World Health Organization

European Region

Twenty-fifth Meeting of the European Technical Advisory Group of Experts on immunization (ETAGE)

17–18 November 2025
Copenhagen, Denmark

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Abstract

The Twenty-fifth Meeting of the European Technical Advisory Group of Experts on Immunization (ETAGE) was held in Copenhagen, Denmark, on 17–18 November 2025, to review progress with immunization and control of vaccine-preventable diseases in the WHO European Region, and provide policy advice to the WHO Regional Office for Europe and its Member States. The meeting included reports on global implementation of Immunization Agenda 2030, a review of the European Immunization Agenda 2030 Technical Progress Report 2024, a summary of the 2025 meetings and recommendations of the Strategic Advisory Group of Experts on Immunization, a Regional Office update on vaccine introduction, coverage and pricing, programmatic updates from partners, and an update on methodologies to identify and address immunization inequities. Following detailed discussions, ETAGE made recommendations as detailed in this report.

Keywords: IMMUNIZATION, VACCINES, MEASLES, POLIOMYELITIS

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This publication contains the report of the Twenty-fifth Meeting of the European Technical Advisory Group of Experts on Immunization (ETAGE) and does not necessarily represent the decisions or policies of WHO.

Contents

Abbreviations

1+1	one primary and one booster dose of pneumococcal conjugate vaccine
bOPV	bivalent oral poliovirus vaccine
COVID-19	coronavirus disease
ECDC	European Centre for Disease Prevention and Control
EIA2030	European Immunization Agenda 2030
ETAGE	European Technical Advisory Group of Experts on Immunization
HPV	human papillomavirus
IA2030	Immunization Agenda 2030
IPV	inactivated poliovirus vaccine
NITAG	national immunization technical advisory group
PCV	pneumococcal conjugate vaccine
RVC	Regional Verification Commission for Measles and Rubella Elimination
SAGE	Strategic Advisory Group of Experts on Immunization
UNICEF	United Nations Children's Fund
VPD	vaccine-preventable disease
VPI	Vaccine-preventable Diseases and Immunization programme

Executive summary

The Twenty-fifth Meeting of the European Technical Advisory Group of Experts on Immunization (ETAGE) was held in Copenhagen, Denmark, on 17–18 November 2025, to review progress with immunization and control of vaccine-preventable diseases (VPDs) in the WHO European Region, and provide policy advice to the WHO Regional Office for Europe and its Member States.

ETAGE received reports on the status of global and regional immunization programmes, and progress against the European Immunization Agenda 2030 (EIA2030) monitoring indicators. ETAGE was briefed on the conclusions and recommendations of the Strategic Advisory Group of Experts on Immunization (SAGE) and considered the implications for the WHO European Region of SAGE recommendations on the use of varicella vaccine for the prevention of varicella in children and the use of recombinant herpes zoster vaccines for the prevention of herpes zoster in older adults and high-risk groups. ETAGE also concurred that implementing a "1+1" (one dose and one booster) vaccination schedule for pneumococcal conjugate vaccine (PCV) addressed by SAGE can help countries reduce the number of injections and potentially lower immunization programme costs. Nevertheless, ETAGE stressed that countries considering implementing this reduced schedule must fully meet SAGE criteria, including the existence of a mature PCV programme and high sustained coverage or evidence of sufficient population immunity. In addition, ETAGE reviewed evidence on recent outbreaks of VPDs in the Region and the progress made in enabling access to affordable new vaccines in middle-income countries in the Region.

ETAGE expressed grave concern that, at the current pace, most EIA2030 milestones and targets are unlikely to be met, especially in the context of reduced resources for public health programmes, ongoing conflicts and displacement of populations, and the spread of misinformation and disinformation about vaccination. Suboptimal coverage led to several VPD outbreaks in the European Region in 2024, with exceptionally high numbers of pertussis and measles cases, causing significant morbidity and mortality. Widespread outbreaks further highlight the significant and persistent inequities in immunization coverage, both within and between countries in the Region, while the percentage of countries that have collected evidence of under-immunized populations at subnational levels has not increased.

ETAGE noted the multiple environmental detections of vaccine-derived poliovirus in the Region since September 2024 and applauded the affected Member States for their high-quality environmental surveillance. However, ETAGE also underscored the continuing

threat of poliovirus importation. Sustained efforts are needed to maintain polio-free status throughout the Region. ETAGE concurred with SAGE by reiterating its support for the cessation of bivalent oral poliovirus vaccine in countries that still use it and meet the required conditions for cessation.

ETAGE recognized a critical information gap in verifying and quantifying reasons for un- and under-vaccination. It encouraged implementation of methodologies to better understand low coverage in certain communities and settings, as the reasons may extend beyond hesitancy and involve programmatic and systemic issues of the health system and the delivery of vaccines and vaccine-related products. By knowing the relative contributions of each barrier to vaccination, countries can more effectively tailor interventions, allocate resources and monitor progress toward EIA2030 equity targets. This is also critical to better reach zero-dose communities with lifesaving vaccines.

Opening remarks

Dr Ole Wichmann, Chair of the European Technical Advisory Group of Experts on Immunization (ETAGE), opened the hybrid meeting and welcomed all participants.

Dr Shahin Huseynov, acting Programme Manager of the Vaccine-preventable Diseases and Immunization programme (VPI), expressed that it was an honour to represent the VPI team and thanked ETAGE for its valuable support and guidance.

Dr Ihor Perehinets, Health Security and Regional Emergency Director of the WHO Regional Office for Europe, provided an overview of the new strategic vision for the Regional Office, the restructuring of technical work, and the merger of emergency and communicable disease functions, including immunization, into the Division of Health Security, in recognition of reduced resources and shifting priorities.

He addressed the challenges arising from the war in Ukraine, increased migration, outbreaks of vaccine-preventable diseases (VPDs), and eroding trust in governments and public health programmes, and reflected on the implications of financial constraints, emphasizing the need for critical self-assessment of existing business models and operational efficacy. The importance of sustained investment in public health was underscored, recognizing it as an essential component of national security.

Highlighting the need to adapt to rapidly changing environments and diverse country priorities, Dr Perehinets requested advice from ETAGE members not only on technical immunization issues but also on strategies for advocacy for and investment in public health.

Session 1. Global implementation of Immunization Agenda 2030 and regional update on priority areas in 2026

Global overview: Immunization Agenda 2030

WHO headquarters presented a global mid-term update on the implementation of Immunization Agenda 2030 (IA2030), highlighting achievements and challenges *(1)*. While there has been progress in restoring immunization coverage through catch-up vaccination efforts, immunity gaps persist and have led to large and disruptive VPD outbreaks in several countries. Potential for further backsliding caused by constrained resources in the current global health environment is a concern across all WHO regions. Efforts are increasingly focused on subnational levels, to maximize the impact of available resources, reduce the number of unvaccinated and under-vaccinated children, and advance immunization equity.

In 2025, WHO headquarters experienced a reduction in staff and major funding gaps. Funding gaps and sustainability pressures require sharper prioritization and stronger coordination. Despite the current financial constraints, Gavi, the Vaccine Alliance, continues to prioritize human papillomavirus (HPV) vaccines, malaria vaccine rollout and reduction of the number of zero-dose children worldwide. All WHO regional offices have been affected by drastic reductions in human and financial resources, which is

expected to significantly alter their ability to support immunization activities in Member States.

Progress and gaps

WHO reports a failure to meet IA2030 immunization coverage targets, which will lead to an increase in avoidable future deaths. Global coverage of key immunizations is stagnant or even worsening. However, the target for vaccine introduction in low- and middle-income countries is on track with more than 500 new vaccine introductions from 2021 until 2024.

Surveys conducted by WHO on IA2030 show that the IA2030 vision is more relevant than ever, as the vaccine landscape is changing worldwide. In this context, 82% of respondents agree that IA2030 aligns with existing strategies; 71% agree that IA2030 founding principles are being implemented and 89% agree that the IA2030 Secretariat is successful in convening stakeholders. To achieve IA2030, WHO headquarters has redefined priorities and calls for a refocus on IA2030 goals, with a stronger emphasis on nationally and regionally led approaches.

Vaccine optimization and prioritization

Given the current financial constraints, WHO is working to provide guidance on vaccine schedule optimization. National immunization technical advisory groups (NITAGs) play a prominent role in providing technical guidance to countries. Guidance from WHO in setting evidence-based priorities will be essential to ensure that immunization programmes optimize their vaccine portfolios and continue to deliver impact equitably and sustainably.

Regional overview: European immunization situation and Regional Office restructuring

The WHO Regional Office for Europe presented the status of immunization in the Region, the impact of organizational restructuring and priority areas moving forward. In 2024, WHO reported a decline in immunization coverage, increased cases of measles and environmental detection of polioviruses. According to data provided to WHO by Member States, most zero-dose children are concentrated in a few countries. Coverage of both the third dose of the diphtheria-tetanus-pertussis vaccine and the second dose of the measles-containing vaccine can be used in this context to serve as proxy indicators of health system performance.

The Regional Office faces reductions in staff and strict austerity measures following funding losses. Despite challenges, VPI has maintained core functions. Recent achievements were highlighted, such as technical support provided to Member States, including on NITAG strengthening, vaccine safety and surveillance. Given the current austerity measures, VPI has identified core functions to be maintained in the coming biennium (sustaining polio-free status, poliovirus containment, measles/rubella elimination, disease surveillance, immunization equity, NITAG support) and areas to be scaled down or discontinued (immunization financing, vaccine supply management, vaccine demand/acceptance, communication activities). Fundraising and partner coordination are also priorities for the coming year.

Update from the European Regional Verification Commission for Measles and Rubella Elimination

The European Regional Verification Commission for Measles and Rubella Elimination (RVC) provided an update on the verification status of measles and rubella elimination in the Region, highlighting setbacks in 2024.

- Measles elimination: the number of countries with continuing or re-established endemic status increased from 12 for 2023 to 19 for 2024.
- Rubella elimination: verification of rubella elimination was not possible for three countries. The RVC deems it difficult for these three countries to reach elimination status easily. For the rest of the 52 countries in the Region that submitted a report for 2024, rubella elimination remains stable.

The RVC identified the following as major barriers to achieving measles elimination in the Region: suboptimal vaccination coverage at subnational level, incomplete epidemiological data, surveillance gaps, political and operational barriers, sociocultural factors and outdated policies. In this context, the need for improved data quality, outbreak response and updated verification criteria were highlighted.

The RVC called for increased political and financial commitment from Member States, partners and stakeholders. The importance of maintaining measles/rubella elimination should remain a top priority in the WHO European Region. The RVC also highlighted the need to increase immunization coverage, especially among high-risk groups, and strengthen surveillance and laboratory networks.

Session 2. European Immunization Agenda 2030 technical progress report

This session was kicked off by a review of the European Immunization Agenda 2030 (EIA2030) and the EIA2030 Technical Progress Report 2024 *(2)*, which is based on data reported to WHO. A brief overview of the EIA2030 dashboards was provided, highlighting their structure and utility for regional and country-level monitoring. The dashboards aim to support in-country monitoring and benchmarking.

Session 3. Summary and recommendations of Strategic Advisory Group of Experts on Immunization March 2025 and September 2025 meetings

Strategic Advisory Group of Experts on Immunization (SAGE) provided an update on its September and March 2025 meetings, covering NITAG functionality; prioritization for new vaccine introduction; coronavirus disease (COVID-19) vaccines; development of combination vaccines; and vaccine development for tuberculosis, malaria, pneumococcal disease, varicella, herpes zoster and polio *(3,4)*.

Regional Office update on vaccine introduction, coverage and pricing

VPI presented data on pneumococcal, varicella and herpes zoster vaccine introduction, coverage and pricing across the Region.

Pneumococcal vaccines

Of 47 countries in the Region using a three-dose pneumococcal conjugate vaccine (PCV) schedule, 45 reported coverage of the third dose of PCV:

- 26 countries reached ≥ 0% coverage
- 14 countries reported 80–89%
- 5 countries reported < 80% coverage.

Programmatic evaluations in middle-income countries revealed three main barriers to high PCV coverage: missed opportunities (43–49%), lack of recall/reminder system for parents (35–39%) and parental refusal (5–11%). Findings show that systematic and programmatic barriers include the lack of performance-based incentives, a shortage of health workers, mandatory pre-vaccination medical examinations in some countries and false contraindications. These data show that vaccine hesitancy plays a smaller role compared to systemic issues.

Varicella and herpes zoster vaccination

Universal varicella vaccination is implemented in 18 countries, with high coverage rates. Herpes zoster vaccination is limited to high-income countries due to high costs. Ten countries in the WHO European Region are currently implementing universal vaccination of adults for herpes zoster, while nine countries vaccinate risk groups. Pricing data show significant disparities between high- and middle-income countries.

Recommendations for national decision-making

Countries are advised to align new vaccine introductions and schedule changes with national immunization strategies, public health priorities and financial sustainability. Evidence-based NITAG recommendations are essential.

WHO and the Robert Koch Institute will continue supporting NITAGs in middle-income countries through webinars and capacity-building on systematic evidence-based decision-making for vaccine introductions and schedule changes.

Session 4. Programmatic updates from partners

Coordinated support for Member States by national, regional and global partners, such as the European Centre for Disease Prevention and Control (ECDC) and United Nations Children's Fund (UNICEF), and by other stakeholders is critical to meet EIA2030 goals. To this end, ECDC and UNICEF representatives were invited to this year's ETAGE meeting to share relevant projects and strategies, and to further strengthen collaboration, discuss project integration and create synergies.

Update from the ECDC

The ECDC provided an overview of ongoing and upcoming projects, including systematic reviews, surveillance and data collection efforts related to vaccine coverage and disease monitoring.

The ECDC outlined the finalization of systematic reviews on respiratory syncytial virus vaccine, monoclonal antibodies, maternal pertussis vaccination timing, tick-borne encephalitis booster efficacy, and HPV vaccine effectiveness in immunocompromised individuals.

The ECDC also discussed advancements in vaccination coverage monitoring, including building a dashboard and collecting new data. Recent data collection pilots were started on COVID-19, influenza, pneumococcal disease and mpox. The ECDC will align vaccine coverage indicators with WHO and will strengthen collaboration efforts for HPV vaccination coverage in the context of the Europe's Beating Cancer Plan *(5)*.

The ECDC discussed activities to address vaccine hesitancy and misinformation, including updating information portals and investing in communication initiatives, particularly around measles and other vaccines.

Update from the UNICEF Europe and Central Asia Regional Office

UNICEF outlined its strategic changes, research initiatives and targeted interventions to address immunization inequity and the costs of inaction in selected countries.

UNICEF is currently shifting to centres of excellence for concentrated technical assistance, focusing on social and behaviour change, community demand and confidence in immunization.

UNICEF conducted district-level coverage and equity assessments in Azerbaijan, Georgia, the Republic of Moldova and Ukraine, identifying barriers and prioritizing high-impact, low-investment interventions. Action plans were developed and support for implementation is ongoing.

UNICEF published guidance on identifying and engaging zero-dose and under-vaccinated children within Roma communities. The step-by-step approach to increase confidence and coverage stresses the importance of protecting vulnerable populations through a targeted strategy.

UNICEF also conducted studies in four countries (Azerbaijan, Georgia, the Republic of Moldova and Ukraine) to assess the cost of inaction – the financial and societal impact of suboptimal vaccination coverage.

Findings from these studies show the significant economic burden of not reaching zero-dose children. Reports are currently being shared with participating countries and will be made publicly available in 2026. Participating countries are holding parliamentary sessions to discuss results and promote action. These studies primarily looked at societal costs, including hospitalization costs, noting that vaccination is much cheaper than treatment. Environmental impacts could be further explored in the future.

UNICEF highlighted the need for cross-sector funding and partnerships beyond health, referencing the Child and adolescent health and well-being strategy 2026-2030 and a project with the European Commission's Directorate-General for Health and Food Safety covering five components (early childhood development, immunization, healthy lifestyles, protection from aggressive marketing promotion of harmful products and mental health). Within this framework, UNICEF held Member States consultations on 11 December 2025 and has initiated a process to develop and pilot an online toolkit.

Session 5. Bridging the data gap to address immunization inequities

This session focused on presenting methodologies to identify and address immunization inequities, emphasizing the limitations of current behavioural research and the need for improved data triangulation. Key recommendations and examples from country experiences were discussed.

In 2025, the Regional Office published a practical guide to identifying, addressing and tracking inequities in immunization *(6)*. The guide builds on best practices from the Region and on existing guidance, and was mainly developed to support subnational immunization managers and health-care professionals to follow a step-by-step process.

In this session, the limitations of behavioural insights were discussed, including the reliance on self-reported data, social desirability bias and the lack of frequency quantification of reasons behind under-vaccination. In addition, health worker perspectives may be biased or incomplete, and the level of local researchers' skills can impact data quality.

Vaccination coverage data needs to be combined with vaccine acceptance and demand data to help authorities and health workers determine barriers and address them in a tailored fashion. Methodologies that combine programmatic evaluation with behavioural insights data need to be strengthened to more precisely determine the root cause of coverage gaps at the subnational and local levels.

Combining disparate data sources, or data bridging, is critical to:

- strengthen the system (reveal operational and data gaps at facility and district levels, helping health workers and managers plan more effectively with actionable data at the local level);
- improve targeting and outreach (enable countries to match interventions to the specific reasons children are missed – whether due to access, confidence or system-level issues);
- monitor equity in the context of EIA2030 and beyond (support more nuanced equity analyses that go beyond geographic or socioeconomic stratification); and
- create cost-effective strategies (ensure that investments in service delivery and demand generation are evidence-based and reach those most in need).

ETAGE discussion

Following the presentation, ETAGE highlighted that health workers' risk calculations and fear of blame for adverse events may lead to unnecessary delays. Also, false contraindications and provider education remain key challenges, with many delays stemming from genuine but misguided beliefs. Educating health workers on contraindications is critical to avoid missed opportunities.

ETAGE highlighted the need to develop a standardized framework to link coverage data with barrier typologies and tools for classifying and quantifying reasons for under-vaccination. Furthermore, regional guidance, capacity-building and decision support tools for health workers are needed.

Immunization registry capabilities differ significantly between high- and middle-income countries. High-income countries increasingly use electronic registries for cohort analysis, while middle-income countries rely on paper-based or limited electronic systems, often lacking analytical tools. One strategy to better understand gaps in immunization data is the use of facility-level record reviews to uncover undocumented reasons for delays. However, this is time-consuming and requires human resources. It is a priority to conduct advocacy to mobilize additional resources and document effective interventions.

ETAGE conclusions and recommendations

Based on the evidence presented and the discussions held, ETAGE made the following conclusions and recommendations.

1. EIA2030 technical progress report and status of implementation of ETAGE recommendations

Conclusions

- ETAGE commends countries for the actions taken in the past year to implement its recommendations, including improvement in timely reporting of data to WHO to enable monitoring of EIA2030 implementation. ETAGE also appreciates the WHO Regional Office for Europe's enhanced reporting on progress towards EIA2030 impact goals and strategic priorities and the development of an online dashboard, which provides open access to detailed information on progress at regional and country levels. ETAGE also commends countries for sustaining the Region's polio-free status.
- ETAGE notes that, as of 2024, some progress has been made towards achieving EIA2030 targets, including rubella elimination and introduction and uptake of HPV vaccine. However, ETAGE is gravely concerned that, at the current pace, most milestones and targets are unlikely to be met, especially in the context of reduced resources for public health programmes, ongoing conflicts and displacement of populations, and the spread of misinformation and disinformation about vaccination.

- ETAGE notes the multiple environmental detections of vaccine-derived polioviruses in the Region since September 2024. These detections highlight a high quality of environmental surveillance in the reporting countries but also underscore the continuing threat of poliovirus importation. Where immunization coverage is suboptimal, such importations could lead to local transmission and subsequent outbreaks, thereby jeopardizing the polio-free status of the Region and global eradication of the disease. ETAGE thereby also reiterates its support for SAGE recommendations on the cessation of bivalent oral polio vaccine (bOPV) use.
- ETAGE is particularly concerned by suboptimal routine immunization coverage rates in the Region, which led to a substantial increase in the number of VPD outbreaks in 2024, with exceptionally high numbers of reported pertussis and measles cases, causing significant morbidity and mortality and further delaying achievement of measles elimination in the Region. Widespread outbreaks further highlight the significant and persistent inequities in immunization coverage, both within and between countries in the Region, while the percentage of countries that have collected evidence of under-immunized populations at subnational levels has not increased.
- ETAGE commends countries for efforts to identify inequities in immunization, target immunity gaps, and strengthen VPD surveillance and outbreak response. However, ETAGE recognizes that implemented actions may not be sufficient in countries with significant immunity gaps and inadequate capacities for timely response to VPD outbreaks. Urgent and comprehensive action is needed to preserve the achievements made so far, ensure continued progress and strengthen the resilience of health systems as a foundation for the Region's health security.

Recommendations

ETAGE reaffirms and builds upon the recommendations issued in November 2024 to accelerate progress towards EIA2030 goals and targets.

- ETAGE encourages countries to continue improving the availability of data to monitor their immunization programme performance and improve the completeness of reporting on EIA2030 indicators.
- ETAGE urges countries to allocate sufficient resources and take action to identify un- or under-vaccinated populations and immunization inequities, guided by disaggregated local coverage and surveillance data together with research-based evidence on barriers to and enablers of vaccination, including behavioural determinants, programmatic challenges and quality of immunization services.
- ETAGE recommends that countries systematically use available evidence on immunization inequities to design tailored interventions to increase timely coverage and close immunity gaps, advocate for the resources needed for their implementation and evaluate the impact of such interventions.
- ETAGE strongly encourages Member States to minimize the use of oral polio vaccine and move to an inactivated poliovirus vaccine (IPV)-only schedule, in advance of the global bOPV cessation, and aligns with the SAGE recommendation that in countries where bOPV is not used in routine immunization programmes, outbreak response should use IPV for the initial response.
- ETAGE recommends that countries, in the context of VPD outbreaks:

    - continue to strengthen the capacity of VPD surveillance systems and immunization service delivery, to ensure timely detection and response to outbreaks;
    - leverage VPD outbreak investigations and intra- and after-action reviews of outbreak response as opportunities to identify immunity gaps and their root causes, and to identify the strengths and weaknesses of national VPD detection and response capacity; and
    - develop or update VPD preparedness and response plans, as relevant.
- ETAGE recommends that the WHO Regional Office for Europe further analyse information on actions taken by countries in response to ETAGE recommendations to address barriers to and enablers of vaccination, in order to compile and disseminate innovative and best practices, and to advocate for adequate prioritization and investment in immunization.
- ETAGE recommends that the Regional Office collaborate closely with the ECDC, UNICEF and other partners in the WHO European Region to coordinate actions, maximize synergies and utilize each organization's core capacities to strengthen immunization programme performance and VPD surveillance in the Region, particularly considering the current resource-constrained environment.

2. Recommendations on pneumococcal, varicella and herpes zoster vaccination

Conclusions

- Taking into account the disease burden of varicella and herpes zoster in the WHO European Region, as well as the availability of vaccines, ETAGE concurs with the SAGE recommendations on the use of varicella vaccines for the prevention of varicella in children and the use of recombinant herpes zoster vaccines for the prevention of herpes zoster in older adults and high-risk groups.
- ETAGE acknowledges that implementing a "1+1" (one primary dose and one booster) vaccination schedule for PCV addressed by SAGE can help countries reduce the number of injections, potentially lower immunization programme costs and simplify logistics.
- Countries' decisions on the use of varicella and herpes zoster vaccines, as well as on implementing reduced PCV schedules, should take into account the recommendation of their NITAG.

Recommendations

- ETAGE emphasizes that national decisions on introduction of varicella vaccines, and, for countries that have sufficient financial resources, herpes zoster vaccines:
    - should be aligned with national multi-year immunization strategies and integrated into broader life-course vaccination frameworks;
    - should be consistent with national public health and immunization priorities to ensure they do not compromise routine immunization services, vaccination coverage or disease control efforts; and

    - should carefully consider the affordability and financial sustainability of the introductions.
- ETAGE emphasizes that countries considering a transition to a reduced PCV (1+1) schedule should ensure that the conditions recommended by SAGE are fully met, particularly the presence of:
    - a mature three-dose PCV programme with average routine third-dose PCV coverage of at least 80% for a minimum of five years; and
    - high-quality pneumococcal disease surveillance to monitor circulation of vaccine-preventable *Streptococcus pneumoniae* serotypes following the transition to the reduced vaccination schedule.
- Countries that have not yet met these criteria are recommended to postpone the transition until more evidence on the long-term impact of the 1+1 schedule becomes available from early adopting countries.
- ETAGE encourages NITAGs to apply a systematic approach in developing evidence-based recommendations on national implementation of SAGE guidance and on prioritizing new vaccine introductions, as outlined in the WHO Regional Office for Europe guidance. In support of this approach, ETAGE recommends that the Regional Office, together with the WHO Collaborating Centre for Evidence-based Immunization Policy Making:
    - conduct trainings to support NITAGs in developing recommendations on implementation of SAGE guidance; and
    - facilitate peer-to-peer learning and sharing of experiences between NITAGs.

3. Bridging the data gap to address immunization inequities

Conclusions

- To accelerate progress toward EIA2030 equity targets, countries need to understand why immunization inequities exist. ETAGE recognizes a critical information gap on the reasons for un- and under-vaccination and a need for methodologies to link observed coverage gaps to specific reasons/barriers. Evidence collected in some countries of the European Region shows that programmatic and systemic issues account for most under-vaccination, even in settings where vaccine hesitancy is assumed to be the main barrier. By knowing the relative contributions of each barrier to vaccination, countries will be able to more effectively tailor interventions, allocate resources and monitor progress towards EIA2030 equity targets.

Recommendations

- To support countries in determining both programmatic and systemic reasons for un- and under-vaccination at the subnational level, ETAGE recommends that the WHO Regional Office for Europe complement existing qualitative approaches to assessing behavioural barriers to vaccination with:
    - a self-assessment tool to help countries review existing data and records at facility level to link identified coverage gaps with barriers to vaccination (focusing on programmatic and systemic barriers as primary contributors);

- methodologies to verify and quantify reasons children are un- or under-vaccinated; and
- practical steps for translating findings into tailored programmatic interventions within the existing WHO framework on identifying and addressing immunization inequities and evaluating their impact.

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[1] All references were accessed on 10 February 2026.

Annex 1. Programme

09:15–10:00	**Opening remarks** Ole Wichmann, Chair, European Technical Advisory Group of Experts on Immunization (ETAGE) Shahin Huseynov, Programme Manager a.i., Vaccine-preventable Diseases and Immunization, WHO Regional Office for Europe Ihor Perehinets, Health Security and Regional Emergency Director, WHO Regional Office for Europe
10:30–12:00	**Session 1 (information). Global overview of implementation of Immunization Agenda 2030; regional update on priority areas in 2026** Annelies Wilder-Smith, Team Lead, Vaccine Research, Development and Policy, WHO headquarters Shahin Huseynov, Programme Manager a.i., Vaccine-preventable diseases and immunization, WHO Regional Office for Europe **Update from the European Regional Verification Commission for Measles and Rubella Elimination (RVC)** Mira Kojouharova, Chair, RVC
13:00–14:30	**Session 2 (recommendation/endorsement). Regional technical progress report of European Immunization Agenda 2030 and status of implementations of ETAGE recommendations – ETAGE discussion** Roberta Pastore, Team Lead, Immunization Analytics and Monitoring, WHO Regional Office for Europe
15:00–17:30	**Session 3 (information/recommendation). SAGE March 2025 and September 2025 meetings: summary and recommendations** Annelies Wilder-Smith, Team Lead, Vaccine Research, Development and Policy, WHO headquarters Hanna Nohynek, SAGE **Regional update on pneumococcal, varicella and herpes zoster vaccination – ETAGE discussion** WHO Regional Office for Europe
17:00–17:30	**Session 4 (information). Programmatic updates from the partners** Sabrina Bacci, Head of Vaccine Preventable Disease and Immunisation, European Centre for Disease Prevention and Control Fatima Cengic, Regional Immunization Specialist, United Nations Children's Fund Europe and Central Asia Regional Office

Annex 2. List of participants

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The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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