

# GLOBAL ROUTINE IMMUNIZATION STRATEGIES AND PRACTICES (GRISP)

→ A companion document to the Global Vaccine Action Plan (GVAP)



WHO Library Cataloguing-in-Publication Data:

Global Routine Immunization Strategies and Practices (GRISP): a companion document to the Global Vaccine Action Plan (GVAP).

1.Immunization. 2.Immunization Programs. 3.Health Promotion. 4.National Health Programs.  
I.World Health Organization.

ISBN 978 92 4 151010 3

(NLM classification: WA 115)

© World Health Organization 2016

All rights reserved. Publications of the World Health Organization are available on the WHO website ([www.who.int](http://www.who.int)) or can be purchased from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: [bookorders@who.int](mailto:bookorders@who.int)).

Requests for permission to reproduce or translate WHO publications –whether for sale or for non-commercial distribution– should be addressed to WHO Press through the WHO website ([www.who.int/about/licensing/copyright\\_form/en/index.html](http://www.who.int/about/licensing/copyright_form/en/index.html)).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Printed in Spain

Photo Credits: Cover (from top to bottom and left to right, ): Olivier Asselin (WHO), WHO, Jim Holmes (WHO), Christopher Black (WHO), Karen Reidy (WHO/SEARO), Christopher Black (WHO), Christopher Black (WHO), Fernando G. Revilla (WHO/TDR), Christopher Black (WHO), Sergey Volkov (WHO). Inside: Christopher Black (WHO): pp 1, 2, 5, 8 & 54 ; Olivier Asselin (WHO): pp 11, 19 & back cover ; Fernando G. Revilla (WHO/TDR): p 13 ; Jim Holmes (WHO): p 17 ; Sebastian Oliel (WHO/TDR): p 26 ; Andy Craggs (WHO/TDR): p 29 ; Heba Farid (WHO): p 37 ; Anuradha Sarum (WHO/SEARO): p 40 ; WHO: p 45 ; Sergey Volkov (WHO): p 61 ; Karen Reidy (WHO/SEARO): p 65 ; Diego Rodriguez (WHO): p 66.

Design and layout: Paprika (Annecy, France)

# GLOBAL ROUTINE IMMUNIZATION STRATEGIES AND PRACTICES (GRISP)

→ A companion document to the Global Vaccine Action Plan (GVAP)

# ACKNOWLEDGEMENTS

Special thanks are due to the members of the GRISP Steering Committee who guided the development of this document with their vast experience in all aspects of the routine immunization programme and their collective wisdom concerning the translation of the Global Vaccine Action Plan into routine systems strengthening and coverage improvement activities. The Steering Committee consisted of (in alphabetical order): Alan Brooks (Gavi, the Vaccine Alliance), Richard Duncan (UNICEF Programme Division), Jenny Sequeira (Bill and Melinda Gates Foundation), Samir Sodha (US Centers for Disease Control and Prevention), Robert Steinglass (John Snow Inc.) and Margie Watkins (US Centers for Disease Control and Prevention).

Further thanks are due to numerous colleagues in WHO (headquarters, regional and countries offices) and partner organizations who contributed their experiences and knowledge to the preparation and revision of this document.

The document was developed by the World Health Organization and was written by Dr Rudi Eggers of the Department of Immunization, Vaccines and Biologicals.

<b>1. EXECUTIVE SUMMARY</b> .....	1
1.1. Nine transformative investments to achieving better immunization outcomes .....	3
1.2. A comprehensive framework of strategies and practices for routine immunization .....	4
<b>2. INTRODUCTION</b> .....	5
2.1. Background .....	6
2.2. Purpose of the Global Routine Immunization Strategies and Practices (GRISP) .....	8
2.3. The Global Vaccine Action Plan 2011–2020: Achieving the Decade of Vaccines vision .....	9
2.3.1. <i>Decade of Vaccines Vision and GVAP Mission</i> .....	9
2.3.2. <i>GVAP Guiding Principles</i> .....	9
2.3.3. <i>Decade of Vaccines goals</i> .....	10
2.4. “Routine immunization” – one term, two perspectives: immunization system strengthening and coverage improvement .....	11
<b>3. WHERE SHOULD WE FOCUS OUR ATTENTION?</b> .....	13
3.1. Nine transformative investments to achieving better immunization outcomes .....	14
3.2. What routine immunization activities should be promoted in a particular country? .....	16
<b>4. COMPREHENSIVE FRAMEWORK OF STRATEGIES AND PRACTICES FOR ROUTINE IMMUNIZATION</b> .....	17
4.1. Maximize reach .....	20
4.1.1. <i>Detecting and serving unreached or marginalized populations,                 communities and individuals</i> .....	20
4.1.2. <i>Improving equity and reach by designing vaccination services                 to efficiently and effectively deliver vaccines                 to all target groups</i> .....	22
4.1.3. <i>Building the capacity, motivation and professional                 development of vaccinators and mid-level managers</i> .....	27
4.1.4. <i>Ensuring vaccine quality and availability at all levels</i> .....	30
4.1.5. <i>Creating synergy among routine immunization, accelerated disease                 control efforts and new vaccine introduction activities</i> .....	33
4.1.6. <i>Integrating the routine immunization programme through comprehensive                 approaches and joint service delivery</i> .....	36
4.2. <b>MANAGE the PROGRAMME</b> .....	38
4.2.1. <i>Securing all-level political commitment and partnership                 for routine immunization</i> .....	38
4.2.2. <i>Planning, budgeting and mobilizing resources for results and sustainability</i> .....	41
4.2.3. <i>Ensuring excellence in national programme leadership                 and management</i> .....	44
4.2.4. <i>Setting programme policy and guidance</i> .....	46
4.3. <b>MOBILIZE PEOPLE</b> .....	49
4.3.1. <i>Engaging communities and creating demand for vaccination</i> .....	49
4.3.2. <i>Mobilizing and communicating for vaccination</i> .....	51
4.3.3. <i>Addressing vaccine hesitancy, false perceptions and                 the negative consequences of adverse events following immunization</i> .....	53
4.4. <b>MONITOR PROGRESS</b> .....	55
4.4.1. <i>Monitoring programme performance and disease occurrence</i> .....	55
4.4.2. <i>Evaluate the programme through surveys, assessments and reviews</i> .....	58
<b>5. MEASURING GRISP PROGRESS THROUGH THE GVAP</b> .....	61
<b>6. CONCLUSION</b> .....	65
<b>ANNEX A: Role of stakeholders in routine immunization</b> .....	67

# ACRONYMS

<b>AEFI</b>	adverse events following immunization
<b>APOA</b>	Annual Plan of Action
<b>CDC</b>	Centers for Disease Control and Prevention
<b>CHD</b>	Child Health Days
<b>cMYP</b>	comprehensive multi-year plan
<b>DoV</b>	Decade of Vaccine
<b>DQS</b>	data quality self-assessments
<b>DTP</b>	diphtheria-tetanus-pertussis vaccine
<b>DTP<sub>3c</sub></b>	third dose of diphtheria-tetanus-pertussis containing vaccine
<b>EPI</b>	Expanded Programme of Immunization
<b>EVM</b>	Effective Vaccine Management assessment
<b>Gavi</b>	Global Alliance for Vaccines and Immunization
<b>GRISP</b>	Global Routine Immunization Strategies and Practices
<b>GVAP</b>	Global Vaccine Action Plan
<b>HBR</b>	home-based records
<b>HIV</b>	Human Immunodeficiency Virus
<b>ICC</b>	Interagency Coordinating Committee
<b>IIP</b>	Immunization in Practice
<b>IPAC</b>	Immunization Practices Advisory Committee
<b>IVIRAC</b>	Immunization and Vaccines related Implementation Research Advisory Committee
<b>KAP</b>	knowledge, attitude and practices
<b>M&amp;E</b>	monitoring & evaluation
<b>MLM</b>	mid-level management training
<b>MNT</b>	maternal and neonatal tetanus
<b>MNTE</b>	Maternal and Neonatal Tetanus Elimination
<b>NITAG</b>	National Immunization Technical Advisory Group
<b>PATH</b>	Program for Appropriate Technology in Health
<b>PIE</b>	post-introduction evaluation
<b>PIRI</b>	Periodic Intensification of Routine Immunization
<b>PQS</b>	Performance, Quality and Safety
<b>PSPQ</b>	Programmatic Suitability for Prequalification
<b>RITAG</b>	Regional Immunization Technical Advisory Group
<b>SAGE</b>	Strategic Advisory Group of Experts
<b>SIA</b>	Supplementary Immunization Activity
<b>UNICEF</b>	United Nations Children's Fund
<b>VPD</b>	vaccine-preventable disease
<b>WHO</b>	World Health Organization



# EXECUTIVE SUMMARY

# 1. EXECUTIVE SUMMARY



Immunizations are among the most successful and cost-effective health interventions ever devised. They have reduced child deaths and disease prevalence radically. They have enabled the eradication of smallpox, lowered the global incidence of polio by more than 99% and neonatal tetanus by 94%, and achieved dramatic reductions in illness, disability and death from common childhood diseases. However, global mobility and interdependence have increased the vulnerability of people everywhere to the uncontrolled spread of diseases through epidemics.

To realize the full benefits of immunization, the Global Vaccine Action Plan 2011–2020 (GVAP), endorsed by the World Health Assembly in May 2012, sets the direction for a “Decade of Vaccines” through delivery of universal access to immunization. However, routine immunization, which is integral to achieving this vision, is in need of a cohesive delivery and advocacy platform globally. There is also an absence of a commonly agreed upon routine immunization mission statement within disease-specific initiatives, leading to the global immunization financing architecture being very unbalanced, focusing primarily on disease control projects and vaccine introductions, and less so on the required systems strengthening and extension of the reach of sustainable, equitable routine immunization.

The term “routine immunization” is understood in two distinct ways that relate to the foundation of the health system and activities to improve equitable coverage, as described in the table below. It is important to distinguish between these perspectives, as many activities to sustainably strengthen routine immunization systems may not result in short-term or rapid improvements in immunization coverage. Equally, many activities specifically designed to rapidly increase routine immunization coverage may not result in the long-term strengthening and sustainability of the programme.

The purpose of GRISP is to reassert routine immunization as the foundation for sustained decreases in morbidity and mortality from vaccine-preventable diseases across the life-cycle of all individuals. Its objectives are:

- ◆ to contribute to **country efforts** towards sustained routine immunization programmes;
- ◆ to **set global priorities** in the attainment of immunization for all persons targeted;
- ◆ to ensure **global, regional and country coordination** among immunization partners and stakeholders in routine immunization activities and plans;
- ◆ to align new vaccine introduction, accelerated disease control and prevention and programme monitoring activities with a **joint goal of routine immunization programme support**, both in relation to coverage improvement and system strengthening efforts.



GRISP contains two components namely *nine transformative investments to achieving better immunization outcomes* and *a comprehensive framework of strategies and practices for routine immunization*.

## 1.1. Nine transformative investments to achieving better immunization outcomes

These aim to provide overall direction and, if implemented, will transform national programmes and the work of global partners, enabling us to reach the stated DoV goals. These investments are a call to action to governments, donors and partners and should be seen as the highlights and priorities of this document. The nine transformative investments are:



NATIONAL  
TEAM

Invest in a capable national team – supplied with sufficient resources and authority – to expertly manage each country’s national immunization programme.



STRATEGIES  
TO REACH

Invest in tailored strategies that identify undervaccinated and unvaccinated persons and regularly provide them with the vaccines they need.



PLANNING  
CYCLE

Invest in a coherent planning cycle, with strategic, comprehensive, multi-year and operational annual plans outlining and coordinating strategies and activities, which are monitored quarterly.



FUNDING  
FLOW

Invest in ensuring that sufficient and adequately appropriated funds reach the operational level of the programme regularly.



VACCINATOR  
CAPACITY

Invest in vaccinators and district managers by regularly and systematically building their capacity, strengthening their performance and providing supportive supervision.



ADEQUATE  
SUPPLY

Invest in modernizing vaccine supply chains and management to ensure that the correct amounts of the right potent vaccines are available at each vaccination session.



MONITORING  
SYSTEMS

Invest in an information system that identifies and tracks each person’s vaccination status.



BEYOND INFANCY  
VACCINATION

Invest in sustainably expanding routine vaccination schedules to cover people’s entire lives.



COMMUNITY  
INVOLVEMENT

Invest in the shared responsibility for immunization delivery between communities and the immunization programme to reach uniformly high coverage through high demand and quality services.

## 1.2. A comprehensive framework of strategies and practices for routine immunization

Implementing the strategies and practices within this framework will strengthen routine immunization systems and improve coverage. In addition, the framework organizes them by four main areas of action, enabling a systematic approach to be taken.



Coloured dots designate transformative investment strategies.

GRISP, as a companion document to the GVAP does not have a separate monitoring and evaluation framework, but aligns itself to the GVAP monitoring process and outcome.



## INTRODUCTION

## 2. INTRODUCTION

### 2.1. Background

Immunizations are among the most successful and cost-effective health interventions ever devised. They have reduced child deaths and disease prevalence radically. They have enabled the eradication of smallpox, lowered the global incidence of polio by more than 99% and neonatal tetanus by 94%, and achieved dramatic reductions in illness, disability and death from measles, diphtheria, pertussis, hepatitis B, rotavirus, yellow fever and invasive bacterial causes of pneumonia and meningitis. They are predicted to continue to have an enormous impact on public health (see Table 1).

**Table 1.** Forecast impact of vaccination administered in the routine programme, 2011–2020 (adapted from GVAP, page 116)

	Vaccine-preventable disease	Number of future deaths averted ('000)	Number of deaths averted per 1000 persons vaccinated
Original EPI vaccines	Measles – first dose	10 600	16.5
	Measles – second dose	400	1.9
New or underutilized vaccines*	Hepatitis B	5 300–6 000	8.3
	Haemophilus influenzae type B (Hib)	1 400–1 700	2.6
	Pneumococcal	1 600–1 800	4.3
	Rotavirus	800–900	3.1
	Human papillomavirus	500	15.1
	Yellow fever	30–40	0.2
<b>Total</b>		<b>20 630–21 940</b>	

\* Meningococcal meningitis A, Japanese encephalitis and rubella excluded as the calculation was for combined routine and campaign delivery.

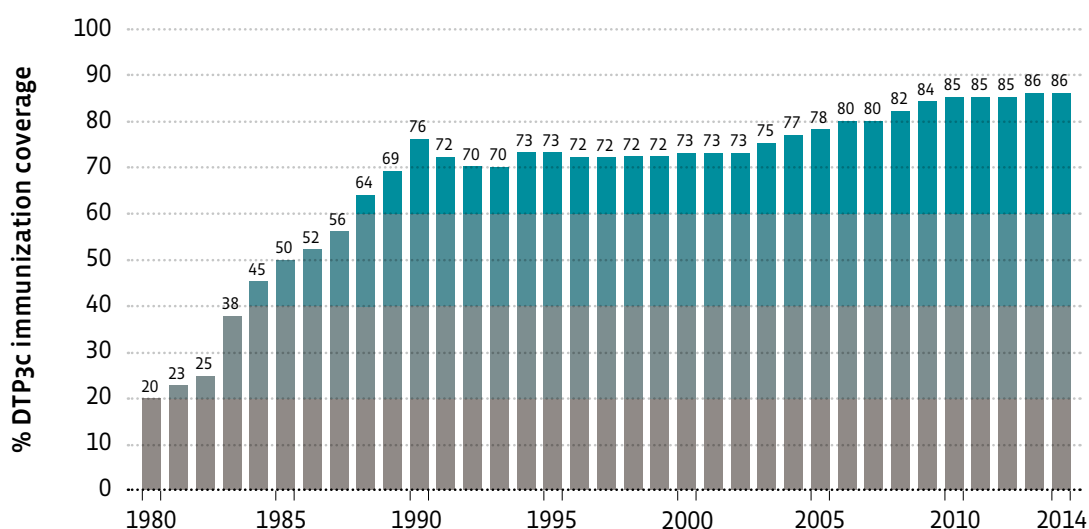
Nevertheless, global mobility and interdependence have increased the vulnerability of people everywhere to the uncontrolled spread of diseases through epidemics. Rises in measles and diphtheria cases in areas previously thought to be rid of these diseases have shown that in spite of dramatic reductions of vaccine-preventable diseases (VPDs), risks from these diseases remain and increasing complacency may lead to disease resurgence. The threat of an influenza pandemic in 2009 and the West African Ebola outbreak in 2014 highlight the need to strengthen country ownership and international solidarity, mutual support and partnerships to contribute to improving global health and security as well as achieving universal health coverage. To fully reap the benefits of immunization, high levels of vaccine coverage must be achieved and maintained; people must be vaccinated correctly and safely at optimal ages with potent vaccine; services must be extended to people currently unreached and to age groups beyond infancy; new vaccines and technologies must be introduced; and vaccination must be more effectively linked with the delivery of other health interventions.

In response to immunization needs worldwide, global partnerships, such as Gavi, the Vaccine Alliance, the Global Polio Eradication Initiative, the Measles Rubella Initiative and the Maternal and Neonatal Tetanus Elimination (MNTE) partnership, strive for synergies to achieve shared outcomes. These global partnerships all have as their core strategies – in line with reaching their own goals – the strengthening of routine immunization systems and increasing coverage. They bring together major stakeholders in immunization from the public and private sectors, including the vaccine industry.

To realize the full benefits of immunization, the Global Vaccine Action Plan 2011–2020<sup>1</sup> (GVAP), endorsed by the World Health Assembly in May 2012, sets the direction for a “Decade of Vaccines” through delivery of universal access to immunization (see section 2.3). However, routine immunization, which is integral to achieving this vision, is in need of a cohesive delivery and advocacy platform globally. There is also an absence of a commonly agreed upon routine immunization mission statement within disease-specific initiatives, leading to the global immunization financing architecture being very unbalanced, focusing on disease control projects and vaccine introductions, but less so on the required systems strengthening and extension of the reach of routine immunization.

To build on the undisputed past successes of immunization and realize its promising future, global partners must ensure that routine immunization coverage, equity and the actual delivery of vaccines to hard-to-reach populations remain high on the global health agenda by raising awareness of their importance, benefits and synergies among governments, donors and the global health community as a whole. The persistence of too much vaccine-preventable morbidity and mortality underscores the need to redouble efforts to continuously improve the quality and reach of immunization service delivery.

**Figure 1.** Estimated global immunization coverage, DTPc3 vaccine, 1980–2014



The 2014 Decade of Vaccines progress report<sup>2</sup> highlights the need to intensify efforts, given its statement that: “By 2014, one third of the world’s 194 countries are not achieving the GVAP goal of 90% DTPc3 [third dose of diphtheria-tetanus-pertussis containing vaccine] national coverage and this has been the case for the preceding 4 years” (see Figure 1). An enhanced routine immunization approach is described below.

1 World Health Organization. Global vaccine action plan 2011–2020. ISBN 978 92 4 150498 0  
[http://www.who.int/immunization/global\\_vaccine\\_action\\_plan/GVAP\\_doc\\_2011\\_2020/en/](http://www.who.int/immunization/global_vaccine_action_plan/GVAP_doc_2011_2020/en/)

2 World Health Organization. 2014 Assessment Report of the Global Vaccine Action Plan.  
[http://www.who.int/immunization/global\\_vaccine\\_action\\_plan/SAGE\\_DoV\\_GVAP\\_Assessment\\_report\\_2014\\_English.pdf?ua=1](http://www.who.int/immunization/global_vaccine_action_plan/SAGE_DoV_GVAP_Assessment_report_2014_English.pdf?ua=1)

## 2.2. Purpose of the Global Routine Immunization Strategies and Practices (GRISP)

This document constitutes the recommendation of WHO and global immunization partners working in immunization regarding the routine immunization activities required to be undertaken to reach the GVAP goals. It is a result of a collaboration among major stakeholders in this field. The ongoing oversight of activities resulting from this document will be coordinated by the World Health Organization (WHO) and overseen by the WHO Strategic Advisory Group of Experts (SAGE) for immunization, with follow-up conducted in line with the GVAP reporting.

### The purpose of GRISP is:

*To reassert routine immunization as the foundation for sustained decreases in morbidity and mortality from vaccine-preventable diseases across the life-cycle of all individuals.*

Its objectives are:

- ◆ to contribute to **country efforts** towards sustained routine immunization programmes;
- ◆ to **set global priorities** in the attainment of immunization for all persons targeted;
- ◆ to ensure **global, regional and country coordination** among immunization partners and stakeholders in routine immunization activities and plans;
- ◆ to align new vaccine introduction, accelerated disease control and prevention and programme monitoring activities with a **joint goal of routine immunization programme support**, both in relation to coverage improvement and system strengthening efforts.



## 2.3. The Global Vaccine Action Plan 2011–2020: Achieving the Decade of Vaccines vision

The GVAP builds on the success of the Global Immunization Vision and Strategy 2006–2015, which was launched in 2005 as the first 10-year strategic framework to realize the potential of immunization. Its development brought together multiple stakeholders involved in immunization – including governments and elected officials, health professionals, academics, manufacturers, global agencies, development partners, civil society, media and the private sector – to collectively define what the global community wants to achieve in immunization over the next decade. The GVAP reiterates existing goals, sets new ones, proposes six strategic objectives and the actions that will support their achievement, and provides an initial estimate of resource requirements and return on investment. Country, regional and global stakeholders are responsible for specific actions in translating the GVAP into detailed operational plans, monitoring and evaluating progress, and mobilizing resources to ensure the Decade of Vaccines vision becomes a reality.

This section reviews the Decade of Vaccines vision and GVAP mission as GRISP fully subscribes to these and proposes strategies and activities for their realization further below.

### 2.3.1. Decade of Vaccines Vision and GVAP Mission

The Decade of Vaccines (2011–2020) vision is:

*A world in which all individuals and communities enjoy lives free from vaccine-preventable diseases.*

The GVAP mission is:

*To extend, by 2020 and beyond, the full benefit of immunization to all people, regardless of where they are born, who they are or where they live.*

### 2.3.2. GVAP Guiding Principles

GRISP adheres to the six GVAP guiding principles in all aspects:

- ◆ **Country ownership** – countries have primary ownership and responsibility for establishing good governance and for providing effective and quality immunization services for all.
- ◆ **Shared responsibility and partnership** – immunization against vaccine-preventable diseases is an individual, community and governmental responsibility that transcends borders and sectors.
- ◆ **Equity** – equitable access to immunization is a core component of the right to health.
- ◆ **Integration** – strong immunization systems, as part of broader health systems and closely coordinated with other primary health care delivery programmes, are essential for achieving immunization goals.
- ◆ **Sustainability** – informed decisions and implementation strategies, appropriate levels of financial investment, and improved financial management and oversight are critical to ensuring the sustainability of immunization programmes.
- ◆ **Innovation** – the full potential of immunization can only be realized through learning, continuous improvement and innovation in research and development, as well as innovation and quality improvement across all aspects of immunization.

### 2.3.3. Decade of Vaccines goals

The GVAP is a plan to achieve the goals that the international immunization community has given itself for the Decade of Vaccines (2011–2020), and incorporates and expands on previously articulated goals. All DoV goals require a well-functioning immunization system, and increasing routine immunization coverage. The goals were articulated and agreed in GVAP and are repeated here:

- ◆ Achieve a world free of poliomyelitis
  - ◆ By 2014, interrupt wild poliovirus transmission globally
  - ◆ By 2018, certification of poliomyelitis eradication
- ◆ Meet global and regional elimination targets
  - ◆ 2015: Neonatal tetanus eliminated in all WHO regions
  - ◆ 2015: Measles eliminated in at least four WHO regions
  - ◆ 2015: Rubella/congenital rubella syndrome eliminated in at least two WHO regions
  - ◆ 2020: Measles and rubella eliminated in at least five WHO regions
- ◆ **Meet vaccination coverage targets in every region, country and community**
  - ◆ **2015: Reach 90% national coverage and 80% in every district or equivalent administrative unit with three doses of diphtheria-tetanus-pertussis containing vaccines**
  - ◆ **2020: Reach 90% national coverage and 80% in every district or equivalent administrative unit with all vaccines in national programmes, unless otherwise recommended**
- ◆ Develop and introduce new and improved vaccines and technologies
  - ◆ 2015: At least 90 low-income and middle-income countries have introduced one or more new or underutilized vaccines
  - ◆ 2020: All low-income and middle-income countries have introduced one or more new or underutilized vaccines
  - ◆ 2020: Licensure and launch of vaccine or vaccines against one or more major currently non-vaccine-preventable diseases
  - ◆ 2020: Licensure and launch of at least one delivery platform technology
- ◆ Exceed the Millennium Development Goal 4 target for reducing child mortality
  - ◆ 2015: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate (Target 4.A)
  - ◆ 2020: Exceed Millennium Development Goal 4 Target 4.A for reducing child mortality

Reaching the coverage targets indicated in bold text above stand out as key aims of this document. However, as the foundation to all immunization activities, routine immunization will play a major role in the attainment of all of these DoV goals. In some cases, as the targets for 2015 may be unreachable in the short time frame left, emphasis should be placed on reaching the long-term targets.





## 2.4. “Routine immunization” – one term, two perspectives: immunization system strengthening and coverage improvement

The immunization system, as part of a functioning health system, is the foundation for achieving and sustaining coverage targets, successfully introducing new vaccines and sustainably reducing or eliminating vaccine-preventable disease and mortality. Like all preventive health programmes, the immunization programme has to be aligned with the broader health system, and as such has to conform with the universal health coverage concept promoted by WHO, and to the principles of the International Health Partnership (IHP)+ platform.

Despite their relative maturity, immunization programmes in many countries may have become stressed as they face new challenges: many programmes struggle to cope with the demands of increasing population, immunization coverage stagnation, effective and efficient management of resources, new vaccine introduction, accelerated disease control efforts and inadequate resources. These increased demands on resources and support systems have not increased in step with the introduction of new vaccines. Programmes require policies and guidelines, staff, supplies, logistics, management, accurate monitoring and surveillance, community engagement, political ownership, financial support, communications, advocacy, and coordination. Constant support, attention, maintenance and repair or revision are needed for achieving sustained, effective and efficient performance to ensure that all targeted persons are fully immunized with the current recommended range of vaccines. Past high accomplishment does not guarantee success in the future.

As an integral part of the health system, immunization service delivery can be viewed as a developmental challenge that requires a systems approach at all relevant administrative levels. The many interconnected components of an immunization system require multi-disciplinary attention to build a cohesive, non-fragmented and well-performing programme. Certain components may have been neglected for a variety of reasons, including institutional preferences of partner agencies, formulaic prescriptions and the absence of a learning culture that identifies and diffuses innovative ideas.

The term “routine immunization” is understood in two distinct ways that relate to the foundation of the health system and activities to improve coverage, as described in the table below. It is important

to distinguish between these perspectives, as many activities to strengthen routine immunization systems may not result in short-term or rapid improvements in immunization coverage. Equally, many activities specifically designed to rapidly increase routine immunization coverage may not result in the long-term strengthening and sustainability of the programme.

<p style="text-align: center;"><b>Securing the Foundation: strengthen routine immunization systems</b></p>	<p style="text-align: center;"><b>Reaching towards Universal Immunization Coverage: accelerate routine immunization activities</b></p>
<p>“Routine immunization” refers to <b>the part of the health system that facilitates vaccination service delivery to all those eligible</b>.</p> <p>The term encompasses system components such as:</p> <ul style="list-style-type: none"> <li>◆ programme planning, management and financing;</li> <li>◆ service implementation with adequate human resources, logistic support through relevant delivery strategies and monitoring;</li> <li>◆ data recording and reporting;</li> <li>◆ programme communication; and</li> <li>◆ vaccine supply and management with quality assurance.</li> </ul> <p>It is the foundation on which the entire programme is built and is a part of the overall health system of a country.</p> <p>Many components of the immunization system are not unique to the immunization programme but are common to all programmes and components of the health system.</p> <p>Within GRISP, “Securing the Foundation” is reflected in strategies and activities, such as programme leadership, human resource capacity building, vaccine availability and quality, political commitment, programme planning and financing, policy guidance and monitoring and surveillance.</p>	<p>“Routine immunization” may also describe the process to regularly deliver vaccines according to the national vaccination schedule, and specific <b>activities are designed to boost routine immunization coverage rapidly</b>, to reach stated coverage or disease control goals. These may often lack long-term sustainability.</p> <p>Routine immunization coverage is the percentage of the target group that is provided with the appropriate number of doses of a specific vaccine according to their age, and is a measure of the ability to reach the target population.</p> <p>In addition to disease-specific activities and special projects such as the introduction of a new vaccine, a country’s routine immunization programme should implement tailored activities to increase routine immunization coverage where it is lagging.</p> <p>Within GRISP, “Reaching towards Universal Immunization Coverage” is reflected in strategies and activities such as detecting and reaching marginalized and partially served populations, improving coverage equity, creating synergy with accelerated disease control activities, creating demand for vaccination, mobilizing and communicating for vaccination, and addressing vaccine hesitancy.</p>



# WHERE SHOULD WE FOCUS OUR ATTENTION?

## 3. WHERE SHOULD WE FOCUS OUR ATTENTION?

### 3.1. Nine transformative investments to achieving better immunization outcomes

A global strategic document such as this has to, by its nature, be comprehensive and has to outline a broad and complete set of strategies and activities.

However, the following nine investments are meant to give direction and will transform national programmes and global partners, and will enable us to successfully reach the stated DoV goals. These investments should be seen as the highlights and priorities of this document, and they are further expanded in the “Strategies and activities” sections below.



GRISP calls on national governments, global partners and donors to take the following steps:



**Invest in a capable national team – supplied with sufficient resources and authority – to expertly manage each country’s national immunization programme.** (Section 4.2.3)



**Invest in tailored strategies that identify undervaccinated and unvaccinated persons and regularly provide them with the vaccines they need.** (Sections 4.1.1 and 4.1.2)



**Invest in a coherent planning cycle, with strategic, comprehensive, multi-year and operational annual plans outlining and coordinating strategies and activities, which are monitored quarterly.** (Section 4.2.2)



**Invest in ensuring that sufficient and adequately appropriated funds reach the operational level of the programme regularly.** (Section 4.2.2)



**Invest in vaccinators and district managers by regularly and systematically building their capacity, strengthening their performance and providing supportive supervision.** (Section 4.1.3)



**Invest in modernizing vaccine supply chains and management to ensure that the correct amounts of the right potent vaccines are available at each vaccination session.** (Section 4.1.4)



**Invest in an information system that identifies and tracks each person’s vaccination status.** (Section 4.4.1)



**Invest in sustainably expanding routine vaccination schedules to cover people’s entire lives.** (Section 4.1.2)



**Invest in the shared responsibility for immunization delivery between communities and the immunization programme to reach uniformly high coverage through high demand and quality services.** (Section 4.3.1)

These investments should not be seen as being in order of importance, as their importance may differ considerably between one country and another. However, the first investment, ensuring an excellent, capable and well resourced national programme team stands out as being the most important enabler for all other strategies and practices to succeed. In the years covered by GRISP, the strengthening of national teams should be seen as the one most important achievement that should be sought.

## 3.2. What routine immunization activities should be promoted in a particular country?

Countries differ considerably in the maturity and capacity of their immunization programmes, so some strategies and activities described below may be more applicable to some than to others. Clearly, this is a matter that has to be determined at country level. While general guidance is provided below, each country is encouraged to find appropriate strategies and activities to meet the challenge and opportunities of their situation.

Broadly, countries' national DTPc3 immunization coverage can serve as a proxy for their routine immunization programme performance, taking into consideration the trend of this coverage over the previous few years. Similarly, a high dropout rate can point to more systemic problems that need systemic solutions. Also, in countries where great differences between subnational states/regions/provinces exist, different strategies may be more successful than others.

Thus, the following table is meant to provide a broad categorization of indicated action, not a prescriptive direction.

National DTPc3 coverage	DTPc3/DTPc1 dropout rate less than 10% (proxy for good utilization)	DTPc3/DTPc1 dropout rate greater than 10% (proxy for poor utilization)
Less than 50%	Developing health infrastructure and systems	
50–79%	Operationalizing the programme, including supply chain development, national health financing, health workforce development, and long-term country-led health planning	<ul style="list-style-type: none"> <li>◆ Demand generation</li> <li>◆ Sharing responsibility for immunization with communities</li> <li>◆ Adjusting service availability and convenience</li> <li>◆ Offering all antigens at each vaccination session</li> </ul>
80–89%	Reaching all and achieving equity and programme quality, including strengthening of health management information system (HMIS) and surveillance, investing in shared responsibility for immunization with the community, equity in terms of gender, wealth, education, etc.	<ul style="list-style-type: none"> <li>◆ Improving the quality of microplanning and outreaches</li> <li>◆ Avoiding missed opportunities, invalid doses, and late completion of vaccination schedules</li> <li>◆ Line listing everyone and checking immunization status of everyone targeted</li> <li>◆ Obtaining disaggregated coverage data at subnational and local level to identify and target low coverage areas.</li> </ul>
Above 90%	Fine-tuning and focusing on marginalized and excluded groups and individuals still unreached for any reason	Creating community awareness and making the service more community oriented by removing social and cultural barriers

The nine highlighted transformative investments earlier in section 3 are appropriate in all countries and settings, and should be prioritized according to the country situation.

National leadership and programme management excellence (transformative investment) is the cornerstone to improving any aspect of the programme and should be prioritized in all countries. Similarly proper planning, funding, training, monitoring and community involvement activities are essential in all countries, irrespective of their coverage level.

Countries that have reached high levels of coverage and system capacity are encouraged to focus additional activities to target strategies to reach remaining unvaccinated individuals, and to expand the vaccination schedule to reach people across the entire life-course.



# COMPREHENSIVE FRAMEWORK OF STRATEGIES AND PRACTICES FOR ROUTINE IMMUNIZATION

MAXIMIZE REACH ♦ 4.1

MANAGE the PROGRAMME ♦ 4.2

MOBILIZE PEOPLE ♦ 4.3

MONITOR PROGRESS ♦ 4.4

## 4. COMPREHENSIVE FRAMEWORK OF STRATEGIES AND PRACTICES FOR ROUTINE IMMUNIZATION

This section provides a comprehensive collection of strategies and practices to strengthen routine immunization systems and improve coverage. In addition, it organizes strategies by four main areas of action, enabling a systematic approach to routine immunization strategies.

### MAXIMIZE REACH

This group of strategies are formulated to extend the coverage and reach of the programme to deliver immunization services in an integrated manner using opportunities that present themselves with special vaccination efforts such as campaigns and new vaccine introductions. They contain key health systems components such as human resources development and the provision of vaccines.

### MANAGE the PROGRAMME

This group of strategies focus on the political support and management functioning of the programme. In addition to strengthening the capacity of the national immunization programme team, these strategies ensure that national policy setting and decision-making are adequately addressed.

### MOBILIZE PEOPLE

These strategies emphasize the demand side of immunization services and encourage the building of resilient community structures and relationships to share the responsibility for immunization services. Equally they focus on addressing concerns and hesitancy about vaccination.

### MONITOR PROGRESS

These strategies complete the framework by outlining the mechanism and process to ensure that the implementation of vaccination strategies achieves their intended results and outcomes. It combines ongoing monitoring through programme reporting and disease surveillance with in-depth assessments and reviews.





Not all strategies and practices are appropriate in every country and every setting. Local knowledge, experience, research and guidance will be essential in selecting the appropriate strategies from this framework to be integrated into national strategic programme thinking.

COMPREHENSIVE FRAMEWORK OF ROUTINE IMMUNIZATION STRATEGIES AND PRACTICES



Coloured dots designate transformative investment strategies.

## 4.1. MAXIMIZE REACH

### 4.1.1. Detecting and serving unreached or marginalized populations, communities and individuals

The GVAP recommended activities and strategies below relate to detecting unreached or marginalized people.

- ◆ *ENGAGE in a dialogue which both transmits information and responds to people's concerns and fears. (S02)*
- ◆ *CONDUCT social research to improve the delivery of immunization services and the ability to meet the needs of diverse communities. (S02)*
- ◆ *CONDUCT operational and social science research to identify successful strategies to reduce inequities and improve the quality and delivery of immunization services. (S03)*
- ◆ *PREVENT and respond to vaccine-preventable diseases during disease outbreaks and humanitarian crises, and in conflict zones. (S03)*
- ◆ *PERFORM operational research on improved delivery approaches for life-course immunization, and vaccination in humanitarian emergencies, so-called fragile States and countries in and emerging from conflict. (S06)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to reach undervaccinated and unreached people.



#### TRANSFORMATIVE INVESTMENT

Invest in tailored strategies that identify undervaccinated and unvaccinated persons and regularly provide them with the vaccines they need.

#### 1. Identify and examine reasons for unvaccinated and undervaccinated populations

Communities and individuals at risk of immunization inequities due to social, geographical, economic, religious and/or other differences should be identified and listed. This needs to be done at all programme levels, using programme monitoring data, district-level diagnostic tools and surveys. The root causes of why some populations or communities are undervaccinated or unreached should be investigated in detail. Causes may be as divergent as vaccine availability, health workers' attitudes, service reliability, family and community health-seeking behaviours, lack of understanding or trust in the health system and vaccines, and/or physical and financial accessibility.<sup>3</sup>

#### 2. Investigate and address cultural, societal and behavioural barriers or confidence gaps in immunization

Where cultural, societal or behavioural barriers to or concerns about immunization exist, they should be investigated in-depth. Following the determination of behavioural issues, context-specific interventions should be designed and implemented to address the diagnosed issue.<sup>4</sup>

<sup>3</sup> UNICEF. *What Does It Take To Immunize Every Child? Achieving equity in immunization*. June 2015

<sup>4</sup> WHO European Regional Office. *The Guide to Tailoring Immunization Programmes (TIP): Increasing coverage of infant and child vaccination in the WHO European Region*. 2013 [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/187347/The-Guide-to-Tailoring-Immunization-Programmes-TIP.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0003/187347/The-Guide-to-Tailoring-Immunization-Programmes-TIP.pdf?ua=1)

**3. Explore health worker–client interactions, perceptions and practices**

In individual health facilities, the attitude and practice of a single health worker may affect how clients perceive the services and whether clients are willing to return for follow-up. In some communities, gender, ethnicity and/or language may be important factor(s) influencing the health worker–client interaction. In some cases, a knowledge, attitude and practices assessment (KAP) should be undertaken to identify the deficiencies in the health worker–client interaction. Specific supportive remedial action can be taken when issues are identified.<sup>5</sup> In some communities, agreed and publically displayed facility scorecards have allowed for good and honest feedback between the community and health workers.

**4. Improve the friendliness, convenience, efficiency and quality of services at health facilities**

A consumer-oriented approach, characterized by friendliness, convenience, efficiency and quality of services at health facilities, contributes significantly to the willingness of the population to access them. Vaccination sessions should be designed to reduce long waiting times during routine immunization sessions; clear messages on when to return should be given. For outreach, prompt communication as soon as a session is cancelled is essential so that caregivers are not left waiting without services. In addition to health worker attitudes and information communicated, the structure and condition of the facilities are important, including the availability of a comfortable waiting area and clean toilets.

**5. Use VPD surveillance and campaign monitoring opportunities to identify unvaccinated and undervaccinated children**

Health workers should take the opportunity to review home-based records during any case investigation or campaign monitoring assessment. Any unvaccinated or undervaccinated children encountered should be referred to the next local immunization session, with clear explanation to the caregiver. Where community health workers or members of civil society conduct home visits during surveillance or campaign activities, these referrals should also be made known to the local facility.

**6. Find “invisible children” left out of any system**

Most countries have a minority of highly mobile populations that may be marginalized by the system or find it necessary to “hide” their children from the authorities, for fear of recrimination, repatriation (if they are immigrants or refugees), removal (if they are illegal squatters), rejection (if they are nomads from neighbouring countries), or other dire consequence. The immunization programme, within the broader health system, should investigate means to identify these children without triggering negative consequences and delivering basic preventive health services to them, if necessary anonymously. In some settings, civil society organizations may be deployed to reassure the population that information will not be shared with the authorities. General awareness should be raised on the right to health (for example in the International Covenant on Economic, Social and Cultural Rights), and the Convention on the Rights of the Child.

<sup>5</sup> WHO, John Snow Inc., Manoff Group. Tools and Approaches for Understanding Health Worker/Caregiver Interactions for Immunization. July 2014

### 4.1.2. Improving equity and reach by designing vaccination services to efficiently and effectively deliver vaccines to all target groups

The GVAP activities and strategies below relate to improving equity among all target groups.

- ◆ RECAST “Reaching Every District” to “Reaching Every Community” in order to deal with inequities within districts. (S03)
- ◆ ENGAGE underserved and marginalized groups to develop locally tailored, targeted strategies for reducing inequities. (S03)
- ◆ ESTABLISH a life-course approach to immunization planning and implementation, including new strategies to ensure equity across the lifespan. (S03)
- ◆ CONSIDER the inclusion of vaccines (as appropriate to national priorities) in health programmes across the life-course. (S04)
- ◆ ENSURE coordination between the public and private sectors for new vaccine introduction, reporting of vaccine-preventable diseases and administration of vaccines, and ensure quality of vaccination in the public and private sectors. (S04)

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to improve immunization coverage equity through immunization programme design.

##### 1. Update microplans to ensure that all communities are included and targeted within session plans<sup>6</sup>

Accurate planning and execution of facility and outreach sessions is the most basic means for reaching all populations. District and facility managers should be given tools and skills and relevant resources to strengthen planning and implementation capacity. During microplanning, both fixed and outreach sessions should be organized according to actual population size, geography, community needs and quality of services in terms of frequency and location of sessions, number of vaccinators, availability of vaccines, opening hours and seasonal surge times and strategies to overcome security issues. To best serve populations through outreach and pulse vaccinations, sessions should be designed to rationally balance the need to deliver doses at specific times in a child’s life with the effort and cost of extended services. To best tailor services, microplans should be developed in collaboration with representatives of the served population to solicit their input and agreement.<sup>7</sup>

##### 2. Prioritize services to reach the largest number of unvaccinated

In-country advocacy and mobilization of political commitment aim to strengthen understanding that equitable programmes are essential to achieving national and international immunization goals. Service delivery to all people needs to be prioritized and sustained at all levels. Unreached populations may live in

6 WHO/UNICEF. Microplanning for Immunization Service Delivery: Using the Reaching Every District (RED) Strategy. WHO/IVB/09.11. October 2009 [http://www.who.int/immunization/sage/9\\_Final\\_RED\\_280909.pdf](http://www.who.int/immunization/sage/9_Final_RED_280909.pdf)

7 WHO. *Immunization in Practice: Chapter 4 Microplanning for reaching every community*. <http://www.who.int/immunization/documents/training/en/>

remote areas that are difficult to access physically and/or are insecure, but some may exist within reach of facilities due to other underlying issues, e.g. the urban poor, ethnic minorities or migrants. Facility-level issues such as limited opening hours that preclude attendance of working parents and caregivers should also be factored as appropriate.

### **3. Revitalize and provide adequate resources for outreach services**

In countries where fixed sites are inadequate for regular provision of preventive health services to all targeted individuals, the provision of outreach services should be a central strategy. Outreach routes and frequency and types of services provided should be carefully planned using, where possible, modern technologies such as geographical information system information as well as local knowledge from health workers, community leaders and civil society representatives. Outreach services must be adequately resourced with staff, funding, supplies, vehicles, fuel and other operational requirements to ensure their reliable and predictable provision.

### **4. Apply Periodic Intensification of Routine Immunization (PIRI) in settings requiring rapid, short-term coverage improvement or “catch up” missed vaccinations**

Activities such as “child health days” are employed in some countries to rapidly boost routine immunization by conducting a campaign-like, extra-effort approach, sometimes also targeting mothers for tetanus toxoid vaccinations. These activities should be seen as part of the routine immunization arsenal and should be employed either in remote communities as extended outreach or to provide missed immunization doses in undervaccinated populations. This approach differs from disease-specific campaigns (such as measles supplemental immunization activities<sup>8</sup> or polio national immunization days) in that PIRI activities:

- ◆ should be integrated, i.e. provide a broad set of antigens and other interventions based on community needs to boost participation;
- ◆ should provide only the missing doses as per the national schedule after review of home-based vaccination records (HBR) or facility registries and defaulter tracking and, in cases where no documentation exists, should provide the first dose in the immunization series along with HBR documentation and clear follow-up instructions to the caregiver;
- ◆ should record doses given by name and type of dose and vaccine, both in the HBR and facility register;
- ◆ should be targeted to communities where routine service delivery is too weak or unable to reach all children and pregnant women with routine immunization delivery strategies.<sup>9</sup>

8 Offering routine antigens to missed or defaulting children up to a specific age can be included along with disease specific supplementary immunization activities (SIAs) to boost routine immunization coverage. Such an approach has been successfully implemented in some countries. See “Use accelerated vaccination activities such as campaigns to actively look for and refer inadequately immunized children to regular vaccination sessions” below.

9 John Snow Inc. Periodic Intensification of Routine Immunization (PIRI): Lessons Learned and Implications for Action (IMMbasics/USAID/WHO, pre-print release 2009). [http://www.who.int/immunization/programmes\\_systems/policies\\_strategies/piri\\_020909.pdf](http://www.who.int/immunization/programmes_systems/policies_strategies/piri_020909.pdf)

**5. Expand target age groups for routine immunization to cover the life-course and increase opportunities to vaccinate**

National immunization programmes are encouraged to expand scheduled routine vaccination visits beyond the first year of life and to provide needed vaccines in the preschool, school and adolescent and adult populations in keeping with transformative investment. Vaccination opportunities, such as healthy child visits in the second year of life, preschool preparation visits and school visits should be utilized for assessment of vaccination status and administration of previously missed doses.



**TRANSFORMATIVE INVESTMENT**

Invest in sustainably expanding routine vaccination schedules to cover people's entire lives

**6. Include routine immunization in the health services at birth**

The provision of a dose of hepatitis B, Bacillus Calmette–Guérin (BCG) vaccine and, especially in polio-endemic countries, oral polio vaccine, should be part of the standard package of health services in the immediate period after birth in all health facilities, once the newborn has been stabilized. If needed, steps should be taken to ensure the availability of newborn vaccinations 24 hours per day, 7 days per week in health facilities that attend births. If vaccination of the newborn before discharge from the health facility is not possible, the mother should be provided with a vaccination card for the baby and counselled about where and when to go for vaccination, as well as its importance. Provision of these birth doses should also be planned for in-home and non-institutional deliveries along with promotion of birth registration and the referral of mothers to the nearest health facility. Providing information to mothers during antenatal visits, newborn registration and a home-based record given to parents also help with immunization adherence and tracking.<sup>10</sup>

**7. Raise awareness of the importance of comprehensive home-based records**

In most countries home-based records, e.g. vaccination cards or child health booklets, are cornerstones of the immunization programme at local level; caregivers and health workers should consider them to be valuable and important. Home-based records should be given to caregivers at every child's first contact with the health system preferably at birth and reviewed at each interaction. National programmes should carefully design these forms and keep them updated to comprehensively follow child health needs; they should ideally be made of durable and waterproof materials. National programmes should assign high priority to providing sufficient and sustained stocks at all levels of the system.<sup>11</sup> When a home-based record is lost, a replacement record should be given to the caregiver, ideally re-completed with accurate immunization data from facility-based records.

**8. Seek out persons that have missed planned vaccination sessions (defaulter tracing)**

With proper facility record keeping, caregivers that should have returned for their child's next vaccination (or for their own subsequent dose in a series), but have not, should be identified. Facility registers should be designed to enable rapid tracing

<sup>10</sup> WHO. *Every Newborn Action Plan*. [http://www.who.int/maternal\\_child\\_adolescent/topics/newborn/enap\\_consultation/en/](http://www.who.int/maternal_child_adolescent/topics/newborn/enap_consultation/en/)

<sup>11</sup> WHO. *Practical guide for the design, use and promotion of home-based records in immunization programmes*. WHO/IVB/15.05, June 2015, ISBN 978 92 4 150895 7, [http://apps.who.int/iris/bitstream/10665/175905/2/WHO\\_IVB\\_15.05\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/175905/2/WHO_IVB_15.05_eng.pdf)

and contain caregivers' contact details (e.g. physical address and mobile phone number). Where mobile phones are widely available, caregivers' mobile phone numbers should be added to the register, and text messages used to remind about return visits after a missed visit. Defaulter tracing requires continuous effective interaction with the community, caregivers, community health workers and local civil society organizations and should be monitored as evidence of programme performance. If immunization registers at community and health facility level are entered with a child's name and details at birth (organized with a row per child and per pregnant woman, not a row per visit), they enable the tracing of defaulters who did not even attend the first vaccination session. This will help ensure that children and pregnant women are tracked with other defaulters if they do not present for immunization sessions.<sup>12</sup>

**9. Avoid missed opportunities<sup>13</sup>**

Unvaccinated and undervaccinated children and pregnant women may access health services for curative or other preventive services or accompany an adult seeking care, and such a visit becomes a "missed opportunity" if immunization is not addressed. Overdue doses not given at other vaccine dose visits are also considered missed opportunities. Health facility staff in both non-immunization and immunization services should review the vaccination status of all clients presenting or accompanying others and provide any missed doses. Equally, health workers should avoid false contraindications preventing the vaccination of an eligible person. Concomitantly, children and women coming for immunization services should also receive other preventive health interventions at the same time to avoid missed opportunities in respect of other interventions.

**10. Enable and harmonize routine immunization services provided by the private and nongovernmental sector**

Private vaccinators can enhance the ability of programmes to deliver recommended doses, especially to clients who prefer them over public services. National immunization programmes should ensure that appropriate schedules and high-quality practices are implemented by private health care providers and that they are held to appropriate vaccine handling and storage standards. Should vaccines provided by the public sector be administered in the private sector, the vaccines should be provided free of charge and the private vaccinator should comply with national reporting requirements and approved cold chain and vaccine handling practices.

**11. Require appropriate occupational and traveller vaccination**

Health workers should be fully vaccinated in order to prevent nosocomial transmission of vaccine-preventable diseases. Academic institutions should vaccinate students during basic training or upon graduation, and proof of vaccination should be required along with academic qualifications by prospective employing institutions. This must be an absolute requirement in the case of health workers who have contact with paediatric, immune-compromised and intensive care patients. All health

12 WHO. *Immunization in Practice: Chapter 6: Monitoring and surveillance*. <http://www.who.int/immunization/documents/training/en/>

13 "A missed opportunity for vaccination is defined as an occasion when a person, who is eligible for vaccination, and with no valid contraindication, visits a health service facility and does NOT receive all recommended vaccines."

workers should be fully immunized against hepatitis B, measles, rubella, polio, seasonal influenza and diphtheria and tetanus.

Other occupational groups should be systematically vaccinated according to WHO recommendations, including people working with animals (e.g. rabies), and those providing emergency services. Where appropriate, vaccination of travellers going to endemic disease areas (e.g. polio, measles, and yellow fever) and to large social or religious gatherings (e.g. major sports events, *Hajj*) should be advocated for and implemented.

## 12. Vaccinate during and after humanitarian emergencies

Vaccination against diseases such as measles, meningococcal disease, polio and cholera may be of critical importance preventing epidemics among refugees and displaced persons. Basic tally sheets and finger marking may be used instead of home-based records to record the doses given in emergencies. National programme managers should review the WHO guideline on “Immunization in emergency” and include immunizations in emergency contingency plans. Equally, as immunization services may be suspended during an emergency, rapid resumption of basic primary health services, including immunization, should be included in post-emergency contingency plans.<sup>14</sup>



14 WHO. *Vaccination in acute humanitarian emergencies: a framework for decision making*. WHO/IVB/13.07, October 2013. [http://apps.who.int/iris/bitstream/10665/92462/1/WHO\\_IVB\\_13.07\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/92462/1/WHO_IVB_13.07_eng.pdf)



### 4.1.3. Building the capacity, motivation and professional development of vaccinators and mid-level managers

The GVAP activities and strategies below relate to vaccinator and district manager capacity building.

- ◆ *INCREASE levels of pre-service, in-service and post-service training for human resources, and develop new, relevant curricula that approach immunization as a component of comprehensive disease control. (SO4)*
- ◆ *INCLUDE immunization in the basic education curriculum. (SO2)*
- ◆ *ENSURE that immunization and other primary health-care programmes have adequate human resources to schedule and deliver predictable services of acceptable quality. (SO3)*
- ◆ *PROMOTE coordinated training and supervision of community-based health workers. (SO4)*
- ◆ *TRAIN health workers and civil society organizations in engaging communities, in identifying influential people who can assist in planning, organizing and monitoring health and immunization programmes, as well as community needs, and in working with communities to meet those needs. (SO3)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following listed GRISP strategies and activities to build vaccinator and peripheral manager capacity and motivation.

#### 1. Ensure ongoing refresher and in-service training and performance improvement of vaccinators and peripheral managers and supervisors

The quality of an immunization programme depends on its ability to ensure that the knowledge and skills of its vaccinators and peripheral managers are up to date. Regular monthly meetings for data review or management oversight provide a good opportunity to update health workers on new policies and to refresh previous training and solicit feedback from them on their constraints. Regular in-service training sessions and opportunities for self- and on-the-job learning (such as use of the Immunization Service Checklist) have to be planned and systematically implemented for all staff. Attention to increased training needs in times of rapid change, e.g. introduction of new vaccines or a new strategy, is essential especially in programmes where staff turnover is high. Attention to quality through standard training materials and measuring and monitoring trainees’ scores on standardized knowledge tests is also essential, particularly in programmes using a cascade training approach where some staff are trained at national level to subsequently train peripheral levels, thereby risking loss or distortion of key training content. Access to training opportunities should be ensured.



#### TRANSFORMATIVE INVESTMENT

Invest in vaccinators and district managers by regularly and systematically building their capacity, strengthening their performance and providing supportive supervision.

**2. Promote staff motivation**

Unless health workers are motivated to conduct their work with excellence, programme improvement efforts will fail. Motivation not only requires opportunities for training, mentoring and career development, but also timely payment of adequate salaries and allowances and a conducive work environment. Regular honest and supportive feedback on staff performance and activities are critical.

**3. Track capacity building and ongoing training needs of staff**

Field and district supervisors should keep track of the training received by staff under their supervision, and ensure that they are provided with regular opportunities for refresher training, ideally at least every three years. Specific new staff training mechanisms should be in place. Training should be evaluated for adequate retention of content among all staff.

**4. Develop and disseminate up-to-date pre-service immunization training packages**

At least every four years, national immunization programmes and their technical advisers should review and update the pre-service training curricula of vaccinators, health workers, programme managers, nurses and doctors, in order to ensure their ongoing relevance and accuracy. In addition, any major immunization policy change by the health authorities (e.g. a new scheduled vaccination) should be proactively communicated to professional and vocational health training institutions (e.g. nursing and medical colleges) to allow teaching materials to be updated continuously.

**5. Establish a culture, process and budget for supportive supervision and mentorship throughout the programme**

Every staff member at every level should be able to rely on regular supervisory interactions with their supervisor and a process for dialogue and feedback. The intent of these interactions should be clearly supportive, and while it may have some performance assessment components, its essence should be to reinforce good practices, to enable challenges and problems to be discussed and resolved, and to refresh training content. Supervisory visits and discussion points should be documented and reviewed at subsequent visits. While unscheduled supervisory visits may occasionally be appropriate, the staff member should have a clear and reliable indication of when the next supervisory visit can be expected. Supervisory visits should occur at least once a quarter based upon a review of past issues identified and solutions proposed and agreed upon.

**6. Train supervisors in supervisory skills**

National programmes should require regular training in supervisory methods and skills for all supervisors in addition to technical training. Conflict resolution, problem solving, adult learning and coaching, data interpretation and management should be included. Programmes should also use standard supervisory checklists to ensure appropriate procedure and follow-up, and a duplicate write-up of observations and recommendations should be left at health facilities.

**7. Use remote and individual learning (eLearning)**

Training can often be done individually through “eLearning” platforms, which may be through video, Internet and/or podcast: eLearning provides more flexibility for individuals to work at the pace, time and place of their choosing. Programmes

should promote these learning methods by establishing learning progression tables and other incentives that motivate staff to use them. Where online facilities exist, they should be promoted; where they do not exist, stand-alone tablets, laptops or videos should be made available regularly for this purpose.

**8. Develop training material using adult learning principles**

Adults learn best when they understand not only what they learn, but also why they are learning it. Their differing learning styles should be accommodated; an experiential, positive and encouraging learning process is needed. Ideally, learners should have opportunities to immediately put the training into practice to reinforce knowledge and practices. These principles should be reflected in all material directed at health workers.

**9. Establish a network of mentoring**

Newly appointed and junior staff should be given access to a trusted and experienced staff member in their field to enable frequent, informal and open contact for mentoring support. Where it is not possible to have a mentor in the same location, regular “check-in” telephone conversations or visits may be helpful and should be encouraged and enabled by the programme.



#### 4.1.4. Ensuring vaccine quality and availability at all levels

The GVAP activities and strategies below relate to assuring vaccine quality and supply.

- ◆ *STAFF supply systems with adequate numbers of competent, motivated and empowered personnel at all levels. (S04)*
- ◆ *INNOVATE to improve cold chain capacity and logistics, as well as waste management. (S04)*
- ◆ *MINIMIZE the environmental impact of energy, materials and processes used in immunization supply systems, both within countries and globally. (S04)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to ensure vaccine quality and availability.



ADEQUATE  
SUPPLY

#### TRANSFORMATIVE INVESTMENT

Invest in modernizing vaccine supply chains and management to ensure that the correct amounts of the right potent vaccines are available at each vaccination session

#### 1. Develop and maintain a cadre of trained and professionally recognized logisticians to manage the vaccine supply chain

National immunization programmes and developmental partners should increasingly insist that valuable, costly and temperature-sensitive vaccines are handled by trained and well-motivated professionals at national and subnational levels. It is a false economy to save on human resources in this area, which is critical to the success of the immunization programme. National and provincial logisticians should have achieved standard qualifications; prospective managers should be proactively trained. Academic, technical and professional logistics training qualifications such as LogiVac<sup>15</sup> should be adopted as standard requirements for the appointment of logisticians.<sup>16</sup>

#### 2. Maintain a functioning cold chain and vaccine distribution system

Immunization programmes are increasingly managing vaccines that are valuable both in monetary terms and in their impact on health. Many vaccines require storage and transport at cold chain (+2°C to +8°C) temperatures. The equipment needed to ensure this temperature consistency has to be fit-for-purpose and should be selected from WHO-tested and recommended equipment,<sup>17</sup> maintained diligently, repaired rapidly when not functional and replaced at the end of its recommended period of use. Preventive maintenance (supplies, spares, staff time and travel) should be budgeted, and mechanisms put in place to notify the proper authorities immediately if equipment malfunctions so that rapid repair can be undertaken. Where necessary, funding for the cold chain should be ring-fenced to ensure that it is not used in other activities. All these functions should be included in immunization planning and budgeting,

<sup>15</sup> [www.logivac.org](http://www.logivac.org)

<sup>16</sup> WHO/UNICEF. Immunization supply chain and logistics: a neglected but essential system for national immunization programmes: Call to action. WHO/IVB/14.05, July 2014. [http://www.who.int/immunization/call-to-action\\_ipac-iscl.pdf](http://www.who.int/immunization/call-to-action_ipac-iscl.pdf)

<sup>17</sup> WHO. Performance, Quality and Safety catalogue (PQS). [http://apps.who.int/immunization\\_standards/vaccine\\_quality/pqs\\_catalogue/](http://apps.who.int/immunization_standards/vaccine_quality/pqs_catalogue/)

reviewed for action regularly at all levels, and assessed in regular Effective Vaccine Management assessments (EVMs) and cold chain inventories.

In-country vaccine distribution systems need to be strengthened, as the findings from EVM assessments indicate that transportation systems are one of the weakest links in the supply chain. At lower levels, systems combine transportation of vaccines/supplies and health workers for service delivery; without reliable transport, the system starts breaking down. In some countries, private sector, civil society or other local partners may be used to contract services such as cold chain maintenance/repairs or transportation.

**3. Monitor the temperature during all vaccine storage and transport**

As higher temperatures rapidly spoil some vaccines, and the freezing of some vaccines renders them ineffective, all vaccine storage from the central cold store to peripheral vaccine carriers should have devices to monitor the temperature. In stores where large quantities of vaccines are kept, continuous electronic monitoring of temperature and an alarm system are indispensable, and should be insisted upon by programme managers and vaccine donors. At district and facility vaccine stores, continuous electronic temperature loggers should be standard equipment, and these should be recorded at least twice daily and any discrepancy remedied. In passive containers (cold boxes and vaccine carriers), appropriate temperature monitoring indicators (e.g. vaccine vial monitors, freeze indicators and other transport temperature indicators) should be used.

**4. Forecast vaccine needs accurately for maximum efficiency and prevention of stock-outs**

At all programme levels, but especially at national and first subnational level, vaccine forecasting and the timing of deliveries should be managed by a trained, competent logistician, taking into consideration current stocks, stocks at peripheral levels, seasonal variations and special activities such as campaigns and accelerated vaccination drives. Stock-outs represent a great danger to the programme and should be avoided where possible through astute management and the clear definition of minimum, maximum and order point levels at each store. The annual forecasting of vaccine needs should be jointly prepared with all in-country stakeholders, especially in countries relying on UNICEF procurement.

**5. Maintain accurate vaccine management data for action**

Data related to vaccine forecasting, supply and distribution should be available and reviewed at every level to facilitate proper vaccine management. Electronic spreadsheets and databases may facilitate the oversight, analysis and dissemination of data and should be promoted. Ideally, such data systems should provide visualization of stock levels and automatically alert the logistician to avoid low stock or stock-out situations. Visibility of working cold chain and stock available to the immunization programme at all levels, in particular at health facility level, should become standard practice to allow decision-makers to act as required.

**6. Exploit the full temperature sensitivity range of specific vaccines**

Several vaccines have now been licensed for storage at temperatures of up to 40°C for several days (the “controlled temperature chain” vaccines). Vaccine manufacturers should ensure that all vaccines are tested and licensed with the broadest possible temperature ranges, in order to provide logistic convenience at the furthest periphery by avoiding overly strict cold chain requirements. This feature enables further reach, higher coverage and less wastage of these vaccines when used in campaigns.

**7. Integrate vaccine and health supply systems safely**

To maximize synergies and reduce transaction costs, vaccine and other medicine supply chains should be integrated safely where possible. Personnel managing such an integrated cold chain require expert training to avoid potentially harmful situations in which vaccines or their diluents may be confused with other medicines and distributed or injected erroneously, which can sometimes have fatal consequences. The vaccine supply chain may also be integrated with supply chains used by the public, private and civil society sectors.

**8. Redesign immunization supply systems to maximize effectiveness and efficiency**

Vaccine supply chain systems should be reviewed to optimize the number of steps in the chain and adapted to allow varying quantities and volumes of vaccines and all possible types of delivery strategies to be accommodated. The supply chain should be measured and managed for continuous quality improvement, including an accurate assessment of system costs and performance, and benchmarked against other, high performing supply systems.<sup>16</sup> Similarly, the supply chain should be designed to ensure that vaccine diluents, injection materials, safety boxes, and reporting and stock management tools are distributed adequately and used appropriately. The role of “leapfrog” technologies, such as digitized stock management systems that allow ordering, dispatch notices, receipt notices, automated inventory updates on mobile phones or similar devices, should be explored.

**9. Build global partnerships to support vaccine supply chains**

Due to the increasing emphasis placed on the immunization supply chain by global partners, their activities and inputs should be coordinated globally and regionally. WHO, UNICEF and the Gavi Secretariat should lead a partnership group consisting of all interested stakeholders at global level and be given the mandate to coordinate all global partnership activities in this area.

### 4.1.5. Creating synergy among routine immunization, accelerated disease control efforts and new vaccine introduction activities

The GVAP activities and strategies below relate to creating synergy among routine immunization, accelerated disease control efforts and new vaccine introduction.

- ◆ *ENSURE that global vaccine programmes focusing on eradication and elimination goals (for example, poliomyelitis and measles campaigns) are incorporated into national immunization programmes and do not operate independently. (SO4)*
- ◆ *ENGAGE underserved and marginalized groups to develop locally tailored, targeted strategies for reducing inequities. (SO3)*
- ◆ *FURTHER strengthen and expand disease surveillance systems to generate information for decision-making, monitoring the impact of immunization on morbidity and mortality and changes in disease epidemiology. (SO4)*
- ◆ *INTRODUCE appropriate new vaccines into national immunization programmes (see also objective 5). (SO3)*
- ◆ *ENSURE that new vaccine deployment is accompanied by comprehensive plans to control targeted diseases. (SO4)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to create synergy among routine immunization, disease control efforts and new vaccine introduction.

**1. Use accelerated vaccination activities such as campaigns to actively look for and refer inadequately immunized children to regular vaccination sessions**

Large-scale vaccination campaigns have the ability to reach far beyond regular health services. Those using house-to-house vaccination or canvassing strategies offer an opportunity to review the vaccination status of all children encountered and to refer them for any needed doses. Additionally, through careful planning, campaign activities have the potential to strengthen routine immunization systems.<sup>18</sup>

**2. Review home-based records either during the campaign or during post-campaign monitoring to identify underserved individuals and communities**

Using methods developed in Cambodia<sup>19</sup> and the Philippines, large-scale vaccination campaigns should be used to identify communities that are undervaccinated, not only for the vaccine being used within the campaign, but all scheduled vaccines; appropriate service delivery can subsequently be planned to reach these communities in a more sustainable manner. By reviewing campaign tally sheets, particularly for children under 12 months of age, and triangulating them with routine coverage data, infants that should be receiving routine immunization services can be better targeted.

18 John Snow Inc. *Using Measles Activities to Strengthen Immunization and Surveillance (UMASIS)*. 2011. <http://www.jsi.com/JSIInternet/IntlHealth/project/display.cfm?ctid=na&cid=na&tid=40&id=8782>

19 Sann Chan Soeung, John Grundy, Richard Duncan et al. *From reaching every district to reaching every community: analysis and response to the challenge of equity in immunization in Cambodia*. Health Policy and Planning 2012;1–10

**3. Use measles case-based surveillance data as part of routine immunization risk assessment and prioritization of accelerated routine immunization activities**

Measles virus is extremely contagious and therefore seeks out and causes disease in undervaccinated or unvaccinated individuals. By using subnational data on the location of measles cases in addition to parameters such as low routine immunization coverage, areas of higher risk can be identified and appropriate remedial strategies designed.

**4. Reinforce routine immunization using the added attention on outbreaks**

During a vaccine-preventable disease outbreak, the first priority is to bring the disease under control. However, through increased public awareness created by an outbreak, there is an opportunity to identify programme weaknesses that failed to prevent the outbreak and correct them. As soon as an outbreak is suspected, enhanced social mobilization should be used to inform the affected community and additional routine vaccinations should be made available to all children of the appropriate target age group (based on disease epidemiology) presenting to a health facility or an outreach vaccination site.

**5. Add coverage improvement to the responsibilities of staff in disease control specific posts**

As the maintenance and strengthening of the routine immunization programme is a key strategy in all vaccine-related disease eradication or elimination programmes, the terms of reference of workers appointed in these eradication and elimination programmes should include routine system strengthening and coverage improvement activities. For this, polio- and/or measles-funded staff should receive regular training and updating on routine immunization skills. In countries where disease eradication or elimination personnel operate in parallel to the national routine immunization programme, it is essential to work towards the integration of these two programmes.<sup>20</sup> Equally, the heightened attention provided by accelerated disease control initiatives should be used to raise political awareness, financing and ownership of the routine immunization programme as a whole.

**6. In areas that have eliminated maternal and neonatal tetanus, move from tetanus toxoid campaign-based strategies to enhanced routine vaccination of children and women of reproductive age**

To maintain the status of maternal and neonatal tetanus (MNT) elimination, countries should schedule and plan for the delivery of protective doses of tetanus toxoid-containing vaccines through routine immunization delivery platforms during childhood, adolescence and pregnancy periods; appropriate interventions should be chosen from the guidelines with consideration of what opportunities routinely exist for their delivery. Other interventions that prevent MNT such as hygienic practices during the birthing and neonatal period, cord care and trained birth attendants have to be maintained and expanded. Further, MNT elimination indicators should be regularly reviewed to remain vigilant.

In countries with high enrolment of girls in primary school, school-based tetanus booster vaccination of girls and boys in the early grades before dropout can be considered. Taking advantage of the long duration of immunity through successive vaccine doses, this complementary strategy closes the immunity gap among boys and among adolescents of both sexes due to

<sup>20</sup> WHO. *Polio Eradication & Endgame Strategic Plan 2013-2018*. 2013. [http://www.polioeradication.org/Portals/0/Document/Resources/StrategyWork/PEESP\\_EN\\_US.pdf](http://www.polioeradication.org/Portals/0/Document/Resources/StrategyWork/PEESP_EN_US.pdf)



waning immunity from infant doses and ensures that females routinely enter their most fertile reproductive years already protected against tetanus.

**7. Create an additional preventive child health visit in the second year of life when introducing the measles second routine dose**

In line with the ambition to expand immunization programmes beyond the infant target group, countries that are considering the introduction of a routine measles second dose should establish this additional scheduled immunization visit as a broad “healthy child visit” in the second year of life. This opportunity should be used to provide other antigens, such as the DTP or polio booster or routine meningitis A vaccine, enabling previously missed doses in the national immunization schedule for infants to be given, and providing a platform for other preventive interventions such as deworming, vitamin A supplementation, nutritional advice and growth monitoring.

**8. Exploit the raised awareness and interest around new vaccine introduction to improve routine coverage**

Both the interest of the population in a new vaccine and the increased communication effort during new vaccine introduction should be exploited to deliver broader immunization and coverage improvement messages, administer missed doses and provide additional prevention and disease control messages concerning newly targeted diseases. This should be emphasized with health staff and mobilizers during post-launch monitoring and post-introduction evaluations (PIEs) to ensure that new vaccines are integrated into the routine system. The strategic use of the introduction of a new vaccine to identify and address underlying chronic weaknesses in routine immunization enables the potential of the new vaccine to be realized.

**9. Use the training on new vaccines as an opportunity to build and reinforce the capacity of health workers to provide recommended vaccinations**

Health worker training sessions on the administration of new vaccines and their disease- and vaccine-specific technical details are opportunities to refresh knowledge and skills on disease-specific prevention and control of all other diseases targeted by routine vaccines.

**10. Augment disease surveillance, adverse event following immunization (AEFI) monitoring and coverage reporting systems during new vaccine introductions**

New vaccine introductions require the adaptation of reporting forms, surveillance systems and training material, which should be used as an opportunity to reinforce the surveillance and monitoring of other vaccine-preventable diseases and programme activities where possible. In addition, AEFI monitoring and reporting may be enhanced during the period of new vaccine introduction and should be expanded to cover all vaccines.

#### 4.1.6. Integrating the routine immunization programme through comprehensive approaches and joint service delivery

The GVAP point below relates to integrating routine immunization.

- ◆ *ENSURE that new vaccine deployment is accompanied by comprehensive plans to control targeted diseases. (SO4)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to integrate routine immunization through comprehensive approaches and joint service delivery.

##### 1. Place vaccines into the context of comprehensive approaches to disease control

The use of newer vaccines, such as those for the prevention of hepatitis B, pneumococcal, rotavirus and human papillomavirus infection are vital interventions in the broader disease control efforts against chronic liver disease, acute respiratory infections, meningitis, severe diarrhoea and cervical cancer. Immunization with these vaccines should be part of comprehensive approaches and contribute to disease control goals. Other interventions, such as those to reduce alcohol and tobacco consumption, boost access to safe water and sanitation, oral rehydration, antibiotics and zinc supplementation, improved case management and appropriate antibiotic use, and provision of adolescent health interventions, should be reinforced during the introduction and routine delivery of these vaccines.<sup>21</sup>

##### 2. Deliver other key preventive maternal and child health interventions during vaccination visits, where appropriate

Among all preventive health programmes and initiatives, the immunization programme traditionally has the greatest ability to reach infants, children and pregnant women, through “healthy child visits” and antenatal care. Through this programme, other interventions should be delivered at the same time to the appropriate age and target group where possible. The immunization programme has already been successfully used to deliver vitamin A supplementation, anti-helminthic treatment, insecticide-impregnated bednets and intermittent preventive treatment against malaria. Other important preventive interventions may be added, e.g. for adolescents. With all additions however, care should be taken not to overburden the immunization system to the extent of weakening it or compromising focus on its ability to reach its particular target age group(s). Where possible, a system for monitoring changes in quality of care (e.g. time per client), as well as acceptability to providers and clients, and any consequent decline in coverage, should be instituted. A system for identifying any unintended decline in equitable coverage, such as reduced vaccination of vulnerable groups, is also important.

The choice of intervention that is integrated will affect success, and needs some preparatory consultation and/or research to

<sup>21</sup> WHO/UNICEF. *Ending Preventable Child Deaths from Pneumonia and Diarrhoea by 2025: The integrated Global Action Plan for Pneumonia and Diarrhoea (GAPPD)*. 2013. ISBN 978 92 4 150523 9

ensure that the additional services are truly high priority and a good match for the patterns of immunization services.

**3. Start immunization programme tracking with pregnant women and in antenatal care**

National immunization programmes should establish a system in which health services provided to women during pregnancy are recorded, including information on immunization services. Following birth, this process should ensure that new mothers and fathers are well informed about immunizations and newborns are tracked and followed up for appropriate vaccines. With the birth of the infant, birth registration and the distribution of a home-based record should be initiated (see “Include routine immunization in the health services at birth” and “Raise awareness of the importance of comprehensive home-based records”).



## 4.2. MANAGE the PROGRAMME

### 4.2.1. Securing all-level political commitment and partnership for routine immunization

The GVAP activities and strategies below relate to securing all-level political commitment and partnership.

- ◆ *ENSURE legislation or legal framework in all countries, including provisions for a budget line for immunization, and for monitoring and reporting. (S01)*
- ◆ *INCLUDE immunization in the agendas of governing body meetings at all levels and in other social, health and economic forums. (S01)*
- ◆ *ESTABLISH a commitment for governments to invest in immunization according to their ability to pay and the expected benefits. (S05)*
- ◆ *DEVELOP more effective ways for national regulatory agencies, health sector coordination committees, and interagency coordination committees to support immunization programmes as part of disease control programmes and preventive health care. (S01)*
- ◆ *SUPPORT local civil society organizations and professional associations to contribute to national discussions on immunization and health. (S01)*
- ◆ *LINK global, national and community advocacy efforts with professional and academic networks. (S02)*
- ◆ *ENSURE coordination between the public and private sectors for new vaccine introduction, reporting of vaccine-preventable diseases and administration of vaccines, and ensure quality of vaccination in the public and private sectors. (S04)*
- ◆ *ENGAGE, enable and support in-country civil society organizations to advocate the value of vaccines to local communities and policy-makers and local and global media. (S02)*
- ◆ *DEVELOP and disseminate the evidence base for the broad economic benefits of immunization for individuals, households, communities, and countries. (S01)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to secure all-level political commitment and partnership.

##### 1. Build national ownership of the immunization programme

The long-term sustainability of a vaccination programme can only be ensured when it is fully owned by the people it serves. National governments have a responsibility to deliver immunization services for the public good while working with donors and partners to ensure their compliance with programmatic leadership and priorities. External funding has to be coordinated and managed by the national government through its immunization programme in collaboration with partners in order to fill financial gaps. It is critical that external funding supports rather than redirects national priorities. Donor funds should be channelled through government and should be viewed as complementary and not as a replacement for government resources, and national governments should increase their commitments to funding their immunization programmes.

**2. Develop national partnerships for immunization**

Under the leadership of the national ministry of health, immunization programme coordinating bodies, such as Interagency Coordinating Committees (ICCs), should be strengthened through the engagement of all immunization donors and partners operating in the country, including civil society organizations and professional bodies which often have more significant roles in countries where a large proportion of vaccinations are done through the private or nongovernmental sectors. Coordinating bodies may have a role to play in oversight of donor investment as well as ensuring cohesive immunization partner planning and activities. They may be tasked with activities beyond immunization and so may provide an opportunity to increase synergy with other programmes (such as maternal and child health); and they should be clearly aligned with health sector coordinating committees. The ICC should also clearly be synchronized and aligned with the health sector coordinating committee and the national health sector plan.

**3. Communicate and demonstrate the cost effectiveness of immunization to political and parliamentary decision-makers**

Immunization programmes have a compelling ability to demonstrate clear and tangible benefits with quantifiable costs, in particular in reaching equitable coverage. Accurate planning and costing in comprehensive multi-year plans (cMYPs) as well as the evidence of benefits in terms of preventing disease and death allow for strong advocacy with political and parliamentary decision-makers to ensure that political and financial commitment to the programme is strengthened. This may require country-specific cost-benefit and cost-effective analyses, perhaps drawing on WHO or other benchmarks, and using the more accurate data in the cMYP.

**4. Establish a legal framework for immunization financing, by creating and maintaining a line item in the national budget for vaccines and vaccination operations**

National programmes should ensure that legislation or a legal framework guarantees sustainable financing for immunization within the broader health systems financing, including provisions for a line item in the national budget for recurrent operational needs beyond vaccine and cold chain costs. In line with the GVAP indicators, government financing of the entire immunization programme should be monitored and reported globally. In all countries, vaccines and programme operations have to be seen as regular national budget items, and adequate budget allocation should be made according to financial requirements presented in the cMYP. Where these budget lines do not exist, immunization programme donors and partners should insist on their creation, to ensure national ownership.

**5. Facilitate transparency, accountability and performance oversight**

Across the entire programme, transparency and accountability should be fostered and expected. This will entail the establishment or reinforcement of various committees and other coordinating mechanisms at all levels, with the involvement of key stakeholders, including communities, the private sector, donors, civil society organizations and the media. By introducing and strengthening peer review and performance review by stakeholders, including beneficiaries, increased accountability and ownership will be ensured.

**6. Promote the inclusion of nongovernmental and civil society organizations**

Nongovernmental organizations and civil society organizations should play a greater role in the promotion and delivery of immunization and strengthening of the health system, and representatives from stakeholder agencies and groups should be included and viewed as partners in programme planning and monitoring groups. This is especially valid in fragile or war-torn states. The independent voice of civil society may advocate effectively for the programme.

**7. Participate actively in global advocacy events, including World Immunization Week**

Since 2012, World Immunization Week has been celebrated annually in the last week of April, providing opportunities for social mobilization and advocacy. Countries should align their programme communications at this time to their region's Immunization Week themes, and plan special events, such as mass vaccination campaigns, PIRIs, new vaccine introductions, and training sessions, workshops and roundtable discussions to raise awareness of the importance of immunization.



## 4.2.2. Planning, budgeting and mobilizing resources for results and sustainability

The GVAP activities and strategies below relate to planning, budgeting and mobilizing resources.

- ◆ *DEVELOP comprehensive national immunization plans that are part of overall national health plans through a bottom-up process that includes all stakeholders. (S01)*
- ◆ *SET ambitious but attainable country-specific targets within the context of morbidity and mortality reduction goals. (S01)*
- ◆ *SCRUTINIZE, defend and follow more closely immunization budgets, disbursements and immunization programme activities. (S01)*
- ◆ *ESTABLISH a commitment for governments to invest in immunization according to their ability to pay and the expected benefits. (S05)*
- ◆ *STRENGTHEN budgeting and financial management in-country to better integrate financial and health care planning and priority setting. (S05)*
- ◆ *CREATE expanded and more transparent mechanisms for aggregating, sharing and using information to monitor commitments. (S01)*
- ◆ *DEVELOP and disseminate the evidence base for the broad economic benefits of immunization for individuals, households, communities, and countries. (S01)*
- ◆ *ENGAGE new potential domestic and development partners and diversify sources of funding. (S05)*

### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to plan, budget and mobilize resources. The emphasis in this section is on country-level planning and budgeting, which most often occurs through an immunization programme management team based in the national health authority. Where immunization programme management is decentralized to subnational structures, this section applies to the strengthening of planning and budgeting at that decentralized level.



#### TRANSFORMATIVE INVESTMENT

Invest in a coherent planning cycle, with strategic, comprehensive, multi-year and operational annual plans outlining and coordinating strategies and activities monitored quarterly

#### 1. Develop and update costing cMYPs

Through the development of a comprehensive, costed multi-year plan,<sup>22</sup> national programmes should articulate their overall programme direction and needs. Being comprehensive, they should contain all immunization-related activities, including increasing equity and coverage of Expanded Programme on Immunization (EPI) vaccines, control/elimination/eradication programmes for vaccine-preventable diseases, new vaccine introductions, mass vaccination campaigns, programme monitoring, and vaccine-preventable disease and AEFI surveillance over the five-year planning period. If costed appropriately, the cMYPs become a powerful tool to raise and allocate funding and to set priorities. At the same time, multi-

22 WHO. *Guidelines for Comprehensive Multi-Year Planning for Immunization (Update September 2013)*. January 2014. WHO/IVB/14.01.

year plans allow for ongoing long-term programme directions to be translated into implementable activities and annual planning. They have to align with other health ministry planning cycles and processes and should be informed by all relevant assessments and reviews, including EPI programme reviews, PIEs, surveillance and lab reviews, EVMs and data quality self-assessments (DQS) etc.

**2. Use costing and benefit of immunization information in the cMYP for advocacy**

The costing and impact information contained in the cMYP should be used to advocate for the programme's importance and funding both for vaccines and for operational costs, especially within national governments and local authorities and among in-country partners. The accurate reflection of the activities planned and the gaps that exist to fund these activities allow for authoritative statements of resource needs. As domestic funding increasingly becomes a larger component of routine immunization financing, accurate and credible cost estimates will be essential. In countries that "graduate" from Gavi support, this emphasis on advocacy for domestic funding is critical.

**3. Develop and budget for an operational annual EPI plan of action**

The national annual operational plan of action<sup>22</sup> should be promoted as the central and commanding document to guide the programme activities and to guide every partner's input and aspiration to support in the country. In many countries, the annual planning process will include substantial components of subnational and district operational planning. All donor- and partner-promoted activities should find an entry in the operational annual plan of action; donors and partners should direct their funding to the existing financial gaps within these plans. It should also be understood that the cMYP and the national health sector planning activities should guide the annual operational workplan. As such, the annual plan has to be the functional and detailed expression of these broader multi-year plans.

**4. Plan efficient vaccination services at district level**

Detailed microplans for routine vaccination should serve as the basis for immunization services at district level, with inputs from health facility staff, as has been the case for accelerated disease control and eradication programmes, which are often separate. District and health facility microplans should be based on immunization programme analysis (coverage, achievements, gaps, etc.) from previous years, and consider the inputs by key community structures. They should contain descriptions of the communities served and the difficulties in accessing certain communities and groups (both physically and socially difficult to reach); fixed and outreach session planning in terms of frequency and routes; equipment and staff needs to accomplish the task; means of monitoring the achievement of these plans; and realistic costing and budgeting (including for operational costs).<sup>23</sup>

22 WHO. *Guidelines for Comprehensive Multi-Year Planning for Immunization (Update September 2013)*. January 2014. WHO/IVB/14.01.

23 WHO/UNICEF. *Microplanning for Immunization Service Delivery Using the Reaching Every District (RED) Strategy*. October 2009. WHO/IVB/09.11



**5. Monitor the implementation and expenditure of all plans**

Plans at all levels require a framework describing the monitoring of their progress and should state who is responsible for specific actions, the time by which the actions should be completed and how the completion of tasks should be measured and reported. Ideally, the means of ensuring accountability and responding to both positive and negative consequences should be described in broad terms. Systems for monitoring plan implementation and related expenditure should be strengthened. At national level, ICCs and other national bodies should be made aware of the progress made in implementing the plan at least quarterly. Similarly, at peripheral level, the coordinating structures such as ward health teams or clinic committees should be involved in the monitoring implementation of the microplans.

**6. Create and maintain a national immunization planning cycle by linking national health plans, cMYPs, annual plans of action and the quarterly monitoring of plans**

The immunization plans mentioned in the strategies above should be clearly linked and flow from each other. Thus, strategic, updated cMYPs should be the basis of an annual operational planning and budgeting process that results in annual plans of action. These should be monitored through ICCs and other national bodies at least quarterly. They should inform the updating of the next cMYP and annual plans and provide feedback to assist subnational levels in their planning.

**7. Track the service delivery expenditure and shortfalls at all levels**

To enable improved budgeting and resource allocation, methods of resource tracking should be established, at least down to the district level. Where activities have been curtailed or not implemented due to lack of funds, this should also be noted and reported. District-level health managers should analyse and report immunization (and other programme) efficiency measures, both in peer review settings and to the public (i.e. elected officials, civil society organizations and other subnational stakeholders). District health managers could also strengthen involvement of their accountants in resource tracking of health activities, including spot-checking planned versus conducted activities.



**TRANSFORMATIVE INVESTMENT**

Invest in ensuring that sufficient and adequately appropriated funds reach the operational level of the programme regularly.

**8. Analyse and report immunization financing and expenditure trends globally**

At least annually at global level, the financing trends of national immunization programmes and donor funding flows to immunization as a whole should be analysed and made available broadly. These should contain analyses of governmental funding commitments to immunization, a summary of the financial status of immunization globally and analyses of financial indicators in the annual joint reporting form.

### 4.2.3. Ensuring excellence in national programme leadership and management

The GVAP point below relates to leadership and management.

- ◆ *ENSURE that immunization and other primary health-care programmes have adequate human resources to schedule and deliver predictable services of acceptable quality. (SO4)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to ensure excellence in leadership and management. The emphasis in this section is on senior country-level leadership, which most often occurs through an immunization programme management team based in the national health authority. Where immunization programme management is decentralized to subnational structures, this section applies to the strengthening of planning and budgeting at that decentralized level.



#### TRANSFORMATIVE INVESTMENT

Invest in a capable national team – supplied with sufficient resources and authority – to expertly manage each country’s national immunization programme.

#### 1. Build and strengthen national immunization programme management teams

The technical, managerial and budgeting capacity and authority of the national immunization management team is a key factor in the success of its programme. Governments and their development partners should strengthen the senior management team through systematic capacity building and performance improvement approaches. Both the recruitment of individuals to this team and its functioning should emphasize good management and leadership aptitude and skills. Key training topics must include management and supervisory skills, leadership capabilities and technical updates. In line with WHO’s mandate to develop health norms and standards, an outline of staffing needs and managerial competencies and model job descriptions should be developed as guidance to national decision-makers in staffing their national programme teams.

#### 2. Improve financial management, budgeting, costing, expenditure tracking and resource mobilization skills in national immunization management teams

At national level, a full understanding of the financial situation of the programme is needed to enable the prioritization of activities most critical to success. Ideally, the national programme manager should have the skills needed to undertake financial analysis, interpretation and management, and to communicate and present financial data, including for advocacy. Larger national teams would benefit from having a financial administrator to track resources and create reports. At the subnational level, especially in decentralized settings, managers responsible for implementing immunization strategies and activities should have the skills needed to assess financial and other resource flow issues that constrain their ability to implement activities on time, in full and with sufficient quality.

**3. Enable opportunities for international peer-to-peer skill transfer between national immunization teams**

International health agencies such as WHO and UNICEF should develop the means to allow senior national programme managers to work for short periods alongside their peers in other countries (e.g. during EPI programme reviews or during measles SIAs planning and monitoring), thereby allowing for the synergistic strengthening of both parties.

**4. Support collaboration and learning between national programme management teams through EPI managers meetings and exchanges of practices and experiences**

EPI managers meetings are a vital means of enhancing intercountry learning and support that allow for networking and establishment of closer relationships between managers of countries in similar circumstances. Development partners and governments should ensure that key national leaders in the immunization programme attend these meetings and that they operate as an open and consultative forum for the sharing of experiences and mutual learning. The establishment of the International Association of Immunization Managers provides another venue for exchanges of experiences of this cadre. Online discussion forums such as TechNet<sup>24</sup> also provide opportunities for peer learning.



<sup>24</sup> [www.technet-21.org](http://www.technet-21.org)

#### 4.2.4. Setting programme policy and guidance

The GVAP activities and strategies below relate to setting programme policy and guidance.

- ◆ *CREATE, or strengthen existing, independent bodies that formulate national immunization policies (for example, national immunization technical advisory groups or regional technical advisory groups). (S01)*
- ◆ *DEVELOP more effective ways for national regulatory agencies, health sector coordination committees, and interagency coordination committees to support immunization programmes as part of disease control programmes and preventive health care. (S01)*
- ◆ *EXPLORE models to promote collaboration between the stakeholders that generate evidence on immunization and those who use it in order to set priorities and formulate policies. (S01)*
- ◆ *STRENGTHEN national regulatory systems and develop globally harmonized regulations. (S05)*
- ◆ *INTRODUCE appropriate new vaccines into national immunization programmes (see also objective 5). (S03)*
- ◆ *ENGAGE with end-users to prioritize vaccines and innovations according to perceived demand and added value. (S06)*
- ◆ *ESTABLISH platforms for exchange of information on immunization research and consensus building. (S06)*
- ◆ *RECRUIT new voices, including those of educators, religious leaders, traditional and social media personalities, family physicians, community health workers, and trained immunization champions (among others). (S02)*
- ◆ *CREATE regional forums and peer-to-peer exchange of information, best practices and tools. (S01)*
- ◆ *LINK global, national and community advocacy efforts with professional and academic networks. (S02)*
- ◆ *PROVIDE a forum where countries can communicate expected demand for vaccines and technologies and provide guidance to manufacturers on desired product profiles. (S05)*
- ◆ *PERFORM operational research on improved delivery approaches for life-course immunization, and vaccination in humanitarian emergencies, so-called fragile states and countries in and emerging from conflict. (S06)*
- ◆ *CONDUCT operational and social science research to identify successful strategies to reduce inequities and improve the quality and delivery of immunization services. (S03)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to set programme policy and guidance.

##### 1. Invigorate national ownership of policy setting

National programmes should be encouraged to review policy using their local expertise and experience. Global recommendations are important to drive progress through a framework that countries can adapt to local epidemiologic, economic and other circumstances in the context of their other health priorities. The policy recommendations made by WHO

and other technical bodies should be reviewed and adopted where appropriate, and local modifications to WHO and other normative policy recommendations should be made on the basis of country-based evidence and experience. National health authorities should convene the appropriate experts and take into account their recommendations.

**2. Reinforce the establishment and functioning of National Immunization Technical Advisory Groups (NITAGs)**

In many countries, national immunization policy is set with the help of NITAGs that aim to guide its formulation and develop strategies to advise decision-makers and programme managers on technical issues, including recommendations on vaccine introduction and immunization schedules. Their recommendations should be evidence-based and generated through transparent processes. Members are usually appointed by the health authorities based on their technical expertise and experience and their ability provide valid recommendations on policy changes. NITAGs should engage with academia, professional societies and other national agencies and committees to ensure a cohesive and coordinated approach to achieving national health priorities. They should be strengthened structurally through regular meetings, independent membership and proper management of conflicts of interest. NITAGs should also be strengthened through capacity building of their members and provision of increased quality of evidence on which their recommendations are based. NITAGs are technical advisory bodies with a purpose distinct from ICCs (partner coordinating bodies that support implementation of national programmes).

**3. Enhance evidence-based policy and decision-making**

In all cases, policy recommendations should be based on best evidence and data through a process that is led in-country. Where these data, such as on the disease burden, do not exist in a country, information and experiences from other countries may be used. In addition, specific research projects may be initiated to answer policy questions in a country-specific manner.

**4. Ensuring and sustaining 100% of assured-quality vaccine used in national immunization programmes through functional national regulatory authorities**

More than 100 developing countries rely on the WHO vaccine prequalification process, which allows United Nations agencies (e.g. UNICEF) to procure assured-quality vaccines for them. Countries producing and/or procuring their own vaccines should rely on their own regulatory system or a functional third-party country. National regulatory authorities should build their capacity and sustain WHO-recommended regulatory functions to ensure quality, safety and efficacy, product labelling and immunization programmatic needs for all vaccines they use.

**5. Ensure formal linkages between national technical, regulatory and advisory bodies**

Various technical, regulatory and advisory bodies (e.g. NITAGs, NRAs, technical subcommittees of ICCs) should coexist and cooperate in a well-functioning immunization programme. The national authorities should ensure these bodies operate in close coordination with each other.

**6. Promote programme learning, including operations research, to identify and disseminate best practices**

Immunization programme managers at all levels should encourage the collection and dissemination of good practices as identified by local immunization managers and vaccinators to address practical needs. This requires managers to reassure staff that suggestions for improvement are welcome; managers should in turn disseminate and provide incentives for good practices in their teams. National programmes should seek nursing and medical teaching institute support for devising better immunization service delivery.

**7. Disseminate policy recommendations by RITAGs, IPAC, IVIRAC and SAGE**

Global and regional advisory committees and policy-making bodies such as the SAGE, the Immunization Practices Advisory Committee (IPAC), the Immunization and Vaccines Implementation Research Advisory Committee (IVIRAC) and the Regional Immunization Technical Advisory Groups (RITAGs) should review new developments in vaccines and immunization practices and make global and regional recommendations. These are routinely published and should be made available to programme managers and NITAGs regularly and in a timely manner that enables sufficient flexibility for development of in-country policy and technical discussions for decision-making.

**8. Use EPI managers meetings to disseminate global and regional policy as well as country-to-country peer sharing of national policies**

Bringing together programme managers, technical agencies, civil society and global partners in the annual EPI managers meetings creates a valuable opportunity for networking and allows for country peer-to-peer sharing of experiences. It is essential that programme managers attend and participate actively in these meetings both to be updated on global and regional policy changes and implementation and to share their practical experiences and pragmatic approaches with others.

**9. Guide vaccine manufacturers on programmatic needs**

Programmatic needs should be taken into consideration in the development of vaccines and their presentation and packaging. The formal prequalification of vaccines entails consideration of the programmatic suitability of candidate vaccines;<sup>25</sup> those that meet programmatic needs and preferences are favoured. At global level the Vaccine Presentation and Packaging Advisory Group (VPPAG) serves as a collaborative forum between vaccine manufacturers and partner agencies on these matters globally.<sup>26</sup>

25 WHO. *Assessing the programmatic suitability of vaccine candidates for WHO prequalification PSPQ (Revision 2014)*. January 2015. WHO/IVB/14.10

26 WHO. *Immunization in Practice - A practical guide for health staff*. Geneva: World Health Organization; 2015. Module 7, *Partnering with Communities*. Available from: <http://www.who.int/immunization/documents/training/en/>

## 4.3. MOBILIZE PEOPLE

### 4.3.1. Engaging communities and creating demand for vaccination

The GVAP activities and strategies below relate to engaging communities and creating demand.

- ◆ *TAKE advantage of community structures to enhance communication and deliver services (for example, traditional birth attendants, birth registries). (S03)*
- ◆ *INVOLVE civil society organizations in community outreach and planning. (S03)*
- ◆ *DEVELOP new approaches to community engagement for urban and periurban areas. (S03)*
- ◆ *TRAIN health workers and civil society organizations in engaging communities, in identifying influential people who can assist in planning, organizing and monitoring health and immunization programmes, as well as community needs, and in working with communities to meet those needs. (S03)*
- ◆ *CONDUCT operational and social science research to identify successful strategies to reduce inequities and improve the quality and delivery of immunization services. (S03)*
- ◆ *INCLUDE immunization in the basic education curriculum. (S02)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to engage communities and create demand.

#### 1. Ensure good interaction and collaboration between communities and the immunization services

Immunization services at local and district levels should regularly meet traditional leaders as well as other influential individuals and civil society organizations in their community to provide updates on immunization coverage and disease and AEFI occurrence and maintain interest in immunization; community members should be involved in programme planning and monitoring. Where feasible, health staff should provide an orientation for community leaders (traditional, religious, educational and civic leaders and volunteers) on immunization and prepare them to respond effectively to families’ questions and concerns. Mechanisms should be established for community members to give feedback and suggestions on vaccination services. Community members should also be active participants in health/immunization committees. When outbreaks of vaccine-preventable diseases occur or when parts of the community have concerns or criticisms of immunization services, the facilitation of community leaders and civil society organizations should be sought in responding to these concerns or criticisms. Civil society organizations can often play a role in helping to develop these relationships.<sup>27</sup>



#### TRANSFORMATIVE INVESTMENT

Invest in the shared responsibility for immunization delivery between communities and the immunization programme to reach uniformly high coverage through high demand and quality services.

<sup>27</sup> “My home, my village” in Immunization Handbook for Medical Officers published by Department of Health and Family Welfare, Government of India (page 118 Appendix 7.3)

**2. Promote community ownership of health facilities through clinic or health committees**

Representatives of each community should be engaged in immunization programmes for mobilizing eligible populations, disseminating information and discussing concerns with health staff. Equally, quality issues such as schedule compliance, vaccine handling, safety, and engagement and communication with the community should be discussed. A focus on educating health committees in all aspects of quality service may help increase community demand for quality, and community willingness to support investment in the infrastructure and systems required for a good-quality service. Health staff should enable community volunteers to keep a register of children and women to track immunization status and promote a fully immunized and healthy community. A small group of community leaders and representatives should be invited to meet regularly with the management of health facilities to discuss issues of common concern, specific community needs and to plan for special events. The community should be encouraged to take pride in “their” clinic; they may volunteer services in maintaining the health facility in good repair. Similarly, volunteer community mobilizers and defaulter tracers should be encouraged to become part of the extended health team.

**3. Educate the community through health talks, posters and mobilization drives**

In forums such as school meetings, community events and health days, health facility staff should be encouraged to allocate time to provide educational talks or inputs on the immunization programme and other preventive health topics. During clinic sessions, a health worker or a volunteer should be designated to provide structured health talks on various themes to waiting clients.

**4. Develop immunization information for use in schools and training colleges**

Both at national and local levels, immunization information materials should be produced and updated to be made available to schools and other educational institutions. These materials should be up to date and adapted to the audience; teachers using these materials should be trained. Materials should be easy to read, free from technical jargon and written in the appropriate language.

**5. Put together information materials to promote immunization for child-to-child promotion**

Very basic messages and information on immunization should be developed to allow child-to-child promotion of vaccination. Children can also remind their parents when future doses for their younger siblings may be due.



### 4.3.2. Mobilizing and communicating for vaccination<sup>28</sup>

The GVAP activities and strategies below relate to mobilizing and communicating for vaccination.

- ◆ *ENGAGE in a dialogue which both transmits information and responds to people's concerns and fears. (SO2)*
- ◆ *RECRUIT new voices, including those of educators, religious leaders, traditional and social media personalities, family physicians, community health workers, and trained immunization champions (among others). (SO2)*
- ◆ *TRAIN health-care workers in effective communication techniques, especially to address vaccine hesitancy and to respond to reports of serious adverse events following immunization in order to maintain trust and allay fears. (SO2)*
- ◆ *UTILIZE social media tools and lessons learnt from commercial and social marketing efforts. (SO2)*
- ◆ *LEVERAGE new mobile and Internet-based technologies. (SO2)*
- ◆ *CONDUCT communications research. (SO2)*
- ◆ *ENGAGE, enable and support in-country civil society organizations to advocate the value of vaccines to local communities and policy-makers and local and global media. (SO2)*
- ◆ *CREATE national or regional advocacy plans that involve in-country civil society organizations. (SO2)*
- ◆ *LINK global, national and community advocacy efforts with professional and academic networks. (SO2)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to mobilize communities and individuals, and communicate information about the benefits of immunization.

**1. Include communications and advocacy in immunization planning at all levels**

Communication and advocacy should be planned, budgeted and implemented through cMYPs and annual plans of action. Communication and advocacy experts should be consulted in designing these strategies.

**2. Publicly communicate, in a way that is easy to understand, the benefits and safety of immunization, while acknowledging and being transparent about risks**

Each country should have an immunization communication strategy concerning routine immunization and the benefit of vaccines in its national and local languages, which is adapted to local cultures. The strategy should be prepared and disseminated for print, broadcast and electronic distribution with the input and guidance of communities, the media, civil society and other stakeholders.

**3. Engage professional associations to promote vaccination among their members and involve them in policy-making and planning**

The trust people place in advice from health care professionals is well recognized and influential. It is therefore essential that health care professionals, especially primary care and family doctors, paediatricians and child health specialists, reinforce the benefits of immunization through clear, unbiased messages. Professional associations should be advisers/partners for the

28 Including UNICEF C4D

immunization programme and its coordinating bodies. They should make unequivocal statements on the need for and benefits of vaccination and participate in reinforcing them during special events such as World Immunization Week, “child health days” and launches of new vaccines.

**4. Use social media and mobile technology to promote immunization**

In this era of social connectivity, immunization programmes and development partners should build capacity among programme communications and managerial staff on use of these semi-individual marketing channels to expand reach, foster engagement and increase access to credible, science-based health information. In addition, programmes should capitalize on text messaging to send immunization visit reminders to caregivers and to follow up on missed vaccinations. Text messaging can be used to remind village volunteers which children in the village are due or overdue for vaccines.

**5. Use celebrity appeal and community leaders to promote immunization**

Locally, nationally and at the global level, celebrities should be sought out to act as advocates and “goodwill ambassadors” for immunization. The choice of celebrities should be based on their ability to promote the public health aspect of immunization and their appeal to targeted segments of the population used to the programme’s advantage. Community and religious leaders should be actively engaged in immunization programme advocacy and communications. High-level positive pronouncements and approval of immunization and vaccines should be sought from global, established religious bodies and organizations.

**6. Include immunization in facility-based and community-based health education**

Where electronic communication is difficult, basic, low-technology health education materials such as infographics and laminated educational flip charts should be designed for use in health education sessions at fixed facilities and during outreach sessions. These materials should be seen as a stimulus to discussion and questions, not top-down communication. Where appropriate, media such as short health educational films and info-spots should be used to provide messages to waiting clients. Messages should focus on easy-to-remember and picture-rich messages relating to immunization issues. Quality interpersonal communication by facility immunization staff should be emphasized, using key messages that are also tailored to clients’ informational and scheduling needs.

**7. Improve the interpersonal communication skills of community mobilizers**

Community mobilizers are essential for the provision of information and reassurance to parents and caregivers in the community. The direct “word-of-mouth” method of promotion by a known and trusted individual can help ensure a favourable view of immunization. Thus, districts should assure that community mobilizers are adequately prepared through training to enhance their communication skills.

### 4.3.3. Addressing vaccine hesitancy, false perceptions and the negative consequences of adverse events following immunization

The GVAP activities and strategies below relate to addressing vaccine hesitancy and negative perceptions.

- ◆ *ENSURE capacity for vaccine safety activities, including capacity to collect and interpret safety data, with enhanced capacity in countries that introduce newly developed vaccines. (SO4)*
- ◆ *ENGAGE in a dialogue which both transmits information and responds to people's concerns and fears. (SO2)*
- ◆ *TRAIN health-care workers in effective communication techniques, especially to address vaccine hesitancy and to respond to reports of serious adverse events following immunization in order to maintain trust and allay fears. (SO2)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to address vaccine hesitancy, false perceptions and negative consequences of AEFIs.

**1. Enable health workers to communicate on vaccination benefits and positively address vaccine and vaccination concerns**

While increasing client participation in health care decisions is a welcome development, health care professionals should have the skills to communicate on the success and positive impact of vaccination, to advise on the unmistakable benefits of immunizations, and to counsel and manage vaccine-hesitant caregivers so that they may make balanced, evidence-informed decisions.<sup>29</sup> It is therefore necessary for health workers themselves to be knowledgeable about and communicate effectively both the risks and the benefits of vaccination.

**2. Diagnose reasons for vaccine hesitancy, segmenting the population and developing specific and targeted strategies to address concerns**

Reasons for vaccine hesitancy or refusal can be very different from reasons relating to quality and friendliness of services. National programmes, along with their districts, should recognize and develop specific interventions to address the context-specific reasons for non-vaccination. Poor quality primary and local health services breed a mistrust of all health services, including immunization. Child health services should be improved to be more acceptable to caregivers such that they have the confidence and trust needed to bring their children in for all essential health services, including immunization. Equally, other non-financial barriers to access, such as those arising from gender, ethnicity, religion, and other socioeconomic factors, need to be identified and rectified. Where population segments advocate vaccine hesitancy or refusal, or consider local services to be inappropriate for their needs, national programmes and civil society should use behavioural science methods to identify the key concerns of these populations and design specific interventions to address them.<sup>29</sup>

<sup>29</sup> WHO/EURO. *The Guide to Tailoring Immunization Programmes (TIP): Increasing coverage of infant and child vaccination in the WHO European Region*. 2013 [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/187347/The-Guide-to-Tailoring-Immunization-Programmes-TIP.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0003/187347/The-Guide-to-Tailoring-Immunization-Programmes-TIP.pdf?ua=1)

**3. Educate health workers on the appropriate handling, reporting and communication of AEFIs**

AEFIs are observed in immunization programmes for a variety of reasons and many are temporally and coincidentally (as opposed to causally) related to vaccination. AEFIs are often not caused by the vaccine or the immunization process and are incidental. In some cases, serious AEFIs may be caused by a vaccine's intrinsic constituents, an individual's reaction to the vaccine, an immunization-related error caused by inappropriate vaccine handling, prescribing or administration, or as a result of recipient's anxiety around immunization. In any case, coincidental, vaccine- or vaccination-related events or programmatic errors may harm the programme if not well handled. National immunization programmes should establish, distribute and promote the use of standard operating procedures for handling AEFIs and for assessing causality. Health care workers should be empowered to report AEFIs without fear of repercussions or reprisals.

**4. Establish national AEFI review committees to enable rapid and trustworthy investigation of, and response to, serious AEFIs**

National programmes should allow for and train a national AEFI committee that can review all reported serious adverse events, including at short notice if required. Such a committee can advise on further investigation to establish causality, reach conclusions and make authoritative recommendations to the national immunization programme and regulatory authorities. They can also provide independent oversight on the development of the national AEFI monitoring system. AEFI review committees should include both technical experts and communicators and be independent of health care authorities to avoid conflicts of interest. Guidance and recommendation provided by the Global Advisory Committee on Vaccine Safety provide a solid basis for the understanding of inherent vaccine characteristics and effects.



## 4.4. MONITOR PROGRESS

### 4.4.1. Monitoring programme performance and disease occurrence

The GVAP activities and strategies below relate to monitoring and surveillance.

- ◆ *TRACK each individual’s immunization status, leveraging immunization registries, electronic databases and national identification number systems. (S03)*
- ◆ *IMPROVE the quality of all administrative data concerning immunization and promote its analysis and use at all administrative levels to improve programme performance. (S04)*
- ◆ *FURTHER strengthen and expand disease surveillance systems to generate information for decision-making, monitoring the impact of immunization on morbidity and mortality and changes in disease epidemiology. (S04)*
- ◆ *LEVERAGE new mobile and Internet-based technologies. (S02)*
- ◆ *DEVELOP and promote the use of new technologies for collection, transmission and analysis of immunization data. (S04)*
- ◆ *ENSURE capacity for vaccine safety activities, including capacity to collect and interpret safety data, with enhanced capacity in countries that introduce newly developed vaccines. (S04)*
- ◆ *ESTABLISH information systems that help staff to track the available supply accurately. (S04)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following GRISP strategies and activities to monitor programme performance and progress and measure disease reduction within the context of broader health programme and disease surveillance activities.



#### TRANSFORMATIVE INVESTMENT

Invest in an information system that identifies and tracks each person’s vaccination status.

#### 1. Use and interpret performance, financial, and management data to drive programmes

At all levels, a strong culture of using data as the basis for making programme decisions should be fostered. Programme staff and managers at all levels should have basic skills and understanding of how to record, review and interpret data, and how to draw valid conclusions from them. These competencies should be regularly taught and supervised. Opportunities for sharing and discussing data, such as peer-to-peer exchange and review meetings should also be used as means of improving decision-making at all levels and ensuring feedback and feed-in dialogue and loops. Information regarding vaccine coverage and VPD surveillance should be shared with NITAGs at least twice a year to identify any areas needing further engagement and improvement.

#### 2. Improve administrative coverage data recording and collection

Programmes should review and facilitate accurate and timely coverage reporting from the point of vaccination and the facility register, to the session tally sheet and the home-based

record, along the path of data aggregation and summarization, to the calculation of coverage rates at district, provincial and national levels. As data increasingly become the main driver of programme direction, their quality has to progressively improve along with staff ability to compare, analyse, triangulate and act on them. This improvement relies on the ongoing review of the gathered data, feedback to those reporting and evaluating and questioning the interpretation resulting from these data.

### **3. Revisit target population estimates**

Target population estimates and denominators for coverage measurements are often difficult for national and district managers to assess, resulting in vaccine forecasting and supply errors, difficulties in activity planning and inaccurate coverage rates (e.g. coverages being reported as over 100%). It is of paramount importance that immunization programmes develop progressively better information on target populations in conjunction with national statistics offices, if national demographic information is sound. If not, they may consider other methods of local target population estimation and comparison, such as trend analysis or collaboration with other authorities (e.g. those responsible for electoral rolls or school enrolment). Where the vital registration system is strong, national or subnational data from birth registrations should be considered. Conducting local headcounts of all children under five years of age, registering all home deliveries by village, or using volunteer health workers and community-based organizations in some settings are all ways to obtain more accurate target population figures, resulting in more realistic estimates of coverage. They also help in identifying and tracking defaulters.

### **4. Increase accuracy and reliability of data aggregation and feedback**

At each level that records, aggregates, summarizes, interprets or transmits data, these processes should be made easier through proper form and process design and clear instructions and guidance on data aggregation and transmission. Where data are regularly received from a more peripheral level, feedback from the higher level back to the periphery is important to provide accountability and motivation. Systematic, accurate and timely feedback to data users, with opportunities for review, monitoring, and analysis, is a mainstay of data quality improvement. At all levels, the availability of updated reporting forms should be ensured and data providers properly trained. For both paper and electronic data collection and transmission systems, archiving instructions should be clear. All required parties should be included in the reporting scheme to avoid miscommunication even when using electronic systems.

### **5. Design and make available facility registers that are fit-for-purpose**

Facility immunization registers (book-based or patient-card-based) should be designed to accommodate the need for effective follow-up and oversight regarding which doses are required. Registers should be kept according to the birth month of the child, and each child should be entered once and uniquely identified to ensure efficiency, and a sequential number allocated for ease of backtracking. Where appropriate, contact details of the caregivers, including mobile phone numbers, should be recorded to facilitate follow-up and reminders.

In developing country settings, a paper-based register is the basic requirement in all vaccination sessions; as facilities become electronically enabled, the facility registers may be transformed into electronic databases. Data generated from outreach activities sometimes either gets omitted or duplicated; therefore, where outreach teams come from the district, it is important that data should be left at the respective health facilities in those catchment areas.

**6. Explore the feasibility and utility of using information and communication technology in programme monitoring**

With the expansion of mobile networks and communications such as text messages and smartphone apps, national programmes should explore the feasibility of using such technology for coverage and activity monitoring and feedback, including appointment reminders, defaulter tracking and the establishment of electronic registries (ideally linked to the birth registry). Vaccine supply and forecasting data could be added to these processes. Electronic data collection allows useful analysis and enables closer programme monitoring (e.g. local coverage surveys) and better responsiveness at all levels.

**7. Enhance vaccine-preventable disease case surveillance**

Polio and suspected measles and rubella case-based surveillance form the backbone of VPD case surveillance and are an absolute requirement in disease eradication and elimination programmes. On this basic surveillance infrastructure, other VPD case reporting should be established, improved or maintained, including MNT, diphtheria, pertussis and congenital rubella surveillance. As the reporting of AEFIs follow the same basic structure as case-based surveillance, AEFI reporting should be integrated in overall case reporting systems.

**8. Expand case-based surveillance with laboratory confirmation where appropriate**

The global polio, and measles rubella laboratory networks have established an excellent record of providing rapid confirmation of case-based suspected disease occurrences. This existing network infrastructure and expertise should be expanded where appropriate to provide confirmation services for other vaccine-preventable diseases including yellow fever, Japanese encephalitis and hepatitis B. Routine serological and polymerase chain reaction (PCR) confirmation of cases can further be enhanced in selected cases by molecular testing and characterization of the virus. These laboratories should become part of a larger diagnostic service that extends to non-vaccine-preventable diseases such as HIV. Accredited regional reference laboratories should be established to oversee the quality and accuracy of diagnostics in peripheral laboratories.

**9. Boost sentinel hospital surveillance for selected disease syndromes**

For several new vaccines, programme impact is mainly measured through a laboratory-based sentinel hospital surveillance system. In some countries, surveillance is based on a fixed catchment population, allowing for disease incidence to be followed; in most others, sentinel surveillance provides general disease information. Currently, invasive bacterial disease (IBD) sentinel surveillance is being put in place to monitor bacterial meningitis and, in some countries, bacterial causes of pneumonia. Sentinel surveillance for rotavirus diarrhoea is

also in place. Every country introducing a new vaccine into the immunization programme should consider establishing sentinel hospital surveillance to provide data for decisions on vaccine introduction and use. This platform may be further enhanced for surveillance of other vaccine-preventable diseases, e.g. congenital rubella syndrome or typhoid fever. Surveillance programmes should in turn be evaluated through surveys, assessments and reviews.

#### 4.4.2. Evaluate the programme through surveys, assessments and reviews

The GVAP point below relates to programme evaluation.

- ◆ *CONDUCT representative epidemiological, immunological, social and operational studies and investigations of vaccine impact to guide health economics analysis. (S06)*

#### Strategies and activities

National immunization programmes, supported by all partners, should pursue the following listed GRISP strategies and activities to evaluate their programme.

##### 1. Conduct national immunization programme reviews regularly in preparation of strategic programme planning

A comprehensive review covering all levels, conducted by the national immunization programme, and involving staff and external participants, provides a snapshot of the strengths and weaknesses of the immunization and broader health system and provides additional external recommendations on possible remedies to challenges and shortcomings. Such programme reviews should be a core component of the situational analysis of the cMYP, and should equally feed into health sector plans. The recommendations made in the programme review should result in clearly outlined improvement activities and must find entry into the national operational planning processes. As cMYPs should be undertaken every three to five years, programme reviews should be conducted prior to each cMYP. Progress made in implementation of the recommendations from the programme reviews and assessments should be formally included in the process of reviewing and updating the cMYPs.

##### 2. Evaluate the introduction of new vaccines with PIEs

The introduction of a new vaccine is a major immunization system event, which should be evaluated within 12 months. PIEs and the national immunization programme reviews mentioned above may be conducted simultaneously by adding a PIE module of questions to the programme review. Recommendations from PIEs should be taken up in the updated cMYPs and annual plans of action (see above), and should also be reviewed prior to the introduction of a future vaccine.

##### 3. Substantiate immunization coverage data with coverage surveys

Periodic coverage surveys should be conducted in countries to validate administrative data and collect additional information on unvaccinated and undervaccinated populations. Coverage surveys are of greater value in countries with coverage below



85% and where population data is questionable. Social and economic determinants that affect coverage, which are important for addressing barrier issues and improving equity, should be added as appropriate. Coverage validation is especially important in countries where administrative coverage data are incomplete or uncertain or where issues exist with target population data; regular immunization coverage surveys should be conducted to substantiate administrative coverage. These surveys should be carefully designed to balance the resolution and accuracy of the survey with its cost and effort. Field data collection should be closely monitored; data analysis and interpretation should be verified. With the growing number of vaccinations in the immunization schedule, a caregiver's recall may be less reliable and additional effort should be made to harmonize and review home- or facility-based records. Coverage surveys should also contain information about the availability of home-based records, coverage of the “fully immunized child” and reasons for being undervaccinated when missed doses are noted.

**4. Assess the strengths and weaknesses of the immunization supply chain through the WHO/UNICEF Effective Management Assessment (EVM) strategy**

The EVM allows a country to analyse the weaknesses and strengths of its vaccine supply chain from central level to the lowest delivery level and develop an improvement plan based on its findings. Nine key components<sup>30</sup> of the supply chain are evaluated at national, subnational and district levels. The improvement plan should then be a “living” document that is actively used to make programme changes and advocate for additional resources as needed.<sup>31</sup>

National programmes and in-country partners should adopt the three-step approach of assessing, planning and implementing change within the national immunization programme budgeting, planning and financing cycle. This three-step approach to EVM should address current and future supply chain challenges, especially those linked to new vaccine introduction. Countries should make every effort to achieve an effective vaccine management system that meets the minimum recommended standard for each criterion and each level of the in-country supply chain. Once implemented, the immunization supply chain should be optimized, continually adapted and monitored to its changing context with innovative approaches and technologies. Countries should commit the necessary human and financial resources to address existing and anticipated challenges of immunization supply chain and logistics systems.

30 The nine global EVM criteria are: (1) pre-shipment and arrival procedures ensure that every shipment from the vaccine manufacturer reaches the receiving store in satisfactory condition and with correct paperwork; (2) all vaccines and diluents are stored and distributed within WHO-recommended temperature ranges; (3) cold storage, dry storage and transport capacity is sufficient to accommodate all vaccines and supplies needed for the programme; (4) buildings, cold chain equipment and transport systems enable the vaccine and consumables supply chain to function effectively; (5) maintenance of buildings, cold chain equipment and vehicles is satisfactory; (6) stock management systems and procedures are effective; (7) distribution between each level in the supply chain is effective; (8) appropriate vaccine management policies are adopted and implemented; (9) information systems and supportive management functions are satisfactory.

31 [http://www.who.int/immunization/programmes\\_systems/supply\\_chain/evm/en/](http://www.who.int/immunization/programmes_systems/supply_chain/evm/en/)

**5. Evaluate programme challenges with qualitative and quantitative methods in communities, households and facilities**

Several methodologies exist to identify programme challenges in communities; national programmes should apply these where routine immunization coverage is low or underperforming. These include linked household and facility surveys, KAP assessments and “Hundred Household” Assessments.

**6. Assess the reliability of the reporting system with a DQS**

The reliability and accuracy of the reporting system as data is reported from one level to the next higher level should be assessed every 2–3 years using the DQS or other in-depth reviews (e.g. iDQA), annual desk reviews of data using standards indicators in systems where reporting flaws are expected.<sup>32</sup> In all countries, data should be digitalized at least at national level through a system that is stand-alone or part of the national health information system; this system should also be regularly assessed.

**7. Conduct serosurveys to measure the impact of vaccination and to highlight population susceptibility gaps**

The disease reduction impact becomes evident only decades after the start of hepatitis B vaccination, as chronic liver disease develops only later in life. To measure the impact of vaccination earlier, and to document progress in regions with hepatitis B control goals, representative serosurveys are necessary. In addition, in some settings, serosurveys may be informative in measles and rubella control as well as MNTE to illuminate susceptibility gaps in the population.

32 WHO. *The immunization data quality self-assessment (DQS) tool*. March 2005. WHO/IVB/05.04. [http://apps.who.int/immunization\\_monitoring/routine/DQS\\_tool.pdf](http://apps.who.int/immunization_monitoring/routine/DQS_tool.pdf)

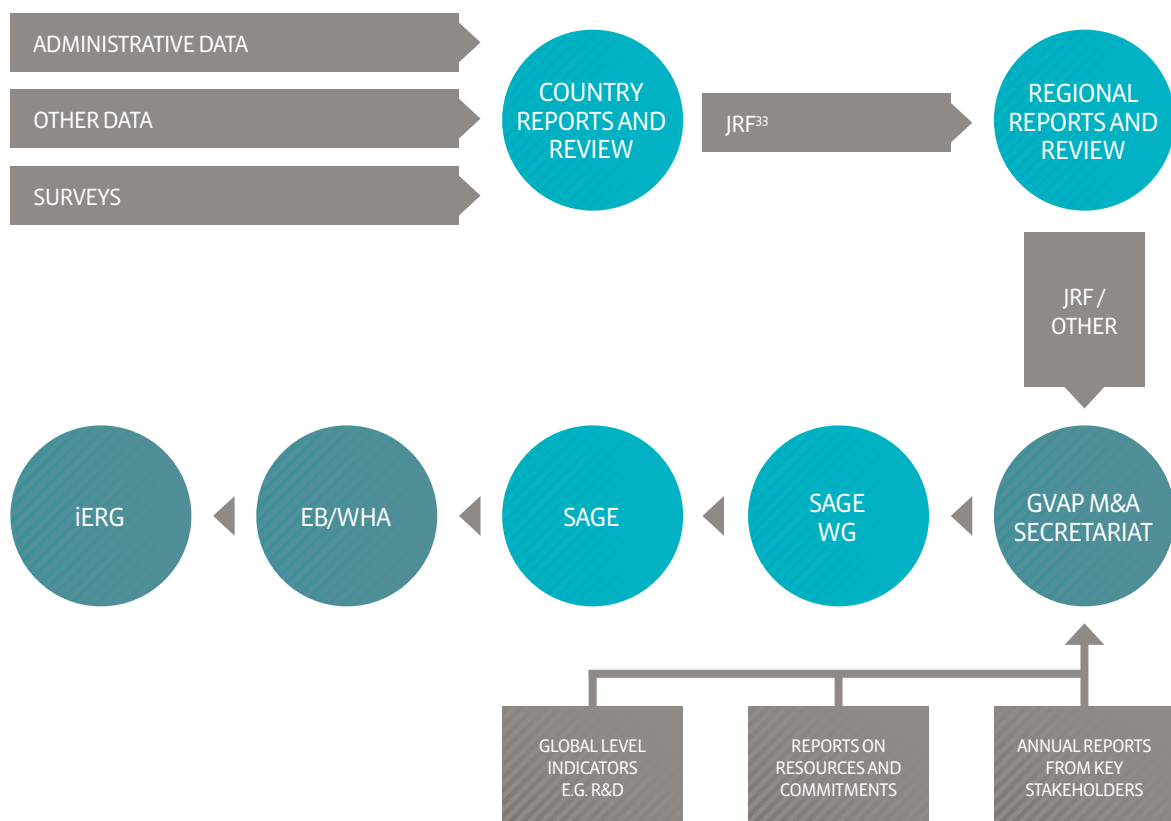


## MEASURING GRISP PROGRESS THROUGH THE GVAP

## 5. MEASURING GRISP PROGRESS THROUGH THE GVAP

The GVAP outlines a Monitoring and Evaluation Accountability Framework to measure progress towards its goals and it acknowledges this tracking to be a critically important element of the GVAP. Recognizing the importance of closely monitoring progress in implementation of the GVAP, the World Health Assembly (WHA), in resolution WHA65.17, called for annual reports on progress to be submitted to each Regional Committee meeting and to the WHA, through the WHO Executive Board.

### Process of monitoring GVAP progress through the GVAP Monitoring and Evaluation / Accountability Framework



GRISP aims to describe the routine immunization strategies directly related to GVAP, and no new milestones and indicators are articulated for this document. The goal and the indicators pertaining to routine immunization system strengthening and coverage improvement in the GVAP are reiterated here.

The progress of routine immunization systems strengthening and coverage improvement will be discernible through the monitoring of all GVAP goals, but the following goal and strategic objectives are highlighted as being especially associated with the strategies and practices outlined in GRISP.

<sup>33</sup> WHO/UNICEF Joint Reporting Form

<b>GVAP GOAL 3: Meet immunization coverage targets in every region, country and community</b>				
<b>Indicators</b>	3.1	Reach 90% national coverage and 80% in every district or equivalent administrative unit with three doses of diphtheria-tetanus-pertussis containing vaccines	<b>Targets</b>	To be reached by all Member States by end 2015
	3.2	Reach 90% national coverage and 80% in every district or equivalent administrative unit for all vaccines in national programmes, unless otherwise recommended		To be reached by all Member States by end 2020

At the level of strategic objectives, the following goals and indicators are associated with GRISP:

<b>GVAP Strategic Objective 1: All countries commit to immunization as a priority</b>				
<b>Indicators</b>	1.1	Domestic expenditures for immunization per person	<b>Targets</b>	Increasing trend in-country funding allocation to national immunization programmes
	1.2	Presence of an independent technical advisory group that meets defined criteria		Functional NITAGs in all countries
<b>GVAP Strategic Objective 2: Individuals and communities understand the value of vaccines and demand immunization both as a right and a responsibility</b>				
<b>Indicators</b>	2.1	Percentage of countries that have assessed (or measured) the level of confidence in vaccination at subnational level	<b>Targets</b>	Increasing trend in the % of countries having assessed the level of confidence in vaccination at subnational level
	2.2	Percentage of un- and undervaccinated in whom lack of confidence was a factor that influenced their decision		Decreasing trend in the distribution of % of un- and undervaccinated in whom lack of confidence is a factor at the national level
<b>GVAP Strategic Objective 3: The benefits of immunization are equitably extended to all people</b>				
<b>Indicators</b>	3.1	Percentage of districts with 80% or greater coverage with three doses of diphtheria-tetanus-pertussis-containing vaccine	<b>Targets</b>	All countries with all districts $\geq 80\%$ DTPc3 coverage by 2020
	3.2	Reduction in coverage gaps between wealth quintiles and other appropriate equity indicator(s)		Increasing trend in equity in immunization coverage; Proposed target to align with Gavi targets: proportion of countries with < 20% difference in coverage between wealth quintiles 60% by 2015 and 75% by 2020

<b>GVAP Strategic Objective 4: Strong immunization systems are an integral part of a well-functioning health system</b>			
<b>Indicators</b>	4.1	4.1. Dropout rate between first dose (DTP1) and third dose (DTP3) of diphtheria-tetanus-pertussis-containing vaccines	Decreasing trend in dropout rate
	4.2	Sustained coverage of diphtheria-tetanus-pertussis-containing vaccines 90% or greater for three or more years	All countries by 2020
	4.3	Immunization coverage data assessed as high quality by WHO and UNICEF	All countries to have high-quality immunization coverage data by 2020
	4.4	Number of countries with case-based surveillance for vaccine-preventable diseases	<ul style="list-style-type: none"> <li>◆ 100% of countries for polio and measles surveillance by 2015</li> <li>◆ 75% of low- and middle-income countries for sentinel site surveillance by 2020</li> </ul>
<b>GVAP Strategic Objective 5: Immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies</b>			
	5.1	Percentage of doses of vaccine used worldwide that are of assured quality	100% of vaccine doses by 2020
<b>GVAP Strategic Objective 6: Country, regional and global research and development innovations maximize the benefits of immunization</b>			
<b>Indicators</b>	6.1	Progress towards development of HIV, TB, and malaria vaccines	Proof of concept for a vaccine that shows greater or equal to 75% efficacy for either HIV/AIDS, tuberculosis, or malaria
	6.2	Progress towards a universal influenza vaccine (protecting against drift and shift variants)	At least one vaccine providing broad spectrum protection against influenza A virus licensed
	6.3	Progress towards institutional and technical capacity to carry out vaccine clinical trials	Every region has a solid base of countries competent in hosting and managing vaccine trials
	6.4	Number of vaccines that have either been re-licensed or licensed for use in a controlled temperature chain at temperatures above the traditional 2–8°C range	Increasing number of vaccines
	6.5	Number of vaccine delivery technologies (devices and equipment) that have received WHO prequalification against the 2010 baseline	Increasing number of technologies

With the endorsement of the GVAP at the WHA in 2012, the monitoring and evaluation/accountability framework came into force, and countries report progress against the GVAP indicators annually. Progress is monitored by the SAGE Working Group on the Decade of Vaccines, which also provides recommendations to countries on how to reach the goals.



## CONCLUSION

## 6. CONCLUSION



To reach the routine immunization goals outlined in the GVAP, GRISP formulates nine transformative investments in routine immunization that will make a difference in the coming years if implemented. These areas should be seen as a call to action and investment by all parties involved in improving routine immunization coverage and immunization systems strengthening – governments, donors and partners.

Using the comprehensive framework of strategies and practices outlined in GRISP, creative, locally adapted methods of improving the routine immunization system should be devised by national immunization programmes. Partners and donors should consider this framework in formulating their own strategic direction and planning.

As the Decade of Vaccines nears its mid-point, there is an urgent need to reassert routine immunization as the foundation for sustained decreases in morbidity and mortality from vaccine-preventable diseases across the life-cycle of all individuals. Immunization programmes flourish only where they are supported and embedded in the functioning of the broader national health system, and operate in synergy with other preventive health interventions.



## ANNEX A: Role of stakeholders in routine immunization

### National and subnational governments

Immunization programmes are entities that operate within national health ministries, and are owned by the governments of sovereign States. Governments are accountable to their own people for the delivery of all health services and programmes, including the immunization programme.

The central roles of national and subnational governments in the immunization programme are:

- ◆ accountability for the programme delivery and results;
- ◆ programme leadership and oversight;
- ◆ national policy setting and guidance;
- ◆ responsibility for resources management for vaccines and the operational cost of the programme;
- ◆ responsibility for the supply of adequate, quality-assured vaccines;
- ◆ quality assurance of the vaccines used as well as the quality of vaccination services;
- ◆ community and client trust-building and responsiveness to hesitancy and concerns;
- ◆ programme monitoring and disease surveillance through the collection, reporting and feedback of appropriate high-quality data;
- ◆ coordination and stewardship of partners and donors providing support for routine immunization, including assistance with in-country capacity building and performance improvement to strengthen and sustain country ownership.

### World Health Organization

WHO has been mandated by its Member States to provide technical leadership in health and immunization in support of national governments and programmes. The Organization should be seen as the collective voice of its Member States on health matters. In its Constitution, Member States formulated the objective of WHO as “the attainment by all peoples of the highest possible level of health”.<sup>34</sup> Contributing to this objective, several functions of WHO are identified in the Constitution, including:

- ◆ to act as the **directing and coordinating authority on international health work**;
- ◆ to **establish and maintain effective collaboration** with the United Nations, specialized agencies, governmental health administrations, professional groups and such other organizations as may be deemed appropriate;
- ◆ to **assist Governments**, upon request, in **strengthening health services**;
- ◆ to **furnish appropriate technical assistance** and, in emergencies, necessary aid upon the request or acceptance of governments;
- ◆ to establish and maintain such administrative and technical services as may be required, including **epidemiological and statistical services**;
- ◆ to **stimulate and advance work to eradicate epidemic, endemic and other diseases**;
- ◆ to promote **maternal and child health and welfare**.

In addition to these functions, WHO’s current broad directions include the pursuit of universal health coverage and the IHP+, which provide the overarching context for its role in immunization. WHO’s function in individual countries varies widely, depending on country

<sup>34</sup> WHO. *Constitution of the World Health Organization*. 2009. ISBN: 9789241650472. [http://apps.who.int/iris/bitstream/10665/44192/1/9789241650472\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44192/1/9789241650472_eng.pdf)

capacity and need. At the global level, WHO focuses on setting norms, standards and policies, development of global guidance and global partner leadership and coordination. At regional and country level, WHO offices provide more direct technical assistance, operational support, guidance and intercountry coordination. In particular, WHO plays the following main roles in global immunization:

- ◆ setting policies and establishing norms for strengthening routine immunization;
- ◆ providing technical guidelines and resource materials for programme management and capacity strengthening;
- ◆ providing direct technical assistance to its 194 Member States through its six regional offices and staff located in 147 countries;
- ◆ under its mandate as convenor and global coordinator of health matters, measuring the progress in meeting the Decade of Vaccines routine immunization goals;
- ◆ convening immunization partners to collaboratively support immunization programmes and ensuring that all stakeholders are involved in planning implementation and reporting;
- ◆ overseeing the global monitoring, surveillance and feedback functions of immunization programmes, including collection of financial data to enable intercountry comparison and allow measurement and modelling of progress;
- ◆ supporting the oversight, accreditation and structure for maintaining assured-quality vaccine production;
- ◆ promoting immunization equity and universal access by facilitating civil society participation in government-led health planning and health system strengthening;
- ◆ gaining appropriate political commitment through WHO's governing bodies such as the WHA.

## UNICEF

UNICEF is mandated by the United Nations General Assembly to advocate for the protection of children's rights, to help meet their basic needs and to expand their opportunities to reach their full potential.

For routine immunization, UNICEF:

- ◆ is the leading global agency for vaccine procurement for routine immunization and is responsible for buying vaccines and related items for global campaigns to eradicate polio, eliminate neonatal and maternal tetanus, and control measles and for new vaccine introductions with Gavi support;
- ◆ supports governments to create effective plans that target unimmunized children and provide for both the cost of vaccines and for their delivery;
- ◆ supports local health workers to create detailed plans with the aim of reaching every child – especially those living in underserved and remote areas;
- ◆ supports social mobilization efforts to engage communities and explain the importance of vaccination, using a tailored approach adapted to each local context. UNICEF works with community leaders, civil society organizations, health ministries and media to provide caregivers with reliable information on the safety, effectiveness and availability of vaccines;
- ◆ invests in cold and supply chain infrastructure and management to improve the conditions in which vaccines and other lifesaving health commodities are delivered;
- ◆ supports subnational strengthening of systems, financing, monitoring and evaluation, and management performance.

## Technical partners (e.g. Centers for Disease Control and Prevention, PATH, John Snow, Inc.)

Technical partners support both Member States and WHO to:

- ◆ generate, synthesize and disseminate evidence on the effectiveness and comparative strength of interventions designed to improve immunization coverage and system processes;
- ◆ develop and implement monitoring and evaluation methods and tools for assessing the performance of immunization systems to further identify best practices and lessons learnt for programme implementation;
- ◆ invest in opportunities to further develop capacity of the immunization workforce in strengthening country-level planning activities, public health management, supervisory skills, immunization data management and data use for decision-making;
- ◆ identify and disseminate best practices for identifying opportunities to further efficiently integrate immunization systems into the broader health system to enhance the overall performance of the health sector;
- ◆ provide opportunities to develop, evaluate and implement innovative strategies that have the potential to positively impact the performance of immunization systems;
- ◆ support development of evidence-based immunization policies and programme implementation guidelines;
- ◆ support research and development of future vaccines, accelerate the introduction of existing vaccines and identify best practices for effective vaccine management.

## Gavi, the Vaccine Alliance and the Gavi Secretariat

Gavi, the Vaccine Alliance, based in Geneva, Switzerland, is a global partnership established in 2000 bringing together public and private sectors with the mission of saving children's lives and protecting people's health by increasing equitable use of vaccines in lower-income countries. Members of Gavi include countries eligible for support, WHO, UNICEF, the World Bank, donor governments, the Bill and Melinda Gates Foundation, civil society organisations and others.

As a public–private partnership, the Gavi Alliance links its partners' individual strengths, from WHO's scientific expertise and UNICEF's field presence and procurement system to the financial know-how of the World Bank and the market knowledge of the vaccine industry. The partners' contributions to Gavi are coordinated by the Gavi Alliance Secretariat. The Alliance is governed by the Gavi Alliance Board to which all partners are held accountable. All partners invest in the Gavi business model. All are accountable for its results. Donors make long-term commitments to support Gavi, giving developing countries security to invest in their routine immunization programme and for manufacturers to plan new investments.

In addition to the individual roles and responsibilities that the Gavi Alliance partners have due to their mandate or function, the main roles of the Gavi Alliance are as follows.

- ◆ The Gavi Alliance works through existing in-country partners who in turn have widespread field presence to contribute to Gavi's programme delivery. This keeps burdensome transaction costs down for implementing country governments. The Gavi Secretariat is not present on the ground in developing countries. Instead health ministries take the lead, working closely with WHO and UNICEF regional and country offices, which provide expert recommendations on vaccine use and help countries consider uptake of new vaccines;

- ◆ Gavi funds immunization programmes in developing countries where the vast majority of the world's unvaccinated children live, and provides support to the strengthening of health systems to help ensure that vaccines reach people everywhere. All Gavi-supported countries co-finance a share of their vaccine costs. As their economies grow, they increase their investment in immunization and eventually sustain their own programmes. The availability of long-term, predictable funding for immunization coupled with aggregated country demand enables the vaccine industry to supply vaccines at more affordable prices.
- ◆ Gavi provides funding for vaccine procurement and delivery. Gavi relies on UNICEF's supply division as its primary procurement agent to negotiate with suppliers, make the purchases and deliver the vaccines to countries. It provides financial support to country health systems in order to improve immunisation coverage and equity.

The Gavi Secretariat's core functions include the following.

- ◆ Funding mechanism:
  - ◆ Collecting and distributing donor pledges to support the Gavi Alliance mission and strategic goals;
  - ◆ Convening review mechanisms for approving country grant requests for immunization, vaccines and health systems support.
- ◆ Policy coordination for Gavi support:
  - ◆ Developing policy frameworks for Gavi support;
  - ◆ Convening the Gavi Board, which approves Gavi programmes and policies and sets the agenda for immunization and health systems support;
  - ◆ Facilitating the implementation of Partner Engagement Framework for Gavi Alliance.
- ◆ Coordination of implementation of Gavi support:
  - ◆ Providing stewardship for new vaccine and finance support;
  - ◆ Serving as focal point for country readiness for specific Gavi support.
- ◆ Co-financing:
  - ◆ Monitoring Gavi policy of co-financing from all Gavi-supported countries;
  - ◆ Working with Ministers of Health and Finance to promote sustainable funding mechanisms for immunization;
  - ◆ Working with private sector and other partners on ensuring long-terms sustainability for immunization support (IFFIm, Matching Fund).
- ◆ Market shaping:
  - ◆ Pooling demand for new vaccines among more than 50 countries;
  - ◆ Working with partners to create new market shaping mechanisms like the AMC;
  - ◆ Conducting strategic dialogue with vaccine manufacturers.
- ◆ Advocacy:
  - ◆ Creating political will in donor and Gavi-supported countries to support immunization and health systems delivery.

## Foundations, philanthropies and donor governments

Foundations and philanthropies can provide financial, technical and advocacy resources, but the ways in which they do so vary greatly as their governance ranges from family foundations to government institutions. At their best, they are flexible and can play traditional as well as unique roles in immunization. Illustratively, they can:

- ◆ provide “voice” and influence around conventional and exploratory approaches/issues, and spotlight and nurture visionaries, leaders, and successful ideas;
- ◆ invest in catalytic ideas, promote innovation, promising practices, new ways of working and doing, and advance knowledge and practice, including with high-risk endeavours;
- ◆ advance development of new vaccines/equipment and new delivery technologies, and anticipate future needs;
- ◆ support and expand the scale of existing proven approaches, and respond swiftly to changing contexts of what is working and what is not (in collaboration with partners, communities and grantees);
- ◆ amplify and advance investments in health systems building systems to assure last-mile reach and equity;
- ◆ increase available resources via donor networks and building business cases for donors;
- ◆ support the capacity building of partners and implementing organizations around immunization;
- ◆ develop innovative financing mechanisms that increase sustainability of programmes and provide incentives for actions that benefit the public good (e.g. outcome investing, co-financing agreements and basket funds);
- ◆ tackle complex problems when a longer time horizon might be needed.

## Civil society organizations, including nongovernmental organizations

Civil society organizations are engaged to:

- ◆ work with governments and immunization partners in countries to connect communities to immunization and health services;
- ◆ hold governments and immunization partners accountable to the population served for immunization;
- ◆ raise awareness of the benefits of immunization and the right to health at the community and country level;
- ◆ increase the demand for immunization and health services within underserved communities;
- ◆ mobilize communities to appropriately use immunization services;
- ◆ deliver immunization services in cooperation with governments;
- ◆ advocate for integrated service delivery and health services that respond to community needs;
- ◆ provide information and encouragement to families of vaccination drop-outs and refusers;
- ◆ participate in national, subnational and community immunization planning, monitoring and reporting;
- ◆ encourage government transparency and accountability;
- ◆ represent vulnerable and marginalized populations at the national policy level;
- ◆ influence policy creation at the national, regional and global level;
- ◆ support domestic and international resource mobilization and allocation for immunization and health system strengthening.







**Department of Immunization, Vaccines and Biologicals**

Family, Women's and Children's Health  
World Health Organization

CH-1211 Geneva 27  
Switzerland

Fax: +41 22 791 4227

Email: [vaccines@who.int](mailto:vaccines@who.int)

Or visit our website at <http://www.who.int/immunization/documents/en/>

ISBN 978 92 4 151010 3

