

European Immunization Agenda 2030



ABSTRACT

The European Immunization Agenda 2030 (EIA2030) is a vision and strategy, designed and crafted by the Member States, for achieving the full benefits of vaccination in the WHO European Region for the next decade. EIA2030 builds on the successes and lessons learned through implementation of the European Vaccine Action Plan 2015–2020. It also incorporates the lessons learned and best practices identified in responding to the COVID-19 pandemic and deploying COVID-19 vaccines, which have underlined the need to strengthen health service policies, delivery and practices, from the local to national levels. By strengthening immunization systems, EIA2030 will help to:

- reduce mortality and morbidity caused by diseases preventable through vaccination
- increase equitable access to new and existing vaccines for everyone regardless of age, identity and geographic location
- strengthen primary health care and thereby contribute to achieving universal health coverage and sustainable development.

ISBN: 978-92-890-5605-2

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Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris.

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Abbreviations

AEFI	adverse event following immunization
COVID-19	coronavirus disease 2019
DTP	diphtheria, tetanus, and pertussis-containing vaccine
EPI	Expanded Programme on Immunization
EIA2030	European Immunization Agenda 2030
EPW	European Programme of Work 2020-2025
EVAP	European Vaccine Action Plan 2015-2020
GDP	gross domestic product
GPW13	WHO Thirteenth General Programme of Work 2019-2023
Нер В	hepatitis B
HIC	high-income country
HPV	human papillomavirus
IA2030	Immunization Agenda 2030
LMICs	low-and-middle-income countries
MCV1	first dose of measles-containing vaccine
MCV2	second dose of measles-containing vaccine
MIC	middle-income country
M&E/A	monitoring, evaluation and accountability
MOV	missed opportunities for vaccination
NITAG	National Immunization Technical Advisory Group
PCV3	third dose of pneumococcal conjugate vaccine
SDGs	Sustainable Development Goals
SP	strategic priority
UHC	universal health coverage
UNICEF	United Nations Children's Fund
VPD	vaccine-preventable disease

Acknowledgements

WHO greatly appreciates the guidance of the European Technical Advisory Group of Experts on Immunization (ETAGE) and the contributions of all co-developers of EIA2030: Member States and national public health institutions, the European Commission and the European Centre for Disease Prevention and Control (ECDC), non-state actors in official relations with WHO, the United Nations Children's Fund (UNICEF), the United States Centers for Disease Control and Prevention, and Gavi, the Vaccine Alliance. MM Global Health Consulting is also gratefully acknowledged for its contributions during the consultations and drafting of the report.





Foreword

By preventing many serious early-childhood infectious diseases, vaccinations help children grow into healthy adults. Vaccination against rubella protects the babies of the future from severe birth defects. Other vaccinations early in life help prevent liver and cervical cancer many years later. Vaccination of older adults extends protection against some diseases throughout the life course.

The WHO European Region has made great progress in recent decades on many of these fronts, but we have by no means tapped the full potential of available vaccines to protect people of all ages, in all locations, in all population groups, from all vaccine-preventable diseases. There are still gaps in vaccination coverage that put especially the most vulnerable at risk, and these have been exacerbated in some countries by the challenges posed by COVID-19 pandemic and the ensuing vaccination rollout. Access to newer vaccines, including against human papillomavirus and SARS-CoV2, is also not equitable — neither within nor among countries.

The European Programme of Work 2020-2025 — "United Action for Better Health in Europe" ascribes EIA2030 as one of the Region's flagship initiatives. This special emphasis on immunization reflects not just the impressive impact that vaccines have had on overall health in the Region, but also the opportunity for populations to reap even greater benefits from vaccines already in the national immunization schedule and those yet to be introduced.

EIA2030 offers a strategic way forward for the Region. Informed by our Member States' priorities, and supported by governments, civil society, partner agencies, academia and many more stakeholders, this new agenda focuses on critical enablers for success.

Progress will be monitored and measured against set disease control targets, and we will hold each other accountable to ensure we meet these targets. Strong immunization programmes embedded in primary health care will strengthen the role and impact of primary health care. Immunization services that reach everyone at every age equitably, will contribute to sustainable development and directly support achieving several of the Sustainable Development Goals (SDGs), not only that of SDG3 — "to ensure healthy lives and promote well-being for all at all ages".

On behalf of WHO, I extend my thanks to all who have contributed to this document and I welcome the advances it will allow us to make.



Dr Hans Henri P. Kluge WHO Regional Director for Europe



Executive summary



Immunization is one of the "best buys" in global health, a strong foundation of the primary health care system and an indisputable human right. It plays a crucial role in achieving – either directly or indirectly - 14 of the 17 Sustainable Development Goals (SDGs), particularly SDG3: "to ensure healthy lives and promote well-being for all at all ages". Immunization is one of the most cost-effective ways to save lives and promote good health and wellbeing; every year, vaccines save millions of lives, and millions more people are protected from disease and disability. Immunization routinely reaches more households than any other health service and brings communities into regular contact with the health system. This provides an effective platform to deliver other primary health care services and upon which to build universal health coverage (UHC). As one of the most far-reaching health interventions, it closely reflects the ethos of the SDGs: "leaving no one behind".

The European Immunization Agenda 2030 (EIA2030), a vision and strategy crafted by Member States for achieving the full benefits of immunization in the WHO European Region for the next decade, builds on the achievements and lessons learned from implementation of the European Vaccine Action Plan 2015-2020 (EVAP). Implementation of EVAP saw many successes – such as sustained polio-free status in the Region, an increased number of Member States verified as having eliminated measles and rubella, progress with documenting hepatitis B control, improved vaccine introduction decisionmaking through national immunization technical advisory groups, and most Member States achieving financial self-sufficiency for vaccine procurement. However, not all the EVAP targets were met, and a main aim of achieving equity in immunization remains elusive. In addition, there is a real risk that complacency will undermine past achievements.

EIA2030 outlines the strategic pivots required to achieve its vision, and considers key contextual challenges to be addressed, such as the complexities of sustaining high and equitable coverage, specific challenges faced by middle-income countries in the Region, and gaps in immunization over the past years that could fuel future outbreaks. EIA2030 provides the vision and framework for action by WHO, policy-makers, national immunization programmes, professional associations, civil society, community-based organizations and other immunization stakeholders for the next decade in the Region. EIA2030 is one of the flagship initiatives of the European Programme of Work 2020-2025 – "United Action for Better Health in Europe", which was adopted by the WHO Regional Committee for Europe in September 2020. EIA2030 was developed at the request of Member States through a truly bottom-up consultative and iterative process with the various regional stakeholders. Its regional focus areas were determined by national priorities and reaffirmed through multistakeholder consultations.

EIA2030 envisions contributing to a world where everyone, everywhere, at every age, fully benefits from vaccines for good health and well-being. The COVID-19 pandemic has reminded the world of the power of vaccines to fight disease, save lives and create a healthier, safer and more prosperous future. Moving forward, strong immunization systems will be needed to ensure that people everywhere are protected against COVID-19 and other diseases. Rather than focusing on achieving specific diseaserelated goals, EIA2030 aims to build back better after the ravages of the COVID-19 pandemic by creating stronger and more resilient immunization systems and structures, based on the key pillars of immunization equity, life course immunization and tailored local solutions that address vaccination demand and acceptance in the population.



By strengthening immunization systems, EIA2030 implementation will help to:

- reduce mortality and morbidity caused by diseases preventable through vaccination;
- increase equitable access to new and existing vaccines for everyone regardless of age, identity and geographic location;
- strengthen primary health care and thereby contribute to achieving UHC and sustainable development.

EIA2030 includes a Monitoring, Evaluation and Accountability (M&E/A) framework with overall impact goals and a set of indicators to monitor progress.

The unfinished agenda in EVAP implementation linked to disease-specific goals will be an integral part of the M&E/A framework of EIA2030 wherein the disease-specific goals would be considered as a tracer for immunization system performance. Achieving the overall EIA2030 impact goals will in turn contribute to broader health goals and the SDGs. The overall implementation of EIA2030 will be overseen by the WHO Regional Committee for Europe. A high-level multistakeholder immunization board will promote the highest level of political engagement and ensure that immunization stays at the top of national health agendas. The European Technical Advisory Group of Experts on Immunization and the disease-specific independent commissions for measles and rubella, poliomyelitis and hepatitis B will support the WHO Regional Office for Europe and regional partner organizations with relevant technical aspects over the next decade.

EIA2030 is designed to inspire national implementation adapted to the local context and support efforts to achieve national, regional and global health security, equitable access to immunization and UHC. As an adaptive and flexible strategy catering to national and subnational context based on the identified regional focus areas, the EIA2030 framework will be periodically reviewed and revised throughout the decade as new needs and challenges emerge.







Background



Immunization is one of the most cost-effective public health interventions. It acts as a strong foundation of the primary health care system and surely is an indisputable human right. Globally, it is estimated that millions of deaths are prevented by immunization annually (1).

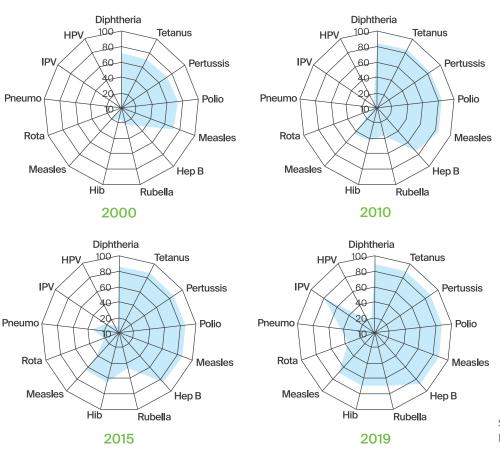
Since WHO established the Expanded Programme on Immunization (EPI) in 1974, coverage with three doses of diphtheria-tetanus-pertussis-containing vaccines (DTP3), a marker of the performance of immunization programmes, has globally increased from 20% in 1980 to 85% in 2019 (2). The wide gap in immunization coverage between high- and low-income countries has been substantially reduced, with DTP3 coverage in the low-income countries progressing from less than 5% in 1980 to over 80% in 2019 (2).

Not only has immunization coverage increased, but the breadth of protection provided by vaccination has expanded since the establishment of EPI, with the addition of several new vaccines that have contributed to providing protection across the life course (Fig. 1)(2).

Figure 1 shows the global average immunization coverage with the different antigens recommended by WHO for use in national immunization programmes. The shaded area is used as a marker of the breadth of vaccination coverage globally in 2000, 2010, 2015 and 2019, respectively.

The increase in coverage as well as the breadth of protection provided by immunization has led to substantial reductions in mortality and morbidity. Immunization has made and will continue to make an important contribution to reducing childhood mortality from pneumonia, diarrhoea, measles, and meningitis, which are among the top 10 contributors to child deaths (3). Widespread use of vaccines has led to the global eradication of smallpox, near eradication of polio and elimination of measles, rubella and neonatal tetanus in a large number of

Fig. 1: Expansion in the breadth of protection provided by immunization globally, 2000 to 2019

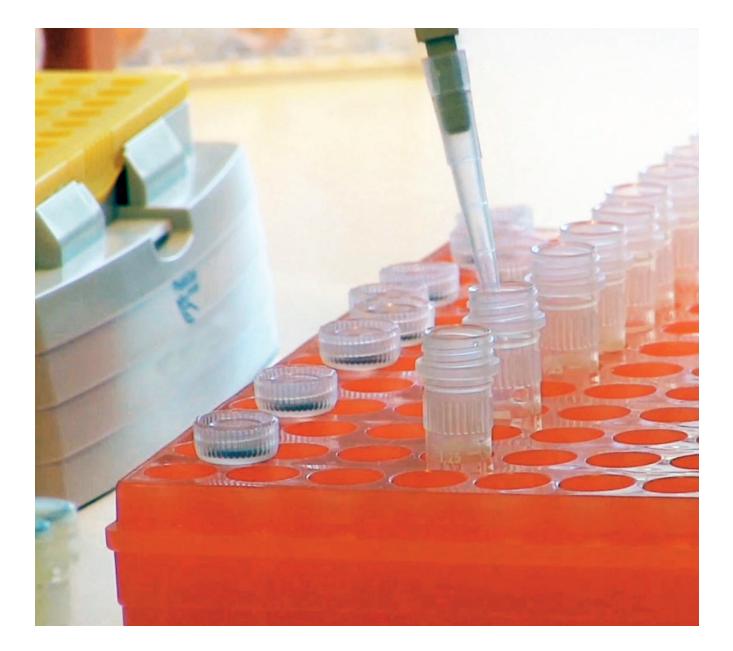


Source: WHO UNICEF Immunization Coverage Estimates (https://immunizationdata.who.int) countries. Further, a modelling study estimated that in 98 low-and-middle-income countries (LMICs), immunization averted 37 million deaths between the years 2000 and 2019, representing a 45% decline in vaccine-preventable diseases. The number of averted deaths triples to 120 million, if calculated for birth cohorts vaccinated from 2000 to 2030 and including hepatitis B and human papillomavirus (HPV) vaccines (4). Total annual global deaths averted by immunization go far beyond these estimates as not all countries nor vaccine-preventable diseases were included in the models (5).

Immunization remains central to preventing childhood diseases, and the burden of vaccine-preventable diseases has decreased significantly especially in high-income countries (HICs). However, distinctive challenges remain in LMICs. LMICs have a disproportionate burden of vaccine-preventable diseases and often have lower immunization coverage than HICs. But, immunization has a high return on investments, especially in LMICs. In a recent study on the return in investments from immunization in 94 LMICs, the return on every dollar invested was estimated at almost USD 20 between 2021-2030 (*6*).



Given its role in preventing morbidity and mortality from an increasing array of infectious and noncommunicable diseases, immunization makes a critical contribution to achieving — either directly or indirectly — 14 of the 17 Sustainable Development Goals (SDGs), particularly but not only SDG3: "to ensure healthy lives and promote well-being for all at all ages". Immunization also impacts SDG1 (no poverty) as it helps protect people from being forced into poverty due to high out-of-pocket health expenditures; SDG2 (zero hunger) wherein immunization provides a platform for delivering nutrition interventions to help reduce child mortality; and SDG4 (quality education) as immunization increases educational attainment since vaccinated children are more likely to avoid missing school due to ill health and thus learn more, positively impacting on cognitive development as well as long-term productivity. Further, immunization is a suitable platform for strengthening primary health care and remains an important contributor to achieving UHC and to the broader health goals related to health emergencies and anti-microbial resistance.



Immunization within the health policy context of the European Region

The European Programme of Work 2020-2025 (EPW) - "United Action for Better Health in Europe"was adopted by the Regional Committee for Europe in September 2020 (7). The EPW sets out a vision of how the WHO Regional Office for Europe can best contribute to the global vision set out in WHO's Thirteenth General Programme of Work, 2019-2023 (GPW13). The EPW identifies three core priorities (moving towards UHC, protecting against health emergencies, and promoting health and well-being), and four flagship initiatives. With a determination to "leave no one behind", the EPW envisions addressing inequalities from both health and a political perspective while considering the key lessons learned from the COVID-19 pandemic and focusing on the recovery and resilience of health systems and programmes impacted by the pandemic.

Regional immunization context

The Region comprises 53 Member States that are classified by the World Bank as either high-or middle-income countries. The ministries of health and the national immunization programmes across the Region have demonstrated strong commitment to immunization by achieving high immunization coverage for routine childhood vaccines and have reached several key EVAP goals and targets.

EVAP envisioned a Region free from vaccinepreventable diseases, where all countries provide equitable access to high-quality, safe, affordable vaccines and immunization services throughout the life course. Since its adoption, the Region has seen many successes, including sustained polio-free status; 29 Member States verified as having achieved both measles and rubella elimination; two Member States validated as having achieved hepatitis B control; 32 Member States having achieved DTP3 coverage of 95% or more as of 2019; 50 Member States having established national immunization technical advisory groups (NITAGs) for vaccine introduction decision-making; and 51 Member The European Immunization Agenda 2030 (EIA2030) — setting a new course for the WHO European Region in the next decade to address immunization inequalities between and within countries and extend the benefits of vaccines across the life course — is one of the four flagship initiatives of the EPW (along with the Mental Health Coalition, empowerment through digital health and behavioural and cultural insights). EIA2030 will build on the achievements and lessons learned from the implementation of the EVAP (8).

States achieving financial self-sufficiency for vaccine procurement.

Although significant progress was made in the five-year EVAP period, the Region still faces challenges that threaten to unravel this progress: persistent immunization equity gaps both between and within countries, the potential threat of outbreaks of vaccine-preventable diseases, and middle-income countries (MICs) lagging behind in key progress indicators. The Region must incorporate the lessons learned from the implementation of EVAP and take advantage of new opportunities in the next decade to achieve the full benefits that immunization can provide.

Sustaining high and equitable coverage

Achieving and sustaining high and equitable immunization coverage in every Member State is fundamental to securing the greatest impact with existing and new vaccines and for achieving vaccinepreventable disease elimination and eradication. Despite progress, several countries in the Region have difficulties with equitably reaching and sustaining the 95% DTP3 target established by EVAP. In 2019, over 500 000 children in the Region were left un- or under-immunized with DTP3 and in 12 countries, DTP3 coverage was lower in 2019 than the highest coverage achieved during the previous 10 years (2).

The ability to sustain high and equitable immunization coverage hinges on numerous factors, including: political commitment; effective and efficient programme management and financing; efficient service implementation with adequate human resources; vaccine supply and management with quality assurance; logistic support through relevant delivery strategies and monitoring; effective data recording and reporting to inform action; population demand and acceptance of vaccines and hesitancy to accept vaccination, which itself can have many root causes (9-12). Further, any humanitarian crises like natural disasters and conflicts, can rapidly lead to the loss of health service infrastructure and shortages of trained health workers, often for extended periods, thereby potentially disrupting the delivery of immunization services. Inclusion of vulnerable populations in the national immunization plans and the use of tailored immunization strategies are key to ensuring every population group in every country is protected from vaccine-preventable diseases.

Middle-income countries

In 2019, MICs accounted for 54% of the Region's unvaccinated children, and a similar share of vaccine-preventable deaths (13). The problems facing MICs extend far beyond faltering progress in the introduction of newer vaccines. Routine immunization coverage in the self-financing MICs (those without any donor support) has declined in recent years while coverage in high-income countries (HICs) remained stable and in the donor (Gavi) supported middle-income countries (MICs) it has even increased. In the Region, the MICs not eligible for donor support are also lagging behind in other regional goals (13). Self-financing MICs tend to spend a lower proportion of their gross domestic product (GDP) and total government expenditures on health compared to HICs. If not addressed, the COVID-19 pandemic's impact on countries' economies could potentially negatively affect their immunization programmes further. A regional strategy to support fully self-financing MICs exists but needs dedicated technical and financial resources for its implementation (14).



Building immunization for tomorrow based on lessons learned from the COVID-19 pandemic and vaccination

The COVID-19 pandemic has revealed the vulnerability of national immunization programmes – globally, there were sharp declines in immunization coverage during the first quarter of 2020 as stringent public health and social measures were implemented to contain the pandemic. During this same period, preventive polio vaccination, measles outbreak responses, and other vaccine campaigns were suspended due to the concern about SARS-CoV-2 infection and transmission in campaign settings.

According to data collected by the Vaccine-Preventable Diseases and Immunization Programme in the WHO Regional Office for Europe in 2020, while only a handful of Member States in the Region reported nation-wide disruptions in their immunization programmes during the first half of 2020, many Member States saw a decline in routine immunization coverage for the year for a variety of COVID-19 related reasons, including individuals seeking less or delaying utilization of health services, school closures and delays in outbreak immunization response by the national immunization programmes. Member States have indicated a potential decrease in immunization coverage particularly for vaccines given outside of infancy (e.g. booster doses, second and third doses of the primary series, and HPV). In addition, many Member States faced staffing constraints as immunization and surveillance staff were repurposed for the COVID-19 response. Finally, the COVID-19 pandemic is impacting the quality of surveillance of vaccine-preventable diseases, including the timely and complete reporting of monthly measles cases.

While the COVID-19 pandemic continues to impact routine immunization service delivery, Member States in the Region have quickly devised innovative measures such as pre-scheduled appointments, engaging community leaders to organize safe immunization sessions, and utilizing catch-up strategies with adequate infection prevention measures. These innovations allowed immunization services to be restored in the Region by August 2020. As countries phase out the public health and lockdown measures linked to the COVID-19 pandemic, aggressive catch-up immunization strategies should be implemented to immunize those who have missed their scheduled vaccinations and re-establish surveillance quality to reduce risks of vaccinepreventable disease outbreaks (15).

While the full impact of the COVID-19 pandemic on immunization programmes and systems is still unknown, the pandemic has demonstrated that national immunization systems need to be resilient to rapidly recover from acute and/or prolonged shocks. In addition, the COVID-19 pandemic has highlighted the need for comprehensive disease surveillance systems as well as policies and processes to ensure preparedness and rapid response (*16*).

Lessons learned during COVID-19 vaccination deployment identified challenges linked to: equitable access, vaccine supply and logistics, information systems to track COVID-19 vaccination; educating and empowering health-care professionals at all levels; monitoring vaccine safety; timely reporting of vaccination uptake by subnational areas and addressing vaccine confidence and demand, community engagement and risk communication. The key programmatic areas for robust COVID-19 vaccination are also integral aspect of routine immunization programmes and serve as priorities and activities in EIA2030 to strengthen the national immunization systems in improving routine immunization coverage and filling immunity gaps. The investments made to ensure robust COVID-19 vaccine deployment will help to strengthen routine immunization programmes and to establish resilient immunization systems for responses to future disease outbreaks. These investments must be bolstered to ensure that innovative service delivery modalities, particularly those enhancing intersectoral coordination and extending the use of digital recording and monitoring tools, are best preserved and utilized.

Introduction to EIA2030 and what it aims to achieve

EIA2030 provides a vision shared by WHO, its Member States, partners and stakeholders on what can be achieved through immunization in the Region; and an action framework on how to achieve it in the next decade. EIA2030 is one of the flagship initiatives of the EPW. It sets the strategic direction and goals for immunization programmes in the Region, aligned to Immunization Agenda 2030 (IA2030) (17).

EIA2030 seeks to build better health tomorrow in the Region through stronger immunization programmes today by focusing on three key principles: ensuring equity in immunization, providing immunization across the life course, and devising local solutions to local challenges.

EIA2030 will address the inequities in immunization coverage between and within countries through the use of innovative programming and local-level interventions, ensuring data-driven decision-making, and remobilizing political leaders at regional, subregional, and country levels. Within the overarching domain of the EPW, the implementation of EIA2030 will benefit from the mechanisms and platforms established for other EPW flagships particularly those related to empowerment through digital health and behavioural and cultural insights.

Strategic pivots in the next decade

Building upon the successes of EVAP implementation and to address the challenges and achieve the impact goals outlined in EIA2030, the following strategic pivots are envisioned.

- Increase local ownership and political momentum and, ensure allocation of appropriate resources.
- Shift from a one-size-fits-all approach to dataenabled, tailored national and subnational policies to achieve high and equitable coverage by devising local solutions to address local challenges.
- Strengthen life course immunization and platforms to address the needs of adult populations and to mainstream catch-up vaccination for those who missed vaccination doses.
- Define and implement a clearly defined, robust results-based monitoring and accountability framework at regional, national and subnational levels.
- Enhance and foster partner coordination to address regional and national needs.





Action framework









Using a truly bottom-up approach, EIA2030 was developed at the request of Member States and through extensive consultation with Member States, the European Commission and its agencies of the European Union includuing the European Centre for Disease Prevention and Control, non-state actors, intergovernmental agencies, the United Nations Children's Fund (UNICEF) and other United Nations organizations, the United States Centers for Disease Control and Prevention, and Gavi, the Vaccine Alliance, in which the regional focus areas were determined by national priorities and reaffirmed through multi-stakeholder consultations.

EIA2030 reflects national priorities for the next decade. EIA2030 has seven strategic priorities (SPs), guided by seven core principles, aligned to IA2030. Together these serve as an action framework for the Region and its Member States to guide their national plans and eventually subnational plans and actions. With an ultimate aim of immunization programmes to eradicate, eliminate or achieve optimal control of vaccine-preventable diseases in the Region, the strategic priorities in EIA2030 use integrated approaches.

Vision

With a global outlook and a recognition that strengthened immunization systems in the Region will impact health both within and beyond the Region, EIA2030 aims to contribute to "a world where everyone, everywhere, at every age, fully benefits from vaccines for good health and wellbeing" (17).

Impact goals

By strengthening immunization systems, EIA2030 implementation will help to:

- **1.** reduce mortality and morbidity caused by diseases preventable through vaccination;
- **2.** increase equitable access to new and existing vaccines for everyone regardless of age, identity and geographic location;
- **3.** strengthen primary health care and thereby contribute to achieving UCH and sustainable development.

Core principles

Strong national immunization systems can achieve the EIA2030 vision and impact goals by being:

Primary health care based: Effective, efficient, and resilient immunization services are accessible to all people and integrated as part of primary healthcare programmes.

Equity-based: All interventions and strategies use an equity-based approach to reach un-and under-vaccinated populations.

People focused: The design, management, and delivery of immunization programmes are shaped by and are responsive to the needs of individuals and communities, particularly focusing on improving awareness about the benefits of vaccines and immunization and improving demand and acceptance and, uptake of immunization.

Country owned: Aligned to the regional and global immunization vision and framework, countries establish and are accountable for targets that represent their local contexts, and adequate support is provided for immunization programmes, including allocation of suitable resources.

Data enabled: Data are used to inform evidence-based decision-making, monitor progress, tailor local strategies to meet local needs, and foster transparency and accountability.

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Innovation and research based:

Countries and partners foster research, explore innovative approaches and share research findings linked to improving efficiencies of immunization programmes, improved techniques to deliver vaccines and innovative ways of communicating about vaccines to close immunity gaps and optimize impact.

Partnership based: The efforts of regional and national institutions and partners are aligned and coordinated to maximize impact. In particular, structures and processes are strengthened to enhance collaboration across the health sector and strengthen cooperation with other sectors (e.g. private, education) and with civil society and community-based organizations.

Strategic priorities and regional focus areas

SP1 Primary health care and universal health coverage

It is a strategic priority for immunization programmes to work in partnership and to coordinate with other health programmes, leveraging their respective capacities to strengthen the delivery of primary health care and achieve UHC goals.

Key regional focus areas

Strengthen leadership, governance and management of immunization programmes.

- Develop and update comprehensive national immunization plans that are integrated within the overall national health plans and include appropriate monitoring and accountability mechanisms that allow for course corrections.
- Strengthen programme management capacity at national and subnational levels, with a clear delineation of roles and responsibilities at each level.
- Create coordination mechanisms with other health programmes to promote fair and equitable immunization access within an integrated primary health care package.

Expand and build the capacity of the health workforce to deliver high-quality immunization services

- Ensure the availability of an adequate number of health workers with the required competencies and training at all administrative levels to deliver immunization services.
- Provide regular pre-service and in-service training to the entire health workforce in immunization and vaccine-preventable diseases, including workshops, education campaigns, and training certification, and enhance supportive supervision.
- Ensure that national policies, practice guidelines, standard operating procedures and training curricula are regularly updated to reflect the latest data and evidence.

Enhance comprehensive surveillance of vaccine-preventable diseases, strengthen immunization monitoring systems, and reinforce surveillance investigation and response to adverse events following immunization (AEFIs), with adequate provisions of personal data protection, as appropriate.

- Strengthen comprehensive surveillance (including laboratory diagnostics and molecular epidemiological tools, where appropriate) to monitor epidemiological trends in vaccinepreventable diseases and use the data to guide policy, strategy, and operation decisions and for outbreak detection and response.
- Strengthen capacity at the national and subnational level to proactively interpret, analyse, and triangulate surveillance data to identify programmatic areas that need to be strengthened, strategic gaps and vulnerable populations at higher risk for outbreaks; and link these findings to strategic shifts, programmatic strengthening, and emergency response.
- Leverage digital technologies to improve immunization monitoring and vaccine-preventable disease surveillance and strengthen the quality and use of reported data for operational and strategic planning.
- Improve the reporting of AEFIs, including investigation and response actions.





- Involve NITAGs to update the national immunization schedule and optimize public health impact of existing and newer vaccines.
- Implement or strengthen immunization information systems, with adequate provisions of personal data protection, as appropriate, such as electronic immunization registries, records and/or electronic vaccination cards to improve the quality and use of immunization data for decision-making.
- Improve the pre- and in-service training and certification of the health workforce and secondary education related to immunization and vaccine-preventable diseases surveillance.
- Explore provision to pivot from disease-specific to comprehensive disease surveillance systems that fully meet the data needs for immunization programmes.
- Improve organizational linkage and communication between surveillance, epidemiology and immunization programme staff through regular review, analysis, and discussion of surveillance data and linkage to programme and response.
- Ensure regular feedback of vaccine-preventable disease surveillance and immunization coverage data analysis to the lowest administrative levels to improve programme performance.

SP2 Commitment and demand

It is a strategic priority to ensure that national leaders advocate for and demonstrate their commitment to immunization programmes, and immunization is valued and actively sought by all people.

Key regional focus areas

Maintain and/or increase awareness of and commitment to immunization by political leadership.

• Ensure decision-makers and national and subnational leaders remain committed to fair and equitable access to immunization in the country by ensuring legislative and financial support for the national immunization programme.

Prepare and engage the entire health workforce to act as advocates for immunization.

- Ensure that the entire health workforce has a comprehensive understanding of the value of immunization and has the capacity to effectively communicate the benefits of immunization and address questions and concerns raised by the public.
- Provide health professionals with clear communication materials from trusted sources on the benefits of preventing diseases through immunization.

Increase and sustain awareness of and demand for immunization in all communities and across the life course.

- Improve understanding of drivers, enablers and barriers for immunization by conducting formative and/or behavioural insights research.
- Utilize results to tailor interventions and frame communication messages to increase community awareness, knowledge, and confidence in vaccines.
- Improve communications on immunization, including making available communication materials from trusted sources, and establish mechanisms for timely and effective response to misinformation about vaccines or when serious AEFIs are reported.



- Identify and establish immunization "champions" or "vaccine heroes" and models of good practices to advocate for immunization within national governments and/or communities.
- Engage NITAGs in generating demand for immunization by communicating available evidence and advising on the need for and type of qualitative research.
- Ensure immunization is included in the curricula of medical, para-medical, pharmacy and nursing schools, and improve community health literacy by including immunization in the school health curricula.
- Ensure optimal working conditions and use performance-based incentives to motivate the health workforce to advocate and promote immunization.
- Explore and tailor innovative communication approaches and messages to reach the community including interpersonal communication during immunization consultations, peer-to-peer learning and sharing of information, best practices, and tools.
- Train health workers and spokespersons in communication skills and ensuring efficient and smooth interaction with the media and journalists.

SP3 Coverage and equity

It is a strategic priority to ensure that immunization coverage is high, and all individuals have equitable access to and adequately utilize all vaccines in national immunization schedules.

Key regional focus areas

Achieve high and equitable coverage throughout the life course.

- Explore and strengthen a broad range of pathways, providers and nonconventional approaches for delivering immunization service (e.g. through pharmacies, private service providers) to improve uptake and promote equitable coverage.
- Establish or update national policies and practices for catch-up vaccination, leveraging the life course approach to immunization including focus on vaccines against measles-mumps-rubella, pertussis, HPV. herpes zoster and influenza.
- Leverage lessons learned from COVID-19 vaccination implementation to ensure national immunization programmes are resilient and are able to maintain services during outbreaks and emergencies and recover quickly if services are interrupted.

Utilize data, innovative strategies and tailored approaches to reduce the number of un- and under- vaccinated individuals in every community.

- Use data from immunization programme performance monitoring, vaccine-preventable disease surveillance, surveys and formative research to identify and characterize underimmunized, marginalized and vulnerable groups, and tailor immunization service delivery strategies at national and subnational levels.
- Utilize data and evidence to update national policies and practices and support innovative approaches to close immunization gaps.
- Establish and improve immunization information systems for automated reminders to beneficiaries to improve the timeliness of immunization.
- Identify reasons for missed opportunities for vaccination (MOV) and establish policies and strategies to reduce MOVs.
- Establish policies and provide training and guidance to health workers to minimize the impact of false contraindications.

Continue evaluating key evidence and needs for the addition of new vaccines to immunization schedules and developing related policy recommendations to optimize their use

- Continue to strengthen NITAGs or equivalent decision-making entities to establish evidencebased policy recommendations for the introduction of vaccines across the life course.
- Establish credible investment cases to advocate with national decision-makers to allocate resources for prioritizing immunization in the country including introduction of new vaccines.

- Use coverage monitoring data and formative research to tailor policies and programmes to meet the needs of under-immunized populations.
- Promote the use of monitoring and surveillance data to make operational decisions to address inequalities in immunization coverage.
- Review the composition, terms of reference and capacity of NITAGs to develop evidence-based recommendations for immunization across the life course.
- Conduct assessments of MOVs and use the results to develop subnational action plans to reduce them.
- Leverage the available technical expertise of stakeholders, as appropriate while formulating context-specific immunization service delivery modality and implementation.



SP4 Life course and integration

It is a strategic priority to ensure that all people benefit from recommended immunizations throughout the life course, and tailored immunization services are effectively integrated with other essential services within and outside the health sector.

Key regional focus areas

Develop or update immunization policies to strengthen life course immunization approaches and leverage the life course platform for the delivery of catch-up vaccinations and booster doses.

• Establish or update policies and strategies related to strengthening the life course immunization platform to provide immunization beyond childhood and to provide catch-up vaccination for those who missed scheduled doses (including booster doses) of vaccination in childhood and across the life course.

Establish or strengthen integrated delivery points of contact between immunization and other health or non-health interventions across the life course, by leveraging lessons learned from COVID-19 vaccination.

• Leverage lessons learned from COVID-19 vaccination implementation to establish or strengthen vaccination throughout the life course and, expand and diversify vaccination pathways, including vaccination in schools, during pregnancy, for health workers and older adults.

Illustrative actions

- Strengthen and implement school health policies that include school entry checks for vaccination status and consider delivery of immunization services as part of school health programmes.
- Strengthen collaboration and coordination between maternal health and immunization programmes to facilitate immunization of pregnant women.
- Strengthen policies to promote immunization of health-care workers to protect their health as well as the health of their patients.
- Use the experience from the COVID-19 pandemic to establish or strengthen the delivery of immunization for older adults and those with co-morbidities, including those in care homes (e.g. herpes zoster vaccine and pneumococcal vaccines).

• Raise awareness of the benefits of immunization beyond early childhood.

Explore and formally establish collaborations within and outside the health sector to strengthen the life course platform.

• Explore and strengthen collaborations within and beyond the health sector to promote the life course approach (e.g. maternal health services, occupational health, social care services for older adults, the education sector).



SP5 Outbreaks and emergencies

It is a strategic priority to ensure rapid detection and response to vaccine-preventable disease outbreaks and sustain immunization programmes during emergencies.

Key regional focus areas

Ensure preparedness for vaccine deployment and vaccination in response to future pandemics as well as capacity to rapidly detect vaccine-preventable disease outbreaks, and implement a timely, high-quality response.

- Evaluate and monitor data on the effectiveness of the implementation of national immunization policies to reduce the risks of vaccine-preventable disease outbreaks.
- Utilize research and surveillance data to identify underlying causes and inform revisions of policies and strategies to prevent or mitigate outbreaks of vaccine-preventable diseases.
- Proactively develop strategic approaches, policies, and surge capacities to respond to outbreaks, including tailored strategies for specific populations.
- Increase country preparedness and enhance surveillance capacity for timely detection, investigation, and optimal response to vaccinepreventable disease outbreaks.

Ensure all vulnerable communities affected by conflict, disaster and humanitarian crises are vaccinated, using tailored approaches where necessary and appropriate.

- Develop context-specific national immunization policies that ensure the inclusion of vulnerable communities (e.g. those affected by conflict, disaster, and humanitarian crises).
- Coordinate with other health sector programmes and relevant partners, such as civil society organizations, and/or community-based organizations and others, to ensure that the delivery of immunization to vulnerable communities is part of the broader health service package.



- Generate and utilize scientific evidence to identify root causes of vaccine-preventable diseases outbreaks and revise national immunization policies or schedules to prevent outbreaks.
- Explore how immunization programmes and surveillance systems at the subnational levels can be strengthened to improve overall outbreak detection and response.
- Consider conducting supplementary immunization activities for vaccine-preventable diseases with outbreak potential, including enhanced surveillance to prevent outbreaks.
- Test country readiness for outbreak response through simulation exercises.
- Review and update existing measles outbreak response plans, practice and guidance.
- Conduct outbreak response assessments and, intra and after-action reviews for programmatic improvement.

SP6 Supply and sustainability

It is a strategic priority to ensure all countries have appropriate and sustainable supply and financing for immunization programmes.

Key regional focus areas

Ensure the timely availability of high-quality and affordable vaccines and related supplies at all levels by strengthening regulatory processes for vaccines, procurement capacity and mechanisms, vaccine supply chains and management information systems for logistics.

- Strengthen the vaccine regulatory process and procurement capacity and mechanisms to enhance access to affordable and quality-assured vaccines and related supplies.
- Support local manufacturing capacity for vaccines where appropriate.
- Strengthen vaccine supply chains and logistics management information systems to ensure the safe, efficient and timely deployment of vaccines to the point of delivery.
- Monitor and document any reported vaccine shortages to facilitate timely actions to mitigate risks.



Ensure allocation of sufficient financial resources to meet the needs of immunization programmes in all countries and increase immunization expenditure including from domestic resources.

- Support countries to make the case for investment in immunization within the domain of primary health care.
- Strengthen resource mobilization through innovative financing solutions to sustain and enhance immunization programmes.
- Support countries transitioning from donor support with institionalized processes and capacity building on immunization economics to ensure the sustainability of immunization programmes.

- Increase capacity related to procurement skills and knowledge to improve efficiencies of procurement processes and access to appropriate price.
- Ensure effective vaccine management standards and standard operating procedures are available and used at all levels.
- Develop cold chain management strategies which include capacity building of personnel, upgrading to modern equipment, and identifying additional facilities in line with WHO standards.
- Investigate any reported vaccine shortages and develop corrective actions (e.g., set-up of early warning systems) to ensure continued and sustained supply at all levels.
- Increase awareness of decision-makers on the importance of and ensuring financial sustainability of immunization programmes.
- Use the results of investment cases, or other analyses (cost effectiveness, economic benefits) to advocate for financial resources for immunization programmes.



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SP7 Research and innovation

It is a strategic priority to ensure operational research is used to increase the reach of immunization programmes and ensure impactful innovations are rapidly made available to all countries and communities.

Key regional focus areas

Conduct operational, implementation, or formative research to identify drivers for and barriers and challenges to achieving high and equitable coverage, and utilize the research results to identify solutions and tailor strategies to increase coverage.

- Promote and conduct operational, implementation and formative research, particularly in reference to vaccine demand and acceptance among population groups and health-care professionals to increase immunization coverage.
- Conduct scientific studies on increasing efficiency and safety of immunization practices against communicable and noncommunicable diseases.

Establish and strengthen institutional capacity at all levels to identify research priorities, manage research and innovation, and conduct research activities.

• Enhance institutional capacity of the national and regional research and public health institutes to conduct operational and formative research to support the development of appropriate immunization policies and strategies.

Evaluate and scale up potential health and technology innovations to improve the efficiency of immunization programmes.

• Conduct continuous and scientifically founded evaluation of vaccines and/or innovative technologies (*18*) to facilitate inclusion and scale-up of locally relevant innovations in immunization programmes.



- Conduct operational research to identify un- and under-immunized groups, understand the magnitude of the identified problem, diagnose root causes and document key barriers and drivers to vaccination among population groups and health-care professionals.
- Use implementation research data and outputs to develop context-specific interventions and tailor strategies to increase vaccination uptake and engagement with communities.
- Map existing research activities and document good and promising practices including compiling such best practices and resources in an existing or purpose-built database and sharing with countries in the Region and beyond.
- Conduct health technology assessments of innovative technologies to advocate for their use in national immunization programmes including assessment of quality, safety and efficacy of new vaccines and products.



Monitoring, evaluation and accountability framework



The Monitoring, evaluation and accountability (M&E/A) framework of the Global Vaccine Action Plan (GVAP) was also adapted for the EVAP and is considered to be one of its successful features, though its full potential was not realized. It helped in keeping immunization high on the global public health agenda, focused efforts on achieving common goals, highlighted the value of the data quality and use of data to enhance performance and is perceived as an important step in promoting accountability (*19*).

IA2030 includes a Monitoring & evaluation framework with action-based indicators intended to implement monitoring, evaluation, and action cycles, including effective feedback loops at country, regional and global levels. The framework includes tailored indicators to ensure the use of data for action to permit continuous quality improvement at all levels.

The EIA2030 M&E/A framework is aligned to and will feed into the IA2030 Monitoring and evaluation framework. A few indicators in EIA2030 will be adapted to the regional context in line with the strategic priorities, epidemiology of vaccinepreventable diseases (VPDs) in the Region, maturity of the national immunization programme and its performance, and feasibility of defining a data source. The impact indicators linked to estimation of disease burden reduction will be monitored through modelled estimates carried out at global level with regional disaggregation.

The M&E/A indicators for EIA2030 have been adapted from IA2030 to reflect the regional context and provide focus on the regional goals and priorities and address issues most relevant to the Region, while also fulfilling the regional mandate to contribute to the global monitoring effort. The objective of the EIA2030 M&E/A framework and the monitoring, evaluation and action cycles is to encourage and empower immunization programmes at all levels to address three fundamental questions:

- 1. How are we doing? (Monitor)
- 2. How can we do better? (Evaluate)
- 3. Who is responsible for doing what to make improvements? (Act)



In accordance with the IA2030, the EIA2030 includes impact goals and a set of indicators to monitor progress against each of the strategic priorities. The EIA2030 goals complement existing regional disease-specific goals, broader health goals, and the SDGs. The specific indicators that will be measured for each of the strategic priorities of EIA2030 represent an adaptation of the global indicators as appropriate to the regional context and focus areas. The tangible strategic priorities aim to galvanize efforts to achieve gains in immunization over the coming decade.

Governance of EIA2030

The overall implementation of EIA2030 will be overseen by the WHO Regional Committee for Europe. A progress report outlining the achievements and the identified challenges will be submitted to the Regional Committee every second year during the span of EIA2030. A high-level multistakeholder immunization board will promote the highest level of political engagement and ensure that immunization stays at the top of national health agendas. The European Technical Advisory Group of Experts on Immunization and the disease-specific independent commissions for measles and rubella, poliomyelitis and hepatitis B will support the WHO Regional Office for Europe and regional partner organizations with relevant technical aspects over the next decade.



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Annex 1 Indicators for EIA2030







Within the overall domain of immunization contributing to achieve UHC goals and to ensure synergies, EIA2030 indicators are aligned to the existing relevant indicators of UHC/primary health care and EPW. An operational document will be developed, which will include a description (definition, data source, analysis and interpretation, frequency of reporting, applicability to all/selected countries, targets and milestones) for each of the indicators. The EIA2030 M&E/A framework will be periodically reviewed and revised, as need be, to accommodate changes in immunization programmes during the decade.

Goal	Desired impact	Indicator
Disease control	Control, eliminate or eradicate specific vaccine-preventable diseases (VPDs)	Sustained polio-free status in the European Region
		Percentage of countries that have achieved and sustained measles and rubella elimination
		Percentage of countries that have achieved the regionally established hepatitis B control target
		Percentage of countries that have achieved global human papillomavirus (HPV) immunization target
	Reduce VPD outbreaks	Trend in number of reported VPD outbreaks
Equity and strengthening of primary health care	Equitable access: leave no one behind	Percentage of countries with evidence of under- immunized populations at subnational levels
	Strengthening primary health care: immunization delivery across the life course	Coverage with vaccines included in national immunization schedules (DTP3, MCV2, HPVc, PCV3)

1. EIA2030 impact indicators

1 DTP3=third dose diphtheria/tetanus/pertussis vaccine; MCV2=second dose measles-containing vaccine; HPVc=completed series of HPV vaccine; PCV3=third dose pneumococcal conjugate vaccine

2. EIA2030 strategic priority indicators

Strategic priorities	Indicators
SP1.1	Percentage of countries with evidence of programmatic decisions at national and subnational levels based on available data and evidence
SP1.2	Percentage of countries with the recommended density of health workers (medical doctors, nursing personnel, midwifery personnel, dentists, pharmacists) per 10 000 population
SP1.3	Percentage of countries conducting periodic vaccine-preventable disease surveillance assessment or review
SP1.4	Percentage of countries having electronic vaccine and supply stock management system at all administrative and service delivery levels
SP1.5	Percentage of countries with at least one documented individual serious adverse event following immunization (AEFI) case safety report per million total population
SP2.1	Percentage of countries with legislation that is supportive of immunization services covering population across the life course
SP2.2	Percentage of countries that have conducted formative research to understand barriers and enablers for vaccine uptake for one or more vaccines and developed tailored strategies based on the findings for improving immunization uptake
SP3.1	Percentage of countries with an evidence-based and funded immunization plan to improve immunization coverage in high-risk communities (un-immunized or under-immunized)
SP3.2	Percentage of countries with evidence of under-immunized population by subnational levels
SP4.1	Percentage of countries achieving coverage targets for MCV2, HPVc and seasonal influenza vaccine as per disease-specific control strategies (95% MCV2, 90% HPVc, 75% Influenza)
SP4.2	Percentage of countries with national policy outlining integration of immunization service delivery for all age groups with primary health care services to prevent missed opportunities
SP4.3	Percentage of countries with key WHO-recommended vaccines (PCV, rotavirus, HPV including other newer recommended vaccines, as the case may be) in their national immunization schedule
SP5.1	Percentage of polio and/or measles outbreaks that are met with timely detection and response (includes outbreaks with an outbreak response immunization campaign)

Strategic priorities	
SP5.2	Percentage of countries with contingency plans to sustain immunization services during a humanitarian crisis or emergency
SP6.1	Percentage of countries whose domestic government and donor expenditure on primary health care increased or remained stable
SP6.2	Percentage of countries whose domestic vaccine expenditures increased or remained stable
SP6.3	Number of stockouts lasting > 1 month linked to procurement delays or lack of funding
SP7.1 and 7.2	Percentage of countries that have conducted and applied findings from operational programmatic and/or behavioural research to improve programme performance





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