

MEASLES AND RUBELLA STRATEGIC FRAMEWORK 2021-2030



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2021-2030**



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ACRONYMS AND ABBREVIATIONS

2YL	second year of life
COVID-19	coronavirus disease 2019
CP	core principle
CRS	congenital rubella syndrome
CSO	civil society organization
Gavi	Gavi, the Vaccine Alliance
Gavi 5.0	Gavi, the Vaccine Alliance 2021–2025 strategy
GPW13	Thirteenth General Programme of Work 2019–2023 (WHO)
HCD	Human Centred Design 4 Health
IA2030	Immunization Agenda 2030
IT	information technology
ITFDE	International Task Force for Disease Eradication
MCV1	first dose of measles-containing vaccine
MCV2	second dose of measles-containing vaccine
MI4A	Market Information for Access to Vaccines
MOSRP	Measles Outbreak Strategic Response Plan
MOV	missed opportunities for vaccination
MRSP 2012–2020	Global Measles and Rubella Strategic Plan 2012–2020
MRSF 2021–2030	Measles and Rubella Strategic Framework 2021–2030
PAHO	Pan American Health Organization
PHC	primary health care
PIRI	periodic intensification of routine immunization
ROI	return on investment
SAGE	Strategic Advisory Group of Experts on Immunization (WHO)
SDGs	Sustainable Development Goals (United Nations)
SIA	supplementary immunization activity
SP	strategic priority
TIP	tailoring immunization programmes
UHC	universal health coverage
UN	United Nations
UNICEF	United Nations Children’s Fund
WHO	World Health Organization

EXECUTIVE SUMMARY

Measles remains a major cause of morbidity and mortality worldwide, with an estimated 9.7 million cases and more than 140,000 measles-related deaths in 2018 (1). It is one of the most contagious diseases and requires maintaining high population immunity to prevent outbreaks. Measles outbreaks can serve as a tracer indicator (a sort of “canary in the

coal mine”) of health inequities and can help identify gaps in immunization programmes and primary health care (PHC) systems.

Rubella remains endemic in many countries, and congenital rubella syndrome (CRS), which has long-term health consequences, continues to be reported.



► Children showing off their finger markings following vaccination in Lao People's Democratic Republic

© WHO/Daniel Hodgson

The Global Measles and Rubella Strategic Plan 2012–2020 (MRSP 2012–2020) rallied efforts to protect and improve the lives of children throughout the world through the control of measles and rubella. Implementation of the MRSP 2012–2020 resulted in the following key achievements over the past decade:

- By the end of 2019, 178 World Health Organization (WHO) Member States had introduced a second dose of measles-containing vaccine (MCV2) and 173 had initiated rubella vaccination (2).
- Global coverage of both MCV2 and rubella vaccines reached 71% in 2019 (2).¹
- In 2018, approximately 346 million people received measles vaccination through 45 supplementary immunization activities (SIAs) in 37 countries (3).
- Surveillance quality and the capacity to detect and respond to outbreaks improved.
- By the end of 2018, 82 countries were verified as having eliminated measles and 81 were verified as having eliminated rubella (3).²
- An estimated 23 million deaths were averted due to measles vaccination between 2000 and 2018 (3).

Although important progress was made, several contextual changes and implementation challenges impeded progress and contributed to an increasing number of outbreaks and a resurgence in measles cases.

¹ In 2012, MCV2 coverage was 48% and rubella coverage was 39%.

² *Measles elimination* is defined as “[t]he absence of endemic measles transmission in a defined geographical area (e.g. region or country) for ≥12 months in the presence of a well-performing surveillance system.” *Rubella elimination* is defined as “[t]he absence of endemic rubella transmission in a defined geographical area (e.g. region or country) for ≥12 months and the absence of CRS cases associated with endemic transmission in the presence of a well-performing surveillance system.” *Wkly Epidemiol Rec.* 2013; 88(9):89–100.



CONTEXTUAL CHANGES

The contextual changes included:

- a shift in the epidemiology of measles, with a higher proportion of cases in young infants and older age groups, which has highlighted unaddressed immunity gaps;
- increasing identification of the role of transmission in health care settings in sustaining outbreaks;
- increased recognition of immunity gaps in refugees and displaced populations as well as in cross-border populations that are often excluded from national immunization plans;
- disruption in services and cancellation of planned SIAs because of the COVID-19 pandemic, leading to increased immunity gaps; and
- declining appetite for vertical disease control programmes and nonselective countrywide campaigns.

IMPLEMENTATION CHALLENGES

The implementation challenges included:

- health system weaknesses that contributed to low or very low vaccination coverage of two doses of measles- and rubella-containing vaccines in several countries, leading to persistence of unimmunized children and an overreliance on unsustainable and disruptive nonselective vaccination campaigns;
- inadequate mechanisms for catch-up vaccination³ to fill emerging immunity gaps in older children and adults;
- increasing vaccine hesitancy in several countries, leading to declining coverage and increased outbreaks; and
- inadequate monitoring and surveillance and inadequate capacity for verifying elimination and identifying chains of transmission to prevent and interrupt measles outbreaks.

³ *Catch-up vaccination* refers to vaccinating an individual with any vaccines missed per the national immunization schedule. It can be delivered through regular routine immunization service delivery (fixed, outreach, mobile, school), periodic intensification of routine immunization (PIRI) activities or any other strategy to ensure opportunities for individuals to receive routine immunizations for which they are eligible. This is distinct from the concept of *catch-up SIAs* (one-time campaigns to vaccinate the main target population responsible for disease transmission in order to rapidly reduce the number of susceptible individuals), other catch-up campaigns that sometimes accompany new vaccine introductions, and the strategy of “catch up, keep up, follow up, speed up” used for measles elimination in the Region of the Americas.

REQUIRED PIVOTS FOR 2021–2030

While the core strategies identified in the MRSP 2012–2020 will remain relevant in the post-2020 period, the following strategic pivots are required in the coming decade:

- ▶ shifting from a one-size-fits-all approach to addressing measles and rubella immunity gaps to using more efficient and effective approaches that are tailored to local challenges, including the mainstreaming of catch-up vaccination through the use of the life course approach;
- ▶ firmly embedding measles and rubella activities within immunization and other PHC programmes;
- ▶ clearly defining the roles and responsibilities of national and subnational governments and global, regional and national stakeholders, with accountability for delivering on those responsibilities;
- ▶ progressively shifting surveillance from disease-specific to comprehensive and sustainable, with national ministries of health and partner agencies at all levels using surveillance data for decision-making;
- ▶ strengthening national and subnational capacity for outbreak preparedness and response by leveraging global health security capacities and processes and using data outbreak investigations to close equity gaps and inform system-strengthening plans;
- ▶ strengthening cross-border monitoring, information sharing and collaboration to address immunity gaps and prevent and respond to measles outbreaks; and
- ▶ accelerating the development and implementation of innovative technologies (such as microarray patches for vaccine delivery and rapid diagnostic tests) and improvements in surveillance.

ALIGNMENT WITH THE IMMUNIZATION AGENDA 2030

The MRSF 2021–2030 aims to provide high-level guidance for developing regional and national strategies and operational plans. It was developed through a broad consultative process that generated feedback on achievements and major shortfalls in measles and rubella control over the past decade and defined strategic pivots and focus areas for the next decade. It is meant to serve as a disease-specific strategy under the Immunization Agenda 2030 (IA2030) structure, and it aligns with other key strategy documents, including WHO’s Thirteenth General Programme of Work 2019–2023 (GPW13); the United Nations Children’s Fund (UNICEF) Immunization Roadmap 2018–2030; and Gavi, the Vaccine Alliance’s 2021–2025 strategy.

The Measles and Rubella Strategic Framework 2021–2030 envisions **“a world free from measles and rubella.”**

Its goal for 2021–2030 is to **“achieve and sustain the regional measles and rubella elimination goals.”**

The MRSF 2021–2030 adopts the general structure of IA2030, including the IA2030 strategic priorities, their associated measles- and rubella-specific objectives, and focus areas for achieving the objectives. It also describes how the IA2030 core principles will be applied to each of the priority and focus areas within the context of measles and rubella elimination. The objective of this framework is to guide all immunization stakeholders at the country, regional and global levels in planning and implementing more effective measles and rubella elimination efforts and to strengthen commitment to achieving a world without measles and rubella.

INTRODUCTION

Measles and rubella vaccination is an integral part of immunization programmes worldwide, contributing to progress towards achieving global immunization goals and, more broadly, the Global Health Security Agenda and the United Nations Sustainable Development Goals (SDGs) (4). Measles and rubella vaccination is also central to the Immunization Agenda 2030 (IA2030) by stimulating progress towards universal health coverage (UHC) and equity in immunization. It has the potential to stimulate implementation of life course vaccination by strengthening second year of life (2YL) platforms for the delivery of the second dose of measles-containing vaccine (MCV2) and school-based immunization delivery platforms for catch-up vaccination.⁴

The period of the Global Measles and Rubella Strategic Plan 2012–2020 (MRSP 2012–2020) saw a sizeable reduction in the measles and rubella disease burden, a steep increase in the introduction of MCV2 and rubella-containing vaccines, and improvements in surveillance. In 2018, approximately 346 million people received measles vaccination through 45 supplementary immunization activities (SIAs) in 37 countries. From 2000 to 2018, estimated measles-related deaths declined by 73% and estimated measles cases fell by 76%. By the end of 2018, 82 countries were verified as having eliminated measles and 81 were verified as

having eliminated rubella; the Region of the Americas sustained rubella elimination, which had been verified in 2015 (3).⁵

Despite the enormous progress, the regional measles and rubella elimination targets for 2020 will not be met and emerging challenges are causing growing concern. The Region of the Americas, which was verified to have eliminated measles in 2016, lost its measles elimination status in 2018. Globally, reported measles cases more than doubled from 2017 to 2018, from 170 000 to 350 000 (5). This upward trend continued into 2019, with several countries experiencing large measles outbreaks. In 2019, the Democratic Republic of the Congo, Ukraine and Brazil reported 333 017, 57 282 and 18 203 confirmed cases of measles, respectively, while Chad reported more than 26 600 suspected cases.⁶ Vaccination coverage remains low or very low in several countries. In 2019, seven countries had coverage of the first dose of measles-containing vaccine (MCV1) below 50% and 23 had coverage below 70%, indicating that 30–50% of children in these countries had not received any doses of measles vaccine through routine service delivery mechanisms (6).

Several contextual changes and implementation challenges impeded progress towards achieving the measles and rubella elimination targets, as summarized in Table 1.

⁴ *Catch-up vaccination* refers to vaccinating an individual with any vaccines missed per the national immunization schedule. It can be delivered through regular routine immunization service delivery (fixed, outreach, mobile, school), periodic intensification of routine immunization (PIRI) activities or any other strategy to ensure opportunities for individuals to receive routine immunizations for which they are eligible. This is distinct from the concept of *catch-up SIAs* (one-time campaigns to vaccinate the main target population responsible for disease transmission in order to rapidly reduce the number of susceptible individuals), other catch-up campaigns that sometimes accompany new vaccine introductions, and the strategy of “catch up, keep up, follow up, speed up” used for measles elimination in the Region of the Americas.

⁵ *Measles elimination* is defined as “[t]he absence of endemic measles transmission in a defined geographical area (e.g. region or country) for ≥12 months in the presence of a well-performing surveillance system.” *Rubella elimination* is defined as “[t]he absence of endemic rubella transmission in a defined geographical area (e.g. region or country) for ≥12 months and the absence of congenital rubella syndrome (CRS) cases associated with endemic transmission in the presence of a well-performing surveillance system.” *Wkly Epidemiol Rec.* 2013; 88(9):89–100.

⁶ WHO African Region measles/rubella weekly updates, 24 June 2020.

▼ **Table 1.** Contextual changes and implementation challenges impeding progress towards achieving measles and rubella goals and targets

Contextual changes



A shift in the epidemiology of measles, with a higher proportion of cases in young infants and older age groups, which has highlighted unaddressed immunity gaps



Increasing identification of the role of transmission in health care settings in sustaining outbreaks



Increased recognition of immunity gaps in refugees and displaced populations as well as in cross-border populations that are often excluded from national immunization plans



Disruption in services and cancellation of planned SIAs because of the COVID-19 pandemic, leading to declining vaccine coverage and increased immunity gaps



Declining appetite for vertical disease control programmes and nonselective countrywide campaigns

Implementation challenges



Health system weaknesses that have contributed to low or very low coverage of two doses of measles- and rubella-containing vaccines in several countries, leading to persistence of unimmunized children and an overreliance on unsustainable and disruptive nonselective vaccination campaigns



Inadequate mechanisms for catch-up vaccination to fill the emerging immunity gaps in older children and adults



Increasing vaccine hesitancy in several countries, leading to declining coverage and increased outbreaks



Inadequate monitoring and surveillance and capacity for verifying elimination and identifying chains of transmission to prevent and interrupt measles outbreaks

The COVID-19 pandemic, which started in late 2019, led to an interruption of routine vaccination services in many countries and cancellation or postponement of planned SIAs. As a result, 29 countries had postponed measles campaigns as of June 2020,⁷ with 18 of them experiencing ongoing measles outbreaks. An additional 13 countries were considering postponing campaigns scheduled for late 2020. In all, over 178 million people were at risk of missing measles vaccinations in 2020. Among

these, several countries – including Ethiopia, the Democratic Republic of Congo, the Central African Republic and Nepal – decided to proceed with their campaigns in spite of COVID-19 because of the increasing risk of death from measles and were implementing infection prevention and control procedures during the campaigns to reduce the risk of COVID-19 transmission. A prolonged pandemic and a consequent decline in the global economy could further affect health systems

⁷ World Health Organization Immunization Repository, 12 June 2020.

worldwide and reverse the gains in measles and rubella elimination and control. Re-establishing routine immunization services and catching up on missed vaccinations must be a priority in the next decade in order to mitigate the risk of large outbreaks and get back on track to achieving measles and rubella elimination and control goals.

THE CASE FOR MEASLES ELIMINATION AND RUBELLA ELIMINATION OR CONTROL

Measles remains a major cause of morbidity and mortality worldwide, with an estimated 9.7 million cases and more than 140 000 measles-related deaths in 2018 (1). Measles can also lead to long-term health problems by predisposing people to other infections through a prolonged immunosuppressive effect that lasts two to three years after infection (7) and by contributing to malnutrition in children. Measles is one of the most contagious diseases and requires maintaining high and equitable population immunity. Measles outbreaks can thus serve as a tracer indicator (a sort of “canary in the coal mine”) of health inequities and can help identify gaps in immunization programmes and primary health care (PHC) systems.

Rubella has long-term health consequences for the estimated 103 000 infants born with congenital rubella syndrome (CRS).

These characteristics position measles and rubella as key indicators of the quality and strength of national immunization programmes and of public health programmes and health systems in general. Fig. 1 provides a high-level overview of the case for measles and rubella control and elimination.

▼ Fig. 1. The case for measles elimination and rubella elimination or control



Measles and rubella are important contributors to childhood mortality and morbidity.

Measles predisposes people to other infections and contributes to malnutrition.



Measles is a key marker of inequity, and its control is a marker of the strength of immunization systems.



Measles vaccination accounts for 59–76% of the economic benefits from vaccination in 94 low- and middle- income countries.

Measles vaccination has a high return on investment (ROI): across 94 low- and middle-income countries, measles vaccination accounts for 76% of the projected \$21 ROI for each dollar spent on immunization (using the cost-of-illness approach) and 59% of the projected \$54 ROI for each dollar spent on immunization (using the value of statistical life approach) for the period 2021–2030 (8). Measles vaccine is generally delivered in combination with rubella vaccine, so the ROI will be even greater given the marginal incremental costs, the systems efficiencies achieved and the additional morbidity prevented.

As we move into the next decade, an increased focus on measles and rubella is critical to ensuring progress towards the SDG3 goal of achieving UHC, for two reasons:

- Measles and rubella contribute significantly to morbidity and mortality.
- Measles and rubella elimination and control activities play an important role in strengthening immunization programmes and contributing to PHC because these diseases serve as markers for health system weaknesses and persistent inequities in access to care.

The renewed interest in PHC and achieving UHC, combined with shifts in the immunization environment (such as decreased appetite for vertical programmes) and other contextual changes, calls for strategic pivots in order to achieve measles and rubella goals over the next decade.

▼ *A health worker prepares measles vaccine in Pakistan*

© WHO/Asad Zaidi



REQUIRED PIVOTS FOR 2021–2030

While the core strategies identified in the MRSP 2012–2020 will remain relevant in the post-2020 period, the following strategic pivots are required in the coming decade:

- ▶ shifting from a one-size-fits-all approach to addressing measles and rubella immunity gaps to using more efficient and effective approaches that are tailored to local challenges, including the mainstreaming of catch-up vaccination through the use of the life course approach;
- ▶ firmly embedding measles and rubella activities within immunization and other PHC programmes;
- ▶ clearly defining the roles and responsibilities of national and subnational governments and global, regional and national stakeholders, with accountability for delivering on those responsibilities;
- ▶ progressively shifting surveillance from disease-specific to comprehensive and sustainable, with national ministries of health and partner agencies at all levels using surveillance data for decision-making;
- ▶ strengthening national and subnational capacity for outbreak preparedness and response by leveraging global health security capacities and processes and using data outbreak investigations to close equity gaps and inform system-strengthening plans;
- ▶ strengthening cross-border monitoring, information sharing and collaboration to address immunity gaps and prevent and respond to measles outbreaks; and
- ▶ accelerating the development and implementation of innovative technologies (such as microarray patches for vaccine delivery and rapid diagnostic tests) and improvements in surveillance.

ALIGNMENT WITH THE IMMUNIZATION AGENDA 2030

The Measles and Rubella Strategic Framework 2021–2030 (MRSF 2021–2030) aims to provide a shared vision and common goals, priorities and focus areas for the next decade to guide development of regional and national strategies and operational plans. It constitutes a disease-specific strategy under the IA2030 structure, and it aligns with other key strategy documents, including the World Health Organization’s Thirteenth General Programme of Work 2019–2023 (GPW13); the United Nations Children’s Fund (UNICEF) Immunization Roadmap 2018–2030; and Gavi, the Vaccine Alliance’s 2021–2025 strategy (Gavi 5.0).

A Measles Outbreak Strategic Response Plan (MOSRP) will support achievement of the MRSF 2021–2030 strategic priorities. The primary goal of the MOSRP is to help countries prevent, prepare for, respond to and recover from measles outbreaks, with support from WHO and other partners. The secondary goals are to improve surveillance so outbreaks can be quickly detected and acted upon, and to use outbreaks as entry points for strengthening routine immunization programmes and narrowing immunity gaps, leading to the prevention of future outbreaks (9).

The MRSF 2021–2030 was developed through a broad consultative process that focused on the achievements and shortfalls in measles and rubella control over the past decade, as well as the strategic pivots, priorities and focus areas needed for the next decade. The process included a desk review of relevant reports and documents, followed by consultation with more than 70 individuals through interviews and an online survey. These individuals included representatives of national and multilateral agencies, civil society organizations (CSOs), academia and national ministries of health. The results of this consultative phase were shared with a wider group of stakeholders at the Measles and Rubella Partners meeting in November 2019 to obtain further feedback. That feedback informed the development of the MRSF 2021–2030 through an iterative process guided by the Leadership and Management teams of the Measles & Rubella Initiative.

The MRSF 2021–2030 adopts the general structure of IA2030, including the IA2030 strategic priorities (SPs), their associated objectives and focus areas, and the IA2030 core principles.

The MRSF 2021–2030 is not meant to serve as a detailed action plan. The objective of the framework is to guide all immunization stakeholders at the country, regional and global levels in planning and implementing more effective measles and rubella elimination activities and to strengthen commitment to achieving a world without measles and rubella.

THE MEASLES AND RUBELLA STRATEGIC FRAMEWORK 2021–2030

The vision



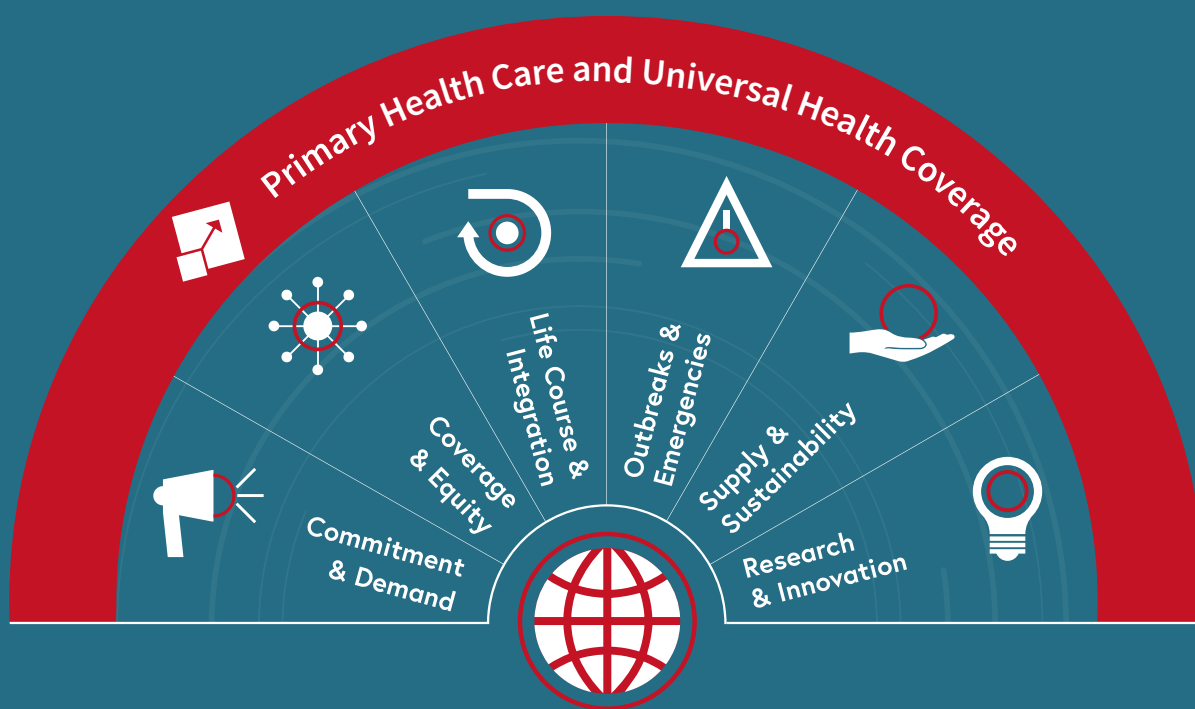
A world free of measles and rubella

The goal



Achieve and sustain the regional measles and rubella elimination goals

Strategic priorities



Core principles



People-focused



Country-owned



Partnership-based



Data-enabled

THE VISION



A world free of measles and rubella

Eradication of a disease represents the ultimate sustainable improvement in public health (10). Regional elimination is a stage on the path towards global eradication. It is a fragile state that must be sustained in order to prevent importations and subsequent spread of the disease. The vision of the MRSF 2021–2030 reflects the views of the WHO Strategic Advisory Group of Experts on Immunization (SAGE) and the International Task Force for Disease Eradication (ITFDE), which state that measles can and should be eradicated, although timelines and targets for eradication will be set only when the necessary conditions for eradication are met (11, 12).

THE GOAL



Achieve and sustain the regional measles and rubella elimination goals

All six WHO regions have established or expressed a commitment to achieving regional elimination of measles and rubella, although the targets and milestones on the path to elimination vary between regions. This variability will be reflected in the monitoring and accountability framework that is under development for the MRSF 2021–2030.

STRATEGIC PRIORITIES

In alignment with IA2030, the MRSF 2021–2030 has seven SPs.



SP1: Primary Health Care and Universal Health Coverage

Include all measles and rubella activities, including surveillance and case management, as key components of PHC systems in support of UHC.

Develop and enhance measles and rubella surveillance as part of a comprehensive surveillance system, and improve the collection and use of monitoring and surveillance data.



SP2: Commitment and Demand

Improve ownership and accountability of measles and rubella goals and targets at all levels, and improve community demand for and uptake of measles- and rubella-containing vaccines.



SP3: Coverage and Equity

Identify and address measles and rubella immunity gaps at all relevant points of contact between individuals and the health system. Establish or strengthen contact points where needed, and use targeted approaches to reach underserved populations.



SP4: Life Course and Integration

Use the life course approach to deliver the second routine dose of measles- and rubella-containing vaccines and catch-up vaccination, and integrate measles and rubella activities with other health and non-health activities.



SP5: Outbreaks and Emergencies

Ensure outbreak preparedness for timely detection and effective response to limit the spread of measles and rubella and reduce related morbidity and mortality.



SP6: Supply and Sustainability

Ensure availability of high-quality measles- and rubella-containing vaccines, vaccination supplies and laboratory reagents, and ensure that measles and rubella activities, including surveillance, are sustainably financed.



SP7: Research and Innovation

Foster research and innovation to overcome barriers to achieving high measles and rubella population immunity and to generate and use high-quality disease and programme data.

CORE PRINCIPLES

In alignment with IA2030, the MRSF 2021–2030 has four core principles (CPs) that apply to all seven strategic priorities.



People-focused

Identify underimmunized populations and communities, define the root causes of undervaccination and ensure tailored, gender-responsive interventions to ensure high availability of and equitable access to vaccination for all individuals and communities.



Country-owned

Improve ownership of measles and rubella efforts at the national and subnational levels to ensure that measles and rubella indicators and milestones are prioritized and monitored at all administrative levels. Ensure that all stakeholders commit to and are held accountable for achieving agreed-upon goals, targets and milestones for measles and rubella within national health plans.



Partnership-based

Establish partnerships to maximize impact, accelerate progress towards shared goals and promote sustainable delivery of interventions. Strengthen and expand existing partnerships, particularly at the local level, across disease control programmes, organizations (particularly CSOs), the private sector (corporate and private service providers) and non-health sectors (such as education).



Data-enabled

Generate high-quality monitoring and surveillance data and use them at all levels to help monitor progress, inform decision-making, evaluate strategy effectiveness and inform operational planning.

AREAS OF FOCUS AND POTENTIAL ACTIONS

In alignment with IA2030, the MRSF 2021–2030 has seven SPs. The sections below briefly describe the measles- and rubella-specific objectives and focus areas under each SP and how the four CPs may be applied. Note that **although the SPs are presented separately, they are interconnected and all are needed to achieve the goals of the MRSF 2021–2030.**

For example, surveillance is and will continue to play a key role in supporting achievement of the objectives under each SP. Further, SP2 (Commitment and Demand), SP3 (Coverage and Equity) and SP4 (Life Course and Integration) must be applied holistically to achieve the needed high population immunity. The SPs and CPs apply to stakeholders at the global, regional, national and subnational levels.

▶ A team of health workers bringing vaccines to remote villages in Fiji
© WHO/Yoshi Shimizu





STRATEGIC PRIORITY 1

Primary Health Care and Universal Health Coverage

OBJECTIVE 1

Include all measles and rubella activities, including surveillance and case management, as key components of PHC systems in support of UHC.

Key focus areas

Establish appropriate linkages between vaccination and other health interventions to work towards achieving UHC. Planning and delivery of measles- and rubella-containing vaccines must be linked to the delivery of other scheduled vaccinations and health interventions, in order to improve efficiencies. Close collaboration and cohesive action among all relevant programmes should be fostered to improve the uptake of each intervention.

Use measles outbreaks as the trigger for action to improve universal access to a minimum package of health interventions. Measles outbreaks serve to highlight communities that lack access to basic health services and can be markers of inequity in health service delivery. They can serve as the trigger for implementing tailored interventions in and beyond immunization as well as efforts to identify where system strengthening is needed. Outbreak response should include root cause analysis to define the reasons for immunity gaps, with plans for sustainable remedial actions to promote the reintegration of immunization into the PHC system where required. Outbreak response must also be holistic, including appropriate case management and nutritional support.

OBJECTIVE 2

Develop and enhance measles and rubella surveillance as part of a comprehensive surveillance system, and improve the collection and use of monitoring and surveillance data for action.

Key focus areas

Strengthen comprehensive surveillance systems. Surveillance is an essential component of measles and rubella elimination and of immunization programmes in general. Data on measles cases, including geographic and age distribution, can highlight immunity gaps that are not identified by monitoring of vaccination coverage alone. Surveillance data can also help guide effective operational planning. As the number of disease control programmes increases, it is important to pivot away from fragmented, vertical and unsustainable surveillance structures. Collaboration across different disease programmes to establish shared governance mechanisms, strengthen national capacity for surveillance, and share laboratory networks and quality control processes will lead to a more efficient, sustainable and comprehensive surveillance system.

Strengthening comprehensive surveillance systems to meet elimination standards will also improve the ability to prevent, detect and control outbreaks of measles and other diseases in a timely manner. While sustainable surveillance that meets established standards (13) is primarily the responsibility of national governments, technical support and coordination at the regional and global levels are essential for quality assurance and data sharing. This includes maintaining and enhancing the support provided through the Global Measles and Rubella Laboratory Network (14). Measles and rubella surveillance activities that were interrupted as a result of the COVID-19 pandemic should be re-established as quickly as possible. Case detection, investigation and contact tracing capabilities established in response to the pandemic should be applied to further strengthen surveillance systems.

Improve the collection and use of immunization monitoring data across all administrative levels and disease programmes.

The availability of high-quality monitoring data at all administrative levels is essential for monitoring programme performance, identifying gaps and informing operational decisions to achieve measles and rubella elimination and control. Renewed efforts are required to improve the quality of data in accordance with recent recommendations (12).

Potential actions to improve surveillance

Promote and strengthen comprehensive surveillance systems supported by laboratory networks.

Promote the training of health workers in early detection, notification and investigation of measles and rubella cases using standardized case definitions, tools and templates for collecting data.

Develop integrated or interoperable and sustainable data systems to facilitate the collection and sharing of data.

Use innovative technologies for data collection and analysis to facilitate the availability and use of surveillance and monitoring data.

Supplement routine data collection with surveys and serosurveys to validate administrative data, identify immunity gaps and collect qualitative information on determinants of vaccination.

Use data generated by different disease programmes, where available, to identify gaps in service delivery.

Promote recording and sharing of SIA data and sharing of information on unvaccinated communities and unmapped settlements across disease initiatives.

▼ *A baby being vaccinated in Côte d'Ivoire by a nurse wearing gloves to protect against COVID-19*

© UNICEF/ Frank Dejo



Applying the core principles



People-focused

Integrate the delivery of measles and rubella vaccination activities with other health interventions to increase convenience for communities, create efficiencies and improve uptake of all the linked interventions.



Country-owned

Governments and all national stakeholders should ensure that measles and rubella activities are optimally financed, are an integral part of PHC and contribute to the achievement of UHC, and that measles indicators can serve as a tracer indicator of overall PHC performance. (For example, MCV2 coverage continues to serve as an indicator of progress towards achieving SDG3.)



Partnership-based

Coordinate and collaborate with other disease initiatives (such as for polio, yellow fever, meningitis, cholera, tetanus, influenza, human papillomavirus, Japanese encephalitis and malaria) and health programmes (such as for maternal, child and adolescent health), given the shared objectives and actions. Further develop partnerships with non-health sectors (such as education) and CSOs to expand delivery platforms, increase efficiencies and contribute to the achievement of SDG3.



Data-enabled

Ensure that surveillance and programme monitoring are the cornerstone of the MRSF 2021–2030 so these data, including subnational-level data, are used as the basis for identifying unimmunized and underimmunized populations and developing tailored strategies.



STRATEGIC PRIORITY 2 Commitment and Demand

OBJECTIVE

Improve ownership and accountability of measles and rubella goals and targets at all levels, and improve community demand for and uptake of measles- and rubella-containing vaccines.

Key focus areas

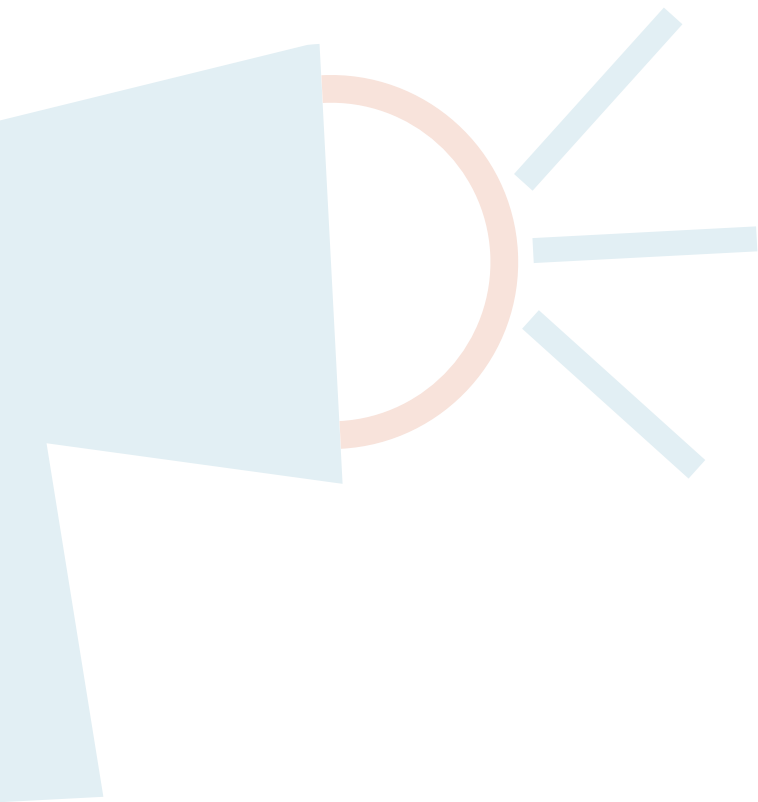
Conduct regular assessment of progress against measles and rubella goals, targets and milestones, and establish accountability processes. Commitment by national governments and all key stakeholders to the global, regional and national measles and rubella goals, targets and milestones are critical to success. Commitment is demonstrated through regular assessment of progress against the relevant indicators, accountability for achieving relevant targets and milestones, and allocation of adequate resources to achieve targets.

Strengthen and sustain political will to achieve measles and rubella goals. Political will and leadership are critical to success. All stakeholders should work collectively to strengthen and sustain political will and the commitment of global, regional and national leaders to achieving measles and rubella elimination goals.

Strengthen national and subnational capacity for community engagement, demand creation and risk communication. Countries should apply lessons learned from other efforts and use both traditional and modern communication and demand-creation strategies and techniques to enhance trust and improve the uptake of measles- and rubella-containing vaccines. Establishing partnerships with other disease control initiatives and programmes (within or outside the health sector) can create efficiencies and amplify impact.

Support countries in identifying barriers to vaccine uptake and developing tailored strategies.

The tailoring immunization programmes (TIP) (15) and Human Centred Design 4 Health (HCD) (16) approaches and similar approaches should be used to promote structured, adaptable and participatory processes that target undervaccinated or vaccine-hesitant populations. These processes should apply behavioural insights to understand the barriers and enablers of vaccination and to design, implement and evaluate tailored, gender-responsive interventions.



Potential actions to generate commitment and demand

Establish national monitoring, evaluation and accountability processes that include relevant indicators for measles and rubella.

Use social media to disseminate accurate information about measles and rubella and the risks and benefits of vaccination.

Monitor the influence of social media and anti-immunization movements on caregivers' attitudes, beliefs, immunization intentions and actions, and develop appropriate response strategies.

Enhance the interpersonal communication skills of frontline health workers and their knowledge of measles and rubella.

Design and implement tailored approaches to reaching underserved and disadvantaged communities.

Implement plans to prevent and respond proactively to adverse events following immunization and to rumours and misinformation about vaccination.

Applying the core principles



People-focused

Actively engage communities in designing and implementing high-quality service delivery that is responsive to people's needs.



Country-owned

Work with political leaders, CSOs and immunization champions at the country level to create awareness, build trust and advocate for improving vaccination uptake.



Partnership-based

Develop partnerships with other disease programmes, non-health sectors, CSOs and the private sector to create efficiencies and build national political will towards immunization in a coherent fashion.



Data-enabled

Use data to identify communities and areas with low vaccination coverage, and conduct formative research to identify the root causes of low uptake, monitor community perceptions and design tailored strategies.



STRATEGIC PRIORITY 3 Coverage and Equity

OBJECTIVE

Identify and close measles and rubella immunity gaps by using all relevant points of contact between individuals and the health system. Establish or strengthen contact points where needed, and use targeted approaches to reach underserved populations.

Key focus areas

Promote integrated service delivery to achieve and maintain high coverage of two doses of measles- and rubella-containing vaccines. Routine delivery of immunization services integrated with other scheduled child health interventions must become the standard for achieving and maintaining high population immunity. Such an approach will provide opportunities for joint actions to improve coverage and strengthen the 2YL platform. In situations where routine services have been interrupted for an undetermined period (such as during the COVID-19 pandemic), children who miss their scheduled doses of vaccination should be carefully monitored and strategies should be developed to provide catch-up vaccination.

Identify and plan gender-responsive interventions to ensure that vulnerable populations (such as migrants and nomadic, socially marginalized, urban poor, indigenous and conflict-affected populations) are vaccinated. This includes ensuring equity-based policies and adequate financing to support vaccination in fragile countries and among vulnerable populations and ensuring inclusion of the latter in national immunization plans. Different delivery approaches will need to be explored, such as outreach and differentiated delivery strategies for special populations as well as periodic intensification of routine immunization (PIRI) services. The sustainability of these approaches will be crucial to long-term success.

Potential actions to promote coverage and equity

Promote consideration of supplementary vaccine delivery to fill immunity gaps, including:

- selective delivery of a supplementary dose, irrespective of prior immunization history and through SIAs; and
 - selective delivery of a routine dose, usually in combination with other vaccinations, through PIRI.
-

Establish and implement strategies to improve vaccination coverage in urban slums and unauthorized urban settlements.

Identify and address gender barriers to increasing MCV1 and MCV2 coverage (both service provision and demand-side factors).

Mainstream the review of data at national and subnational levels to identify immunity gaps, develop strategies, identify successes and challenges, and inform operational decisions.

Establish mechanisms and partnerships to promote joint preventive campaigns with other disease initiatives.

Establish quality criteria for monitoring the performance and impact of SIAs; criteria should include the use of SIAs to improve routine vaccination.

Identify and close immunity gaps through supplementary means of vaccine delivery.

The need for supplementary means to fill immunity gaps, especially in populations without access to routine service delivery, is well recognized. In a strategic shift, tailored approaches should be used rather than sole reliance on nonselective mass campaigns. These tailored approaches should use surveillance, immunization coverage and geospatial mapping data to target those missed by routine services and to deliver routine vaccine doses (such as through PIRI) or supplementary doses (such as through SIAs). These approaches should include special efforts to bring the “missed” individuals within the ambit of routine service delivery and strengthen health systems to sustainably deliver all PHC services to their communities. In the early part of the decade and due to the COVID-19 pandemic, a combination of PIRI and SIAs will likely be required in many countries to fill immunity gaps because of missed routine vaccination doses and the cancellation of planned SIAs.

Promote integrated delivery of vaccines and non-vaccine preventive interventions in preventive campaigns to create efficiencies and maximize impact.

Where indicated and feasible, joint campaigns that combine preventive vaccination with other disease initiatives (such as for polio, yellow fever, cholera or meningococcal meningitis vaccination) or take place during World Immunization Week campaigns should be implemented. Where appropriate and feasible, other non-vaccine preventive interventions (such as vitamin A supplementation) may be included in such campaigns.

Applying the core principles



People-focused

Consider the needs and perspectives of targeted populations, and take a holistic approach to achieving sustainable high and equitable coverage.



Country-owned

Ensure that national immunization programmes take responsibility for identifying barriers to vaccination and implementing tailored, sustainable strategies to fill all immunity gaps.



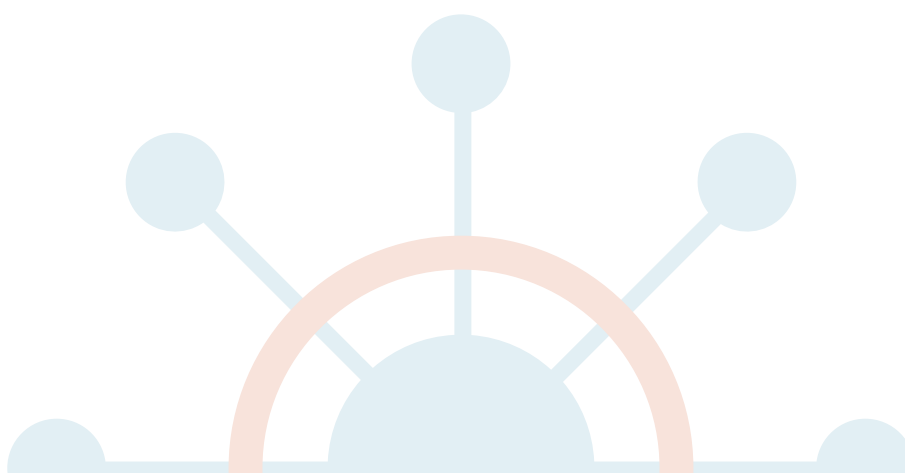
Partnership-based

Strengthen relationships with CSOs and other national- and subnational-level organizations to expand their role in identifying and designing interventions to close immunity gaps.



Data-enabled

Use data to identify immunity gaps and inform the planning and monitoring of differentiated vaccination approaches.





STRATEGIC PRIORITY 4 Life Course and Integration

OBJECTIVE

Use the life course approach to deliver the second routine dose of measles- and rubella-containing vaccines and catch-up vaccination, and integrate measles and rubella activities with other health and non-health activities.

Key focus areas

Use the life course approach for catch-up measles and rubella vaccination (17). Catch-up vaccination will continue to be required for those who missed their two routine doses of measles- and rubella-containing vaccines. The increasing focus on life course vaccination, especially at school age, in adolescence and in adulthood will catalyse efforts to mainstream catch-up vaccination and reduce the frequency and scale of SIAs to fill immunity gaps.

Review country policies. Country policies on vaccination (such as vaccination eligibility criteria, day care or school vaccination checks, and vaccination of health workers and travellers) will need review, discussion and revision to ensure that they enable the life course approach and facilitate integration.

Establish coordination mechanisms. Governance structures and coordination mechanisms that facilitate joint programming, promote integration between different health programmes and foster intersectoral collaboration (such as between the health and education sectors or the public and private health sectors) should be strengthened or established to facilitate life course vaccination. At the national and subnational levels, such structures and mechanisms should take into account the local context.

A photograph of a woman with braided hair, wearing a patterned top, holding a young child. They are both looking towards the camera. The background is slightly blurred, showing other people in a public setting.

Potential actions on life course vaccination and integration

Apply the missed opportunities for vaccination (MOV) strategy more broadly during health facility visits (such as at other health checkups or other contacts with the health system) (18).

Establish day care or school vaccination checks and catch-up vaccination through school-based health programmes.

Use adolescent health programmes to deliver catch-up doses to unvaccinated adolescents together with human papillomavirus (HPV) and other age-appropriate health interventions.

Establish collaborations with influenza and occupational health programmes to vaccinate health workers where health workers are an important target for influenza vaccination.

Implement policies for checking immunization status and catch-up vaccination, including (when required) before travel to endemic areas.

▲ *A mother holding her son as they await his measles vaccination in the Democratic Republic of the Congo*

© UNICEF/Thomas Nybo

Applying the core principles



People-focused

Use the life course approach and integrate measles and rubella vaccination with other interventions to provide additional opportunities to close immunity gaps while improving convenience for communities.



Country-owned

Ensure that national governments take responsibility for developing national policies and plans that create opportunities for catch-up measles- and rubella-containing vaccination and establish the necessary coordination between programmes (such as for immunization and occupational health) or between sectors (such as the health and education sectors).



Partnership-based

Work in partnership with different health programmes and other sectors (such as education) and with CSOs to strengthen life course platforms and promote integration.



Data-enabled

Use data to identify immunity gaps, strengthen life course platforms and identify opportunities for integration of programmes without losing sight of the key objectives of measles and rubella elimination.





STRATEGIC PRIORITY 5 Outbreaks and Emergencies

OBJECTIVE

Ensure outbreak preparedness for timely detection and effective response to limit the spread of measles and rubella and reduce related morbidity and mortality.

Key focus areas

Develop stronger linkages between measles and rubella elimination and control efforts and the International Health Regulations and related processes. This should include the use of the joint external evaluation process to assess and strengthen country capacity to prevent, detect and rapidly respond to measles and rubella outbreaks and promote the inclusion of measles and rubella in National Action Plans for Health Security.

Strengthen national and subnational capacity for outbreak preparedness and response in collaboration with other disease programmes. The various national programmes (such as epidemiology, immunization, and humanitarian and emergency response programmes) and partners should work in close coordination, share resources and responsibilities, and jointly support national capacity strengthening for outbreak preparedness, detection, investigation and response, including case management and nutritional support for measles.

Harness the expertise of CSOs. CSOs with experience operating in areas outside the reach of national governments or international agencies have valuable expertise that can help with preparing and responding to outbreaks and humanitarian emergencies. Collaboration and partnership with CSOs are especially crucial for emergency and outbreak response in countries experiencing protracted conflicts.

Potential actions to improve outbreak preparedness and response

Promote the development and use of National Action Plans for Strengthening Outbreak Preparedness and Response, risk assessment tools, crisis communication plans, and guidance on hospital-level infection prevention and control and community engagement in active searching for cases.

Identify and engage key CSOs and disease control programmes operating at local levels. Define clear roles and responsibilities.

Develop and conduct joint capacity-strengthening activities with other disease programmes and sectors.

Review and revise existing structures to access outbreak response support at the global and regional levels.

Promote systematic use of root cause analysis following outbreaks to strengthen health systems and PHC delivery.

Strengthen capacity for outbreak investigations to identify root causes of outbreaks and inform corrective actions to improve health systems and routine immunization programmes.

An outbreak of measles indicates an immunity gap. Outbreak investigations are needed to identify the root causes, identify chains of transmission and use the resulting information to improve and strengthen the health and immunization systems.

Improve structures and processes to support countries in responding to outbreaks in a timely and effective way.

Provide greater clarity on the need, scope and timelines for an optimal response to measles and rubella outbreaks with vaccination. Streamline global and regional structures and processes, such as through sharing of human resources to conduct epidemiological analyses, assisting with campaign planning and implementation, and conducting monitoring activities during and after campaigns.

Improve cross-border collaborations to mitigate the spread of measles and rubella.

Cross-border populations are often not included in immunization microplans, which can lead to immunity gaps in those communities. Population movement across borders also increases the risk of importation and spread of outbreaks between neighbouring countries. Increased monitoring of immunization status, timely data sharing and joint action in border areas can reduce immunity gaps in cross-border communities and mitigate the risk of outbreaks.

Applying the core principles



People-focused

Consider the perspectives and needs of all populations – including fragile, displaced or otherwise vulnerable communities – in planning and implementing outbreak preparedness and response activities.



Country-owned

Ensure that countries take responsibility for developing National Action Plans for Strengthening Outbreak Preparedness and Response to strengthen local capacity for outbreak preparedness and response and allocate adequate technical and financial resources.



Partnership-based

Ensure that the national plan harnesses the capacity of global, regional and national stakeholders, including CSOs, with the national government in charge of coordinating the response. Explore partnerships outside of the health sector (such as with the humanitarian sector).



Data-enabled

Use information collected from outbreak investigations to strengthen the routine delivery of vaccination and PHC.



STRATEGIC PRIORITY 6 Supply and Sustainability

OBJECTIVE

Ensure availability of high-quality measles- and rubella-containing vaccines, vaccination supplies and laboratory reagents, and ensure that measles and rubella activities, including surveillance, are sustainably financed.

Key focus areas

Ensure the timely availability of sufficient vaccine supplies and laboratory reagents and consumables. The right products in the right presentations and at affordable prices are necessary to meet country and community needs for planned routine vaccination as well as planned and unplanned supplemental immunization and outbreak response. National governments, vaccine manufacturers and global partners should continue collaborating to ensure vaccine security and improve the health of the supply market for vaccines, supplies and laboratory reagents of assured quality.

Ensure sufficient financing for all measles and rubella activities, including surveillance, within health planning and budgeting at all levels. Regular planning and budgeting for measles and rubella activities as part of overall immunization and health planning and budgeting is necessary, together with coordination and advocacy mechanisms to ensure that sustainable funding is available to achieve measles and rubella goals and targets.

Ensure financing for fragile areas or countries. Sustainable external financial support for conflict-affected and fragile countries is necessary, via existing mechanisms (such as Gavi) or new mechanisms, as well as financing at the global and regional levels for coordination, technical support and monitoring.

Potential actions to ensure supply and sustainability

At the global level, harness the expertise of partners and existing initiatives (such as UNICEF, the Pan American Health Organization [PAHO] Revolving Fund, the Gavi Roadmap, the Healthy Market Framework, and Market Information for Access to Vaccines [MI4A]) to monitor global supply and demand and establish necessary mechanisms to receive more frequent updates from partners and discuss mid- and long-term supply and demand.

Establish mechanisms to ensure that supply allocations reflect public health priorities in the event of a global shortage of vaccines or other supplies.

Review and improve measles and rubella planning, costing and budgeting tools in comprehensive multi-year plans for immunization.

Include fragile populations in global and regional health and immunization planning and budgeting.

▲ *A mobile vaccination team on its way to a village in the Democratic Republic of the Congo*

© UNICEF/Thomas Nybo

Applying the core principles



People-focused

Allocate vaccine supply and financing to ensure that the needs of all populations are addressed.



Country-owned

Match commitments to goals and objectives, with sustainable financing to implement the required activities. National governments should have primary responsibility for financing immunization and surveillance activities and for working with partners to ensure sustainable financing flows. They should be responsible for ensuring that vaccine and laboratory supplies are available at all peripheral health facilities.



Partnership-based

Establish partnerships at the country, regional and global levels to ensure timely availability of measles- and rubella-containing vaccines and supplies. Partnerships are also needed to develop in-country technical capacity related to vaccine and laboratory supply and sustainability.



Data-enabled

Use data from logistics management information systems to ensure availability and timely distribution of vaccines and laboratory supplies to points of delivery. Use data on vaccine and laboratory costs, including operational costs, for planning and budgeting.



STRATEGIC PRIORITY 7 Research and Innovation

OBJECTIVE

Foster research and innovation to overcome barriers to achieving high measles and rubella population immunity and to generate and use high-quality disease and programme data.

Key focus areas

Conduct formative research. Formative research can provide insights and information to help tailor immunization services to address health system barriers, improve the uptake of vaccination, and document best practices for outbreak control. Lessons learned from operational and behavioural research can be used to tailor activities for different contexts and communities.

Develop and fund innovative vaccine delivery platforms and technologies. Innovations such as microarray patches for vaccination can enable delivery of immunization services with fewer human resources, especially to underserved populations during SIAs and for outbreak response. Discovery, development and use of new technologies to reach such populations should be promoted to accelerate progress towards disease elimination.

Explore, evaluate and scale up the use of innovative service delivery strategies. Achieving the high levels of vaccination required to interrupt transmission of measles requires new strategies to vaccinate underserved populations and people residing in areas of civil unrest or insecurity. Innovative strategies should be evaluated when developing best practice guidelines for vaccinating such populations.

Improve diagnostics and implement new information technology (IT) solutions. Develop, evaluate and scale up improved diagnostics (such as point-of-care rapid diagnostic tests) to facilitate timely detection and investigation of cases of measles and rubella. Evaluate and scale up the use of new IT solutions for recording, reporting, managing, sharing and using immunization and surveillance data.

Potential actions to improve research and innovation

Conduct multi-country studies to document best practices for interrupting the spread of measles and rubella during outbreaks.

Adapt the TIP and HCD approaches to design more people-centred strategies to improve vaccine delivery and uptake.

Evaluate country preferences and develop use cases for innovative delivery platforms and technologies (such as microarray patches).

Pilot test and scale up new point-of-care and rapid diagnostics and define use case scenarios for such tests.

Evaluate and scale up innovative IT solutions for managing immunization and surveillance data.



◀ A measles and rubella testing laboratory

© WHO/Rajiv Kumar

Applying the core principles



People-focused

Reflect the perspectives, priorities and needs of communities and individuals in conducting research and development.



Country-owned

Ensure that countries take responsibility for strengthening local research capacity, conducting relevant formative research and evaluating innovative approaches and tools.



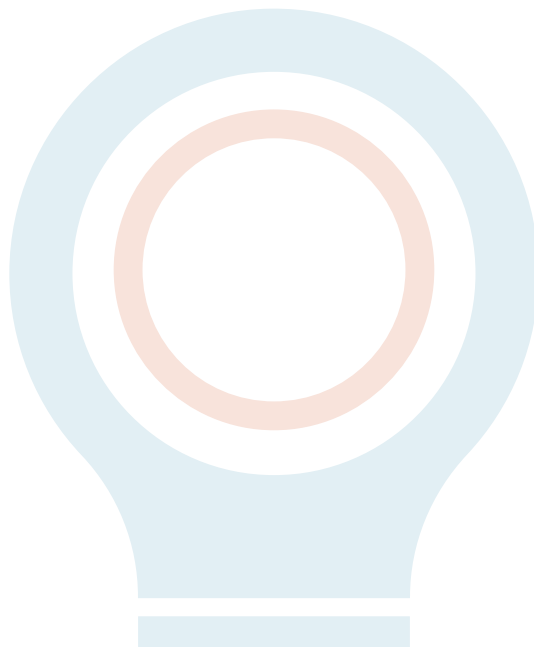
Partnership-based

Harness the complementary expertise of different stakeholders to develop innovative technologies, evaluate their applicability and effectiveness, and scale up their use.



Data-enabled

Use data to inform research on unmet needs and programmatic barriers, and share data on research and innovations to inform their applicability and use for achieving measles and rubella goals.



APPLYING THE FRAMEWORK

The MRSF 2021–2030 is a high-level framework for guiding actions during the next decade; as such, it does not lay out operational details. These will need to be developed and included in regional and national strategic and operational plans that take

into account the local context. The national plans should be synchronized with the respective regional and national planning cycles, which may be shorter than the 10-year time frame of this strategy, allowing for flexibility to adapt to evolving circumstances.

MONITORING AND ACCOUNTABILITY

The monitoring and accountability framework under development for the MRSF 2021–2030 will include indicators, targets and milestones and will define a monitoring and accountability process. It will incorporate the IA2030 measles- and rubella-specific goals and indicators and include additional measles- and rubella-specific indicators for monitoring progress and understanding the root causes of success or failure. The framework will also align with regional goals, indicators and targets.

At the global and regional levels, the monitoring processes will be harmonized and coordinated with the IA2030 monitoring and evaluation processes to eliminate overlaps and redundancies and reduce the reporting burden on countries. Regional and national operational plans will need to be accompanied by monitoring and accountability frameworks and processes at their respective levels. Milestones and targets at those levels should be based on the local context.

The monitoring and accountability framework will define stakeholder roles and responsibilities, with accompanying monitoring indicators. All stakeholders will need to commit to monitoring and reporting on the indicators and targets relevant to them.

MANAGEMENT AND COORDINATION

Applying the MRSF 2021–2030 will require focusing first on components where global coordination and alignment among stakeholders can be most easily achieved. It will require advocacy and communication to mobilize support for the framework’s vision, goal, strategic priorities and core principles and maintain momentum.

Regional and national strategies and operational plans should include appropriate mechanisms for applying the MRSF 2021–2030 at those levels. Management and coordination at the global and regional levels should align with the governance processes established for IA2030. The Measles & Rubella Initiative will provide oversight and coordination for implementation of the MRSF 2021–2030 and will be responsible for global-level advocacy and resource mobilization, coordination of technical support, and global-level monitoring and evaluation.

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