
- **SAGE recommended that all countries currently administering fewer than three doses of the inactivated poliovirus vaccine (IPV) in routine immunization should transition without delay to a three-dose infant schedule** administered at 6, 10 and 14 weeks of age. All countries should achieve high coverage above 90% with this schedule.
- **The availability and Gavi support for a whole-cell pertussis containing hexavalent vaccine³ could be leveraged** to support the shift to a 3-dose IPV schedule. However, the transition to a three-dose IPV schedule should not be delayed if hexavalent vaccines are not immediately accessible.
- **In poliovirus outbreaks, a second fractional- or full-dose IPV campaign may be considered** if transmission persists for more than six months following the initial IPV campaign, with the aim of boosting and maintaining mucosal immunity.

³ Containing diphtheria, tetanus, whole-cell pertussis, hepatitis B, Haemophilus influenzae type b, and inactivated poliovirus vaccines.