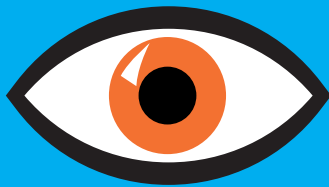


The Guide to Tailoring Immunization Programmes (TIP)



Increasing coverage of infant
and child vaccination in the
WHO European Region



World Health
Organization

REGIONAL OFFICE FOR

Europe

ABSTRACT

Vaccine-preventable diseases (VPDs) pose an ongoing threat to health worldwide, including in the WHO European Region. High vaccination coverage rates are crucial to halting the spread of VPDs in the Region, yet current coverage rates are below optimal and challenges remain, particularly at sub-national level.

Renewed attention and innovative strategies are required to overcome the many challenges of maintaining strong immunization programmes.

The Guide to Tailoring Immunization Programmes (TIP) aims to provide proven methods and tools to assist national immunization programmes (NIPs) design targeted strategies that increase uptake of infant and childhood vaccinations. The Guide provides tools to identify susceptible populations, determine barriers to vaccination and implement evidence-based interventions.

The strategies outlined in this Guide may be used at any time to maintain high coverage rates, but may be particularly valuable when pockets of low vaccination coverage or increased susceptibility to VPDs are identified. The Guide may be used independently by Member States or implemented in conjunction with technical support from the WHO Regional Office for Europe.

Keywords

BEHAVIOUR CHANGE
VACCINE HESITANCY
IMMUNIZATION
VACCINES
SOCIAL MARKETING
VACCINE-PREVENTABLE DISEASES

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EXECUTIVE SUMMARY

Vaccination is a proven, cost-effective public-health strategy that has dramatically decreased childhood morbidity and mortality worldwide. Following the Smallpox Eradication Campaign, the World Health Organization (WHO) took a lead role in launching the Expanded Programme for Immunization (EPI) in 1974. This initiative increased the reach of vaccination programmes globally, in terms of both geographic and population coverage, and expanded immunization programmes to protect children against six childhood diseases: polio; measles; neonatal tetanus; diphtheria, pertussis and tuberculosis.

Vaccine-preventable diseases (VPDs) continue to pose a threat worldwide, evidenced by outbreaks of infectious diseases. In the WHO European Region, which includes 53 Member States with traditionally high immunization coverage, the resurgence of measles, rubella and pertussis,¹ each a highly transmissible VPD, shows that these risks are real.

Current immunization coverage rates in the WHO European Region are insufficient to ensure herd immunity and halt the spread of VPDs in the Region. In some countries with previously high coverage, rates have now fallen well below the 95% WHO-recommended threshold. Overall, in the Region, an estimated 700 000–1 000 000 infants born each year (2012 estimate) do not receive all of the scheduled vaccinations.²

In an environment where immunization is often not a top-tier public-health priority, pressures on national vaccination programmes are multiplying and reduce their ability to provide strong immunization programmes. Lack of political will, changes in the mechanisms for financial support, the introduction of new and combined vaccines, political instability, persistence of social inequities, and underserved populations and growing parental concerns, in some cases refusals, of vaccination contribute to these pressures. To adequately address these challenges, and overcome them, requires renewed attention and innovative tools.

The WHO Regional Office for Europe (WHO/Europe) is taking steps to renew the focus on immunization of infants and children, with an emphasis on measles and rubella elimination by 2015 and maintenance of polio-free status in the Region. These steps are in line with the principles and areas of work outlined in the Global Vaccine Action Plan³ and the advice of both the Strategic Advisory Group of Experts on Immunization (SAGE) and the European Technical Advisory Group of Experts (ETAGE). The present document, *Guide to Tailoring Immunization Programmes (TIP)*, is an integral part of this effort.

1 Measles, rubella and pertussis are highly transmissible and require high vaccination coverage levels to achieve herd immunity.

2 The WHO Regional Office for Europe publishes essential data regarding Member States' vaccination coverage and VPD outbreaks every month. See WHO/Europe's Centralized information system for infectious diseases (CISID) (<http://data.euro.who.int/CISID/>) and Epidemiological Briefs (<http://www.euro.who.int/en/what-we-do/health-topics/disease-prevention/vaccines-and-immunization/publications/who-epidemiological-brief>).

3 The Decade of Vaccines Collaboration (DoVC) is an effort under the leadership of WHO, UNICEF, the GAVI Alliance, the Bill & Melinda Gates Foundation and the National Institute of Allergy and Infectious Diseases (NI-AID—part of the US National Institutes of Health) which aims to define the Decade of Vaccines vision and develop a Global Vaccine Action Plan (GVAP). The Action Plan was endorsed by the Sixty-fifth World Health Assembly in May 2012.

This document serves as an overview Guide to Tailoring Immunization Programmes (TIP) in WHO/Europe Member States.⁴ It aims to help Member States shape strategic responses to immunization programming and communications. In doing so, the Guide considers vaccination of infants and children as a positive care-giving practice, with important community and social benefits.⁵

The overall objective of the Guide to Tailoring Immunization Programmes is to provide proven methods and tools that can help national immunization programmes design targeted strategies that increase uptake of infant and child vaccination, thereby increasing immunization coverage rates and curbing the risks of VPD in the Region. The Guide is intended to be implemented with the assistance of a technical consultant, working in close partnership with the Member State's own national immunization programme.⁶

The TIP Guide provides tools to do the following.

1. Identify and prioritize susceptible populations.

TIP conducts a step-by-step approach to segment groups of caregivers, taking into account their children's vaccination status: fully and timely vaccinated; partially vaccinated; not vaccinated. Segmentation analysis helps to identify the susceptible populations that the national immunization programme should target.

2. Diagnose the demand- and supply-side barriers to vaccination.

TIP employs conceptual pathways and maps to:

- guide a detailed level of understanding as to what drives caregivers' vaccination practices;
- explore the role that vaccination providers play in influencing caregivers' vaccination choices and actions.

3. Design evidence-informed responses.

TIP provides:

- guidance for designing, implementing, monitoring and evaluating TIP interventions based on the results of the segmentation and profiling process;
- an inventory of promising practices in immunization programming, to which immunization programme designers can refer.

4 It is expected that two types of publications will be created using this "master copy". The first is the TIP Guide targeted to TIP advisors/consultants, which will be made available in the form of a binder. The second is a shorter version of the TIP Guide, destined for WHO/Europe Member States, so that they can become familiar with the approach.

5 The protective nature of immunization extends to the whole of a community when the critical threshold in vaccination coverage is reached. This threshold varies depending on the VPD. Individuals who are not immunized, then become protected from VPD by virtue of herd immunity. When this threshold is not met, given the number of susceptible individuals, should a VPD be introduced it is not possible to contain circulation of the infectious disease. As childhood illnesses and deaths due to VPD continue to decrease around the world, it is important that immunization remains a global health priority in order to reach these critical thresholds and eradicate VPD. For a discussion on how vaccination greatly reduces disease, disability, death and inequity worldwide, see Bulletin of the World Health Organization, February 2008 (<http://www.who.int/bulletin/volumes/86/2/07-040089/en/>).

6 The TIP implementation team will in principle consist of one or more consultants familiar with the approach and a designated point person in the Member State. After gaining experience with the approach, the point persons in some Member States may choose to implement the tools in subsequent projects without the assistance of external consultants.

TIP and the Global Vaccine Action Plan

In May 2012, the World Health Assembly approved the Global Vaccine Action Plan (GVAP) (http://www.who.int/immunization/global_vaccine_action_plan/DoV_GVAP_2012_2020/en/index.html) to move forward on the Decade of Vaccines (2011-2020). All signature countries now need to work to translate GVAP into improved vaccines programmes and outcomes.

Six fundamental principles guided the development of GVAP: 1) country ownership; 2) shared responsibility and partnership; 3) equity; 4) integration; 5) sustainability; 6) innovation (GVAP). Beyond the six principles, GVAP has six strategic objectives: 1) all countries commit to immunization as a priority; 2) individuals and communities understand the value of vaccines and demand immunization as both their right and responsibility; 3) the benefits of immunization are equitably extended to all people; 4) strong immunization systems are an integral part of a well-functioning health system; 5) immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies; 6) country, regional and global research and development innovations maximize the benefits of immunization.

TIP is a way forward on components of GVAP. TIP provides an innovative, detailed, practical, evidence-based guide on how countries in the WHO European Region can address GVAP objectives Nos 2 and 3. Overcoming vaccine hesitancy barriers, including lack of confidence, inconvenience and lack of access, and complacency, can lead to improved equity and improved vaccine uptake, with more individuals and communities valuing vaccines and demanding immunization as both their right and their responsibility.

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ABBREVIATIONS & ACRONYMS

AIDS	acquired immunodeficiency syndrome
AEFI	Adverse Event Following Immunization
BCG	bacille Calmette-Guérin (vaccine)
CISID	Centralized information system for infectious diseases (WHO)
COMBI	Communication for Behavioural Impact
CMYP	country multi-year plans
DFID	Department for International Development (United Kingdom)
DoVC	Decade of Vaccines Collaboration
DTP	diphtheria-tetanus-pertussis vaccine
EC	European Commission
ECDC	European Centre for Disease Prevention and Control
EIW	European Immunization Week
EPI	Expanded Programme for Immunization
ETAGE	European Technical Advisory Group of Experts
GP	general practitioner
GVAP	Global Vaccine Action Plan
Hib	Haemophilus influenzae type b
HIV	human immunodeficiency virus
HMIS	health management information system
HPV	human papillomavirus virus
ICC	Interagency Coordinating Committee
IEC	information, education and communication
INGO	international nongovernmental organization
KAP	knowledge, attitudes, practices
LOE	level of effort
MCV	measles-containing vaccine
MMR	measles, mumps, rubella vaccine
MOH	Ministry of Health
NGO	nongovernmental organization
NIAID	National Institute of Allergy and Infectious Diseases
NIP	national immunization programme
OT	opportunities and threats
PoI3	third dose of polio vaccine
PSI	Population Services International
SAGE	Strategic Advisory Group of Experts on immunization (WHO)
SWOT	strengths, weaknesses, opportunities and threats
TESSy	The European Surveillance System
TIP	Tailoring Immunization Programmes
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VCWG	Vaccination Communications Working Group
VPD	vaccine-preventable disease
VPI	WHO/Europe Vaccine-preventable Diseases and Immunization Programme
WHO	World Health Organization
WHO/Europe	WHO Regional Office for Europe

HOW TO USE THE TIP GUIDE

The Guide to Tailoring Immunization Programmes describes an approach and provides tools to assist national immunization programmes to increase or maintain participation in infant and child vaccination programmes.

The TIP Guide is expected to be strengthened over time as WHO/Europe receives and reflects on experiences in implementing it within the WHO European Region. This first online version of the TIP Guide, published in April 2013, provides a descriptive overview of the approach. Two further versions of the TIP Guide will be made available soon: 1) detailed instructions for the range of TIP tools intended for the lead persons (consultants or local point persons) who will carry out the TIP approach in collaboration with the Member State, and 2) a shorter summary version to serve as a manual for national immunization programmes.

Why and when should TIP be used?

TIP's overall objective is to sustain (maintain or increase) high vaccination coverage among infants and children at national and sub-national levels.

National immunization programmes can apply TIP in partnership with WHO/Europe at any point in time. This can be when a national immunization programme

- has identified pockets of low vaccination coverage or increased susceptibility to vaccine-preventable diseases (VPDs), and wishes to take dedicated steps to increase vaccination coverage within them;
- wants to maintain high vaccination coverage by ensuring that vaccination supply remains responsive to existing demand.

For TIP to be successful, national immunization programmes must ensure that there is

- availability of information;
- political will and support;
- funding;
- competent and dedicated people to carry out the process.

Who implements TIP?

TIP is designed to be implemented in close collaboration with a WHO/Europe technical officer or a technical consultant recommended by WHO/Europe. The national immunization programme is not expected to carry out the TIP process alone. The Member State is however free to implement TIP independently of WHO/Europe should they wish to do so. In this case, WHO/Europe will make available tools and resources to support this process.

The TIP technical advisor or consultant should have a strong background in social science research and programme implementation, social or integrated marketing and/or behaviour change communications. The TIP advisor or consultant facilitates the application of the approach, and produces a final concept note with strategic recommendations and a plan of action. The advisor can also provide guidance at the time of the implementation of the recommended TIP strategies. Ultimately it is the responsibility of the national immunization programme to ensure that the strategic decisions resulting from TIP are put into practice, and monitored and evaluated.

Who should be involved in TIP?

The Member State's national immunization programme manager is an essential partner in the TIP process. To ensure the success of TIP, it is recommended that key Member State stakeholders should be engaged from the start, and at critical points throughout the process.

For example, where there is an Interagency Coordinating Committee (ICC) for immunization, the ICC may wish to create a TIP subcommittee with selected representatives from organizations and professions that are capable of impacting vaccination coverage, both through their expertise and their capacity to implement, and are able to help build awareness and linkages in immunization. Should an ICC not exist, a similar working group can be established to serve the same purpose.

Where it is not possible to assemble a working group in a timely manner, and the Member State wishes to engage WHO/Europe in the application of TIP, WHO/Europe requests that the Member State designate a TIP point person or persons in addition to the national immunization manager.

1. BACKGROUND.

IMMUNIZATION IN THE WHO EUROPEAN REGION

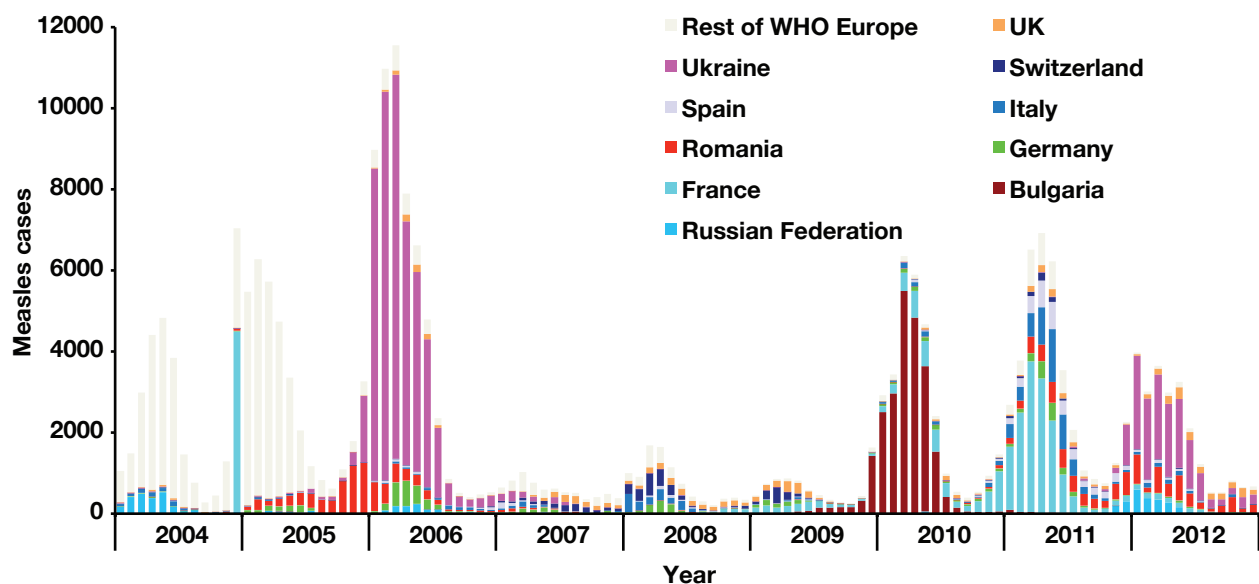
Immunization in the WHO European Region: the risks of VPD are real

Immunization is a proven, cost-effective public-health strategy that has dramatically decreased childhood morbidity and mortality worldwide. Following the Smallpox Eradication Campaign, the World Health Organization (WHO) took a lead role in launching the Expanded Programme for Immunization (EPI) in 1974. This initiative increased the reach of vaccination programmes globally, in terms of both geographic and population coverage, and expanded immunization programmes to protect children against six childhood diseases: polio, measles, neonatal tetanus, diphtheria, pertussis and tuberculosis.

Representing a diverse region in terms of its income-level, history, culture and languages, the WHO Regional Office for Europe (WHO/Europe) has a long and successful history of supporting efforts of the Region's 53 Member States to address VPDs and immunization. Overall immunization coverage of the six basic protective antigens in the European Region has been traditionally high, supported by well-functioning immunization programmes. High coverage has clearly had beneficial effects, increasing individual and social ability to protect infants and children, and causing these childhood diseases to become distant memories of illnesses of the past.

Yet, the risks of VPD are real in the European Region, as evidenced by the resurgence of measles and rubella,¹ each one a highly transmissible VPD (see Fig. 1).²

Fig. 1. Monthly measles and rubella data reporting to CISID, January 2004 to November 2012



1 Measles and rubella are highly transmissible and require high vaccination coverage levels to achieve herd immunity.

2 For updated information on VPD incidence in the European Region, consult the Centralized information system for infectious diseases (CISID) (data.euro.who.int/CISID). The WHO Epidemiological Brief also provides monthly reviews of immunization coverage and VPD incidence (www.euro.who.int/en/what-we-do/health-topics/disease-prevention/vaccines-and-immunization/publications/who-epidemiological-brief).

Current immunization coverage rates in the WHO European Region are insufficient to ensure herd immunity¹ and halt the spread of VPDs in the Region. In some countries with previously high coverage, rates have now fallen well below the 95% WHO-recommended threshold.² Overall in the Region, an estimated 700 000–1 000 000 infants born each year (2012 estimate) do not receive all of the scheduled vaccinations.³

Fig. 2. Vaccination coverage for WHO/Europe Member States, 1990–2011

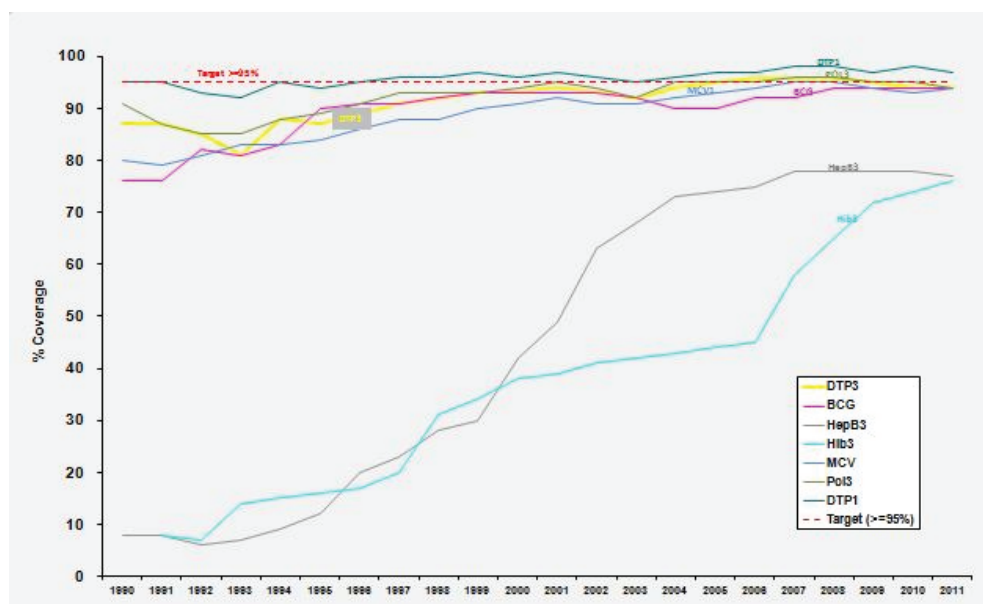


Fig. 2 shows vaccination coverage for seven antigens in the WHO European Region. Only the first dose of the trivalent vaccine for diphtheria, tetanus and pertussis (DTP3) has consistently maintained coverage above 95% over the past two decades. This coverage data, aggregated for the whole of the WHO European Region, masks areas of lower coverage at the national and sub-national levels.

In conjunction with increased risk of VPD outbreaks, pressures on national vaccination programmes are multiplying and this reduces their ability to provide strong immunization programmes.

- The perception that EPI is a finished agenda and the ensuing lack of political will to place immunization as a priority has forced national immunization programmes to manage with restricted budgets, despite increased need.
- Financial support for national vaccination programmes is changing; long-time donors are stepping away from their traditional roles to encourage national ownership of immunization programmes.
- Focus and funding are increasingly centred on new and under-utilized vaccines, and on expanding national immunization programmes' attention to older age groups, such as adolescents and adults.

1 Fine & Mulholland (2008).

2 It is important to note that some Member States may not report coverage accurately. Depending on the method used, it is possible to either over- or under- estimate coverage rates. For this reason, it is crucial to understand the data origin for both the numerator and denominator within the coverage rate at the time of analysis of coverage data.

3 The WHO Regional Office for Europe publishes essential data regarding Member States' vaccination coverage and VPD outbreaks every month. See WHO/Europe's Centralized information system for infectious diseases (CISID) (<http://data.euro.who.int/CISID/>) and Epidemiological Briefs (<http://www.euro.who.int/en/what-we-do/health-topics/disease-prevention/vaccines-and-immunization/publications/who-epidemiological-brief>).

- National immunization programmes struggle to cope with the need for increased information sharing tied to a fast-changing socio-cultural environment and growing scepticism regarding the beneficial role of vaccination. Parental vaccine concerns are fuelled by immediate online access to controversial information and manufactured stories of Adverse Events Following Immunization (AEFIs).
- In an environment where perceived risks of VPD are low and lifestyles introduce a range of competing priorities, complacency regarding vaccination is evident in all Member States, causing parents to delay or opt out of vaccination schedules. This creates a build-up of populations susceptible to VPDs.
- Large, vulnerable and underserved groups reside in the European Region and represent potential havens for VPD outbreaks, as evidenced by recent events. These outbreaks result in the need to rapidly mobilize emergency campaigns, and provide stark reminders of the Region's need to better serve these groups.

TIP and the Global Vaccine Action Plan

In May 2012, the World Health Assembly approved the Global Vaccine Action Plan (GVAP) (http://www.who.int/immunization/global_vaccine_action_plan/DoV_GVAP_2012_2020/en/index.html) to move forward on the Decade of Vaccines (2011–2020). All signature countries now need to work to translate GVAP into improved vaccines programmes and outcomes.

Six fundamental principles guided the development of GVAP: 1) country ownership; 2) shared responsibility and partnership; 3) equity; 4) integration; 5) sustainability; 6) innovation (GVAP). Beyond the six principles, GVAP has six strategic objectives: 1) all countries commit to immunization as a priority; 2) individuals and communities understand the value of vaccines and demand immunization as both their right and responsibility; 3) the benefits of immunization are equitably extended to all people; 4) strong immunization systems are an integral part of a well-functioning health system; 5) immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies; 6) country, regional and global research and development innovations maximize the benefits of immunization.

TIP is a way forward on components of GVAP. TIP provides an innovative, detailed, practical, evidence-based guide on how countries in the WHO European Region can address GVAP objectives Nos 2 and 3. Overcoming vaccine hesitancy barriers, including lack of confidence, inconvenience and lack of access, and complacency, can lead to improved equity and improved vaccine uptake, with more individuals and communities valuing vaccines and demanding immunization as both their right and their responsibility.

Targeted programmes and communications: a strategic priority for the WHO Regional Office for Europe

In line with the principles and areas of work outlined in the Global Vaccine Action Plan¹ and under the advice of both the Strategic Advisory Group of Experts (SAGE) on immunization and the European Technical Advisory Group of Experts (ETAGE), WHO/Europe is taking urgent steps to renew the focus on immunization of infants and children, with an emphasis on measles and rubella elimination by 2015 and the maintenance of polio-free status.

¹ The Decade of Vaccines Collaboration (DoVC) is an effort under the leadership of the World Health Organization (WHO), UNICEF, the GAVI Alliance, the Bill & Melinda Gates Foundation and the National Institute of Allergy and Infectious Diseases (NIAID—part of the US National Institutes of Health) which aims to define the Decade of Vaccines vision and develop a Global Vaccine Action Plan (GVAP). The Action Plan was reviewed by the Sixty-fifth World Health Assembly in May 2012, and endorsed.

The Action Plan comprises four key areas.

1. Establishing and sustaining broad public and political support for the use of vaccines and the financing of immunization services.
2. Strengthening the equitable delivery of immunization services to achieve universal coverage of safe and effective vaccines by 2020 in order to prevent, control, eliminate or eradicate vaccine-preventable diseases.
3. Cultivating a robust scientific enterprise to produce innovation in the discovery and development of new and improved vaccines and associated technologies.
4. Creating the right market incentives to ensure an adequate and reliable supply of affordable vaccines.

In September 2010, the Member States of the European Region adopted a Resolution for renewed commitment to elimination of measles and rubella and prevention of congenital rubella syndrome by 2015 and sustained support for polio-free status in the WHO European Region at the time of the sixtieth session of the meeting of the Regional Committee for Europe.¹ A strategic plan for measles and rubella was subsequently elaborated to give direction to this commitment.² WHO/Europe's Vaccine-preventable Diseases and Immunization (VPI) team supports Member States by strengthening immunization programmes, VPD surveillance and laboratory networks, and ensuring access to safe, affordable vaccines (including new and underutilized vaccines). In addition, there is a growing recognition of the critical role that advocacy and communications play, within immunization programmes, to increase coverage and prevent VPD outbreaks. The need for better communications is fuelled by observations of decreased confidence in vaccines and public distrust of vaccination programmes,³ and increased complacency and persistent lack of access to health care, including vaccination, among some vulnerable groups.

Setting a precedent and echoing SAGE's call for increased attention to advocacy, communications and vaccine hesitancy,⁴ WHO/Europe has spearheaded a number of initiatives in these areas.

European Immunization Week

Launched in 2005, European Immunization Week (EIW) offers a platform through which European Member States, speaking through one collective voice, can advocate for immunization as a public-health priority in the Region. EIW advocacy activities raise awareness of the importance of vaccination, targeting partners, parents and caregivers, as well as the media⁵. Facilitated by WHO/Europe, participating Member States are asked to carry out three steps: 1) analyse their national immunization system and context; 2) define and describe the target groups and the methods to reach them; 3) define activities for the target groups.⁶ Launched initially with seven participating countries – Belarus, Ireland, Italy (South Tyrol Province), Montenegro, Serbia, Tajikistan and the former Yugoslav Republic of Macedonia –⁷ today all 53 Member States participate in EIW and the event garners significant media attention.

1 <http://www.euro.who.int/en/who-we-are/governance/regional-committee-for-europe/past-sessions/sixtieth-session/resolutions/eurrc60r12>.

2 <http://www.euro.who.int/en/what-we-do/health-topics/disease-prevention/vaccines-and-immunization/publications/pre-2009/eliminating-measles-and-rubella-and-preventing-congenital-rubella-infection>.

3 Larson & colleagues (2011).

4 World Health Organization. European Region (2011). SAGE Working Group on communication and dealing with vaccine hesitancy (<http://www.who.int/immunization/sage/hesitancyWG.pdf>).

5 <http://www.euro.who.int/en/what-we-do/health-topics/disease-prevention/vaccines-and-immunization/european-immunization-week/more-about-european-immunization-week>.

6 <http://www.euro.who.int/en/what-we-do/health-topics/disease-prevention/vaccines-and-immunization/european-immunization-week/more-about-european-immunization-week/national-planning-of-eiw>.

7 World Health Organization. European Region (2006). European Immunization Week: Lessons learnt and next steps (http://www.euro.who.int/__data/assets/pdf_file/0010/98911/ImmunizationWeek.pdf).

European experts meet on immunization advocacy and communication

In January 2008, a high-level expert meeting on advocacy and communication for immunization was held jointly by the United Kingdom Department of Health and WHO/Europe. Bringing together chief medical officers, immunization managers, communications officers and representatives from 16 western European Member States, the meeting resulted in a number of key recommendations for government health authorities to support immunization, notably through: ¹

- more human and financial resources to respond to the urgent need for communications and advocacy for childhood immunization;
- national long-term strategies and action plans for targeted communication and advocacy to appropriate groups, including health professionals;
- the adoption of a proactive strategy for potential vaccine scares and contingency planning for times of crisis;
- the creation of a platform for exchanging information on lessons learnt, experiences and best practices in immunization (facilitated by international agencies);
- the continued and expanded use of EIW as an opportunity to focus on communications and advocacy for immunization.

Vaccination Communications Working Group

In January 2010, immunization experts convened by WHO/Europe ² again noted that more effective communication strategies were needed in order to achieve Regional targets for VPDs. Later that year, the Regional Commission for Europe also concluded that new methods of communicating about vaccines, stronger communication capacity in countries, and more coordination of activities would help restore public trust in vaccines and increase demand for immunization.

WHO/Europe responded by sponsoring a December 2010 meeting of vaccine communication experts and stakeholders to share lessons learnt, to identify key communication challenges and issues that face the Region, and to consider the creation of a vaccine communications working group (VCWG). During a subsequent meeting (October 2011 in Istanbul, Turkey), terms of reference for the VCWG were developed and recommended for WHO endorsement. These outline the VCWG vision and objectives.

WHO/Europe Vaccine Safety Communications Manual

In 2012, WHO/Europe developed a manual to provide practical, informative strategies and tools to help national immunization managers plan and manage a communications response following a vaccine safety-related event. The manual, to be published in April 2013, outlines how to use communications tactics and tools to minimize the negative impact of safety events on public confidence and trust. Employing strong communications principles and strategies is not a substitute for evidence-based risk analysis however. Therefore, this document should be used as a companion to WHO guidance for “managing risks associated with vaccine safety”. General information in the manual is complemented by examples of adverse event scenarios to help illustrate how and when immunization managers should engage in risk communication. As each country is different, however, the guidelines also advocate for the development of national vaccine safety communications plans or manuals.

1 World Health Organization & the WHO Regional Office for Europe (2008).

2 Technical consultation with countries on the proposed framework for verifying measles and rubella elimination in the WHO European Region (http://www.euro.who.int/__data/assets/pdf_file/0011/149681/Consultation_framework_measles_rubella.pdf).

2. INTRODUCTION TO TAILORING IMMUNIZATION PROGRAMMES (TIP). A GUIDE TO TIP THE BALANCE IN FAVOUR OF VACCINATION

The successes of vaccination programmes have been built upon the broad acceptance of, and participation in, vaccination by individuals and caregivers who agree to the use of vaccines. Vaccination is, indeed, defined by its protective intent.¹ In the case of vaccination of infants and children, caregivers (often parents) are the primary gatekeepers to this protection. By having their children vaccinated, they choose to undertake a repeated action that protects their children from VPDs, in case of exposure to disease, despite the potential short-term discomfort and distress that this may cause to themselves and the child. By doing so, they also increase protection for others in the community where immunization is precluded, or may not lead to protection because of serious underlying diseases such as some cancers or immunodeficiencies.

In the European Region, reasons for not vaccinating an infant or child are complex and multiple. Lack of access, marginalization, low risk perception, fear, distrust and complacency, as well as alternative philosophical health beliefs, are some of the myriad of reasons why vaccination of an infant or child may not take place. A “one-size fits all” approach to immunization programming and communications cannot suffice to respond to existing vaccination barriers and concerns, or meet current immunization needs.² Innovative and meaningful models are required to place infant and childhood immunization as a positive, protective and caring practice for primary caregivers, and to propose convenient ways for all caregivers to succeed in this practice.

With the Guide to Tailoring Immunization Programmes (TIP), WHO/Europe offers practical solutions to help Member States shape strategic evidence-informed responses to immunization programming and communications. The Guide places vaccination of infants and children as a positive care-giving practice, with important community and social benefits.³

The overall objective of the Guide is to offer proven methods and tools to design targeted strategies that increase uptake of infant and child vaccination, thereby increasing immunization coverage rates and curbing the risks of VPDs in the Region.

To do this, the TIP Guide provides tools to do the following.

1. Identify and prioritize susceptible populations.

TIP conducts a step-by-step approach to segment groups of caregivers, taking into account a child’s vaccination status: full and timely vaccinated; partially vaccinated; not vaccinated. Segmentation analysis helps to identify the susceptible populations that the national immunization programme should target.

2. Diagnose the demand- and supply-side barriers to vaccination.

TIP uses a conceptual pathway and maps to:

- guide a detailed level of understanding of what drives caregivers’ vaccination practices;
- explore the role that vaccination providers play in influencing caregivers’ vaccination choices and actions.

1 Sturm & colleagues (2005).

2 Opel & colleagues (2009); Leask (2011).

3 The protective nature of immunization extends to the whole of a community when the critical threshold in vaccination coverage of 95% is reached; individuals who are not immunized then become protected from the VPD by means of herd immunity. When this threshold is not met, given the number of susceptible individuals, should a VPD be introduced, it is not possible to contain circulation of the infectious disease. As childhood illnesses and deaths due to VPDs continue to decrease around the world, it is important that immunization remains a global health priority in order to reach these critical thresholds and eradicate VPDs.

3. Design evidence-informed responses.

TIP provides to immunization programme designers

- guidance for designing, implementing, monitoring and evaluating TIP interventions based on the results of the segmentation and profiling process;
- an inventory of lessons learnt and promising practices in immunization programming.

Health behaviour theories: origins, applications and use in TIP

The TIP approach draws on health programme planning models, including social marketing and social and behaviour change communications. These models have been created with a firm grounding in behavioural change theories and have been shown to successfully produce durable health outcomes worldwide. Below, we provide some key references regarding the origins and application of these theories in the area of health and, where possible, the field of vaccination/immunization.

1. References on health behaviour change theory

For an overview of health promotion and behaviour theories and planning models:

National Cancer Institute. Theory at a glance: Application to health promotion and health behaviour, 2nd ed. United States Department of Health and Human Services, National Institutes of Health, 2005.

Family Health International's (FHI) Behavioural Research Unit has also published a review of behaviour change theories in the context of HIV/AIDS: Behaviour change: A summary of four major theories, 2002.

Adaptation of health behaviour theory to human papillomavirus virus (HPV) vaccine introduction Bingham A et al. An approach to formative research in HPV vaccine introduction planning in low resource settings. The Open Vaccine Journal, 2009, 2,1-16 (open access).

Program for Appropriate Technology in Health (PATH) adapted an ecological conceptual framework to guide its research into the introduction of HPV vaccine and to provide a platform for a comparative analysis of findings in selected countries. The ecological framework recognizes that individual health behaviours are influenced, at different levels, within a complex environment. It is often used in health programme planning.

2. Resources regarding the application of health behaviour theories

Leading international health agencies have adapted and applied behavioural theories via approaches such as social marketing and behaviour change communications, to implement behaviour change management projects and produce long-lasting health outcomes. Their know-how is available in the form of practical guides, tools and journal publications.

The development of TIP was particularly inspired by the work of a number of implementing health institutions.

Population Services International (www.psi.org)

A global health organization dedicated to improving the health of people in the developing world. PSI applies an innovative and result-driven integrated marketing approach to promote positive health behaviours. This approach is documented in PSI's Delta companion. Marketing planning made easy. The TIP conceptual mappings were born, in part, from PSI's bubble framework, and adapted to the area of infant and child immunization. (PSI Research

Department. Concept paper: Behaviour change framework “Bubbles”. Proposed Revision, 2004). PSI strives to regularly publish results of their behaviour-change programmes in peer-review journals. These can be consulted in their online publications catalogue (<http://www.psi.org/resources/publications>).

Communication for Behavioural Impact (COMBI)

Promoted by WHO since 2000 for planning strategic communications and social mobilization actions, COMBI proposes a dynamic approach to create measurable changes in behaviour. COMBI was first introduced in 1994 and continues to be taught annually by Dr Everold Hosein as part of the course Integrated Marketing Communications for Behavioural Impact in Health and Social Development at New York University. A step-by-step guide to COMBI is published in: Parks W, Lloyd L. Planning social mobilization and communication for dengue fever prevention and control. A step-by-step guide. Geneva, World Health Organization, 2004.

COMBI adaptation to promote timely infant immunization in Georgia

COMBI has also been adapted to infant and child immunization, in partnership with the National Immunization Programme and UNICEF, in Georgia. The communications campaign “Timely immunization is your child’s bodyguard” was launched in February 2007 and resulted in an average 16% increase in timely vaccination of children at 2, 3 and 4 months of age. IMP. Evaluation of the impact of the communication campaign on immunization — communication for behavioural impact (COMBI) in Georgia. Commissioned by UNICEF, 2008.

Johns Hopkins University Center for Communications Programmes (<http://www.jhuccp.org/>)

Johns Hopkins University’s Center for Communications Programmes partners with organizations worldwide to advance the science and art of strategic communication to improve health and save lives. The Center’s approach is documented in a number of publications. TIP reproduces tools from O’Sullivan et al. A field guide to designing a health communication strategy. Baltimore, Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs, 2003.

TIP has reproduced or adapted tools from Immunization essentials. A practical field guide. (reprinted April 2009). This guide was first developed in 2003 under the auspices of USAID-funded cooperative projects involving organizations with technical staff specialized in immunization, such as The Manoff Group Inc., John Snow, Inc. and Program for Appropriate Technology for Health.

Regarding the application of social marketing, the Turning Point Foundation’s¹ Social Marketing National Excellence Collaborative produced a series of tools on how to use marketing to change behaviour. Though examples are limited to the American context, these publications offer a good description of social marketing theory and practice.

The seminal article by Michael L Rothschild Carrots, sticks and promises: A conceptual framework for the management of public health and social issue behaviours² describes a conceptual framework for social marketing. The framework offers a method to choose the most appropriate behaviour change management responses — education, marketing or law — according to the motivation, ability and opportunity of the target to accept change, as well as other influencing factors. It argues that social marketing is an effective behaviour management approach, unique in relation to commercial marketing, education and law. (This article will be provided in a forthcoming annex to the TIP Guide).

1 The Turning Point is an initiative of the Robert Wood Johnson Foundation. For more information visit <http://www.turningpointprogram.org/>.

2 Journal of Marketing, 1999, 63:24–37 (available online at <http://www.social-marketing.org/papers/carrotarticle.pdf>).

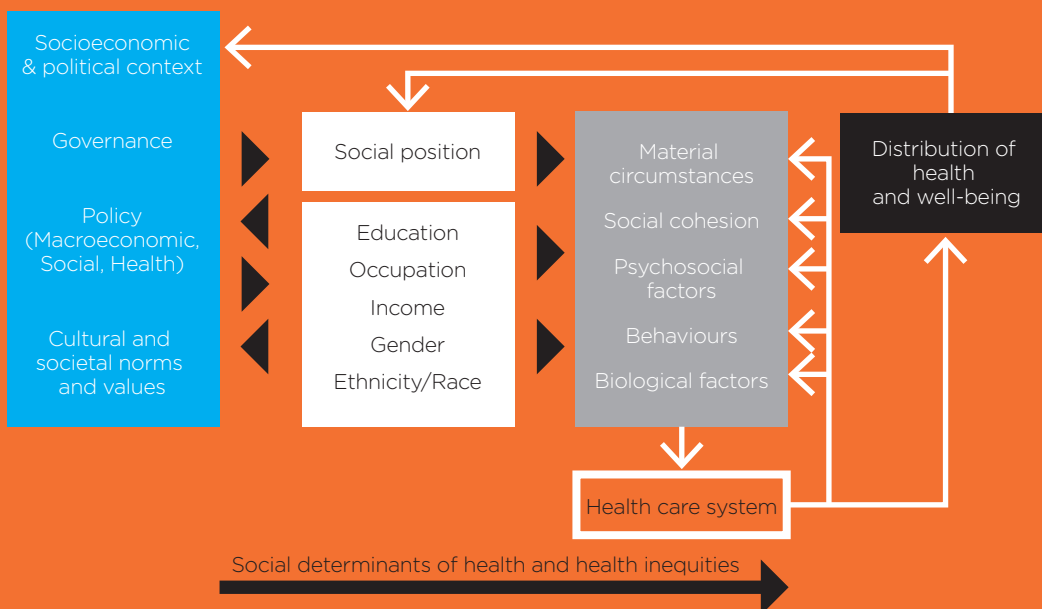
Reasons for low vaccination coverage in the European Region: Behavioural or social determinants of health?

The TIP Guide takes into consideration the context in which immunization programmes evolve and the degree of health equity and potential social determinants of health, as well as health-care seeking behaviours and actions that exist in this context. These questions have a profound effect on WHO initiatives. Health equity depends vitally on the empowerment of individuals to challenge and change the unfair and steeply graded distribution of social resources, to which everyone has equal claims and rights.

In the light of the above, we asked ourselves the question “Can the reasons behind low vaccination coverage in Europe be explained using a social determinant framework?”

Social determinants of health are the circumstances in which people are born, grow up, live, learn, work and age, and the systems put into place to deal with illness.¹ Social determinants of health help us to understand the economic, political, social and cultural conditions that influence the health of people and communities. Factors related to social position, education, occupation, income, gender and ethnicity are recognized to have an effect on early childhood development, material circumstances (availability and access to food, access to and quality of health services, housing), social cohesion and support, discrimination, psychological and social factors, behaviours and biological factors of individuals and communities. These, in turn, influence the distribution of health and well-being within a family, a community and a nation. Fig. 3 is a helpful reference to understanding the relationships between these factors.

Fig. 3. Commission on Social Determinants of Health conceptual framework



Source: World Health Organization. Commission on Social Determinants of Health (2008)

1 http://www.who.int/social_determinants/thecommission/finalreport/key_concepts/en/index.html#.

In his study of measles outbreaks in Europe, Muscat (2011) describes three categories of reasons for low immunization coverage.

1. Poor access to health care — a major factor driving under-vaccination among vulnerable communities. Individuals belonging to Roma, Sinti, traveller and immigrant communities were disproportionately affected by measles at the time of outbreaks in Europe. In some cases, the outbreak originated in these groups. Inequities in access to formal health care are documented in these communities,¹ and can, in part, explain the reasons behind low vaccination coverage.²
2. Opposition to vaccination based on the community's belief system, among those people and communities who adopt alternative health practices, for example. In this case, we can question whether vaccination decisions can be interpreted as a manifestation of their own definition of health empowerment,³ whereby a defined community is exerting its right to adopt medical preferences based on its religious, philosophical or medical belief systems (regardless of the broader medical normative interpretation of the safety of these practices).
3. Lack of information, false information, fear, distrust, competing priorities... causing hesitancy, delay, omission and opting out of the recommended vaccination schedule. The causes of non-vaccination in these cases are multiple and complex.

Social determinants of health are important to the TIP approach. Alone, however, they do not suffice in helping us understand what drives vaccination acceptance and participation in the Region. Many times, they appear in combination with a number of different factors. On the other hand, behaviour-change theories are criticized for placing sole responsibility on the individual, thereby neglecting how social determinants constitute barriers to vaccination among some susceptible populations, particularly underserved and marginalized ones, and the role institutions should play in helping to resolve these barriers.

With TIP we propose to move beyond this debate by introducing a practical framework that aims to understand and describe the reasons behind low vaccination coverage. These reasons are explored from several angles: the socio-political, institutional and health system environment that guides vaccination practices and makes vaccination possible (opportunity factors); the socio-cultural, community and medical contexts in which individuals thrive and are vaccinated (supportive and ability factors), and the personal and psychological context that influences the individual to vaccinate or not (personal motivation factors). The framework proposes that the encounter between the caregiver and the vaccination provider is a critical moment in vaccination decision-making⁴ and accordingly investigates these factors from the perspectives of both the caregiver and the vaccination provider.

The driving premise of the TIP approach is that, to successfully place vaccination as a positive and possible⁵ practice in the hearts and minds of caregivers, we first need to listen to the individual caregiver's point of view, to explore the motivational, supportive and environmental factors which influence how they live and evolve and to understand what makes this practice possible for them. TIP conceptual framework and maps offer diagnostic tools to do just this.

1 Hajioff & McKee (2000).

2 Health inequities of vulnerable groups are the result of dynamic multidimensional processes, and are tied to social exclusion and disadvantage. For an analysis of social determinants in the WHO European Region, see Marmot & colleagues (2012).

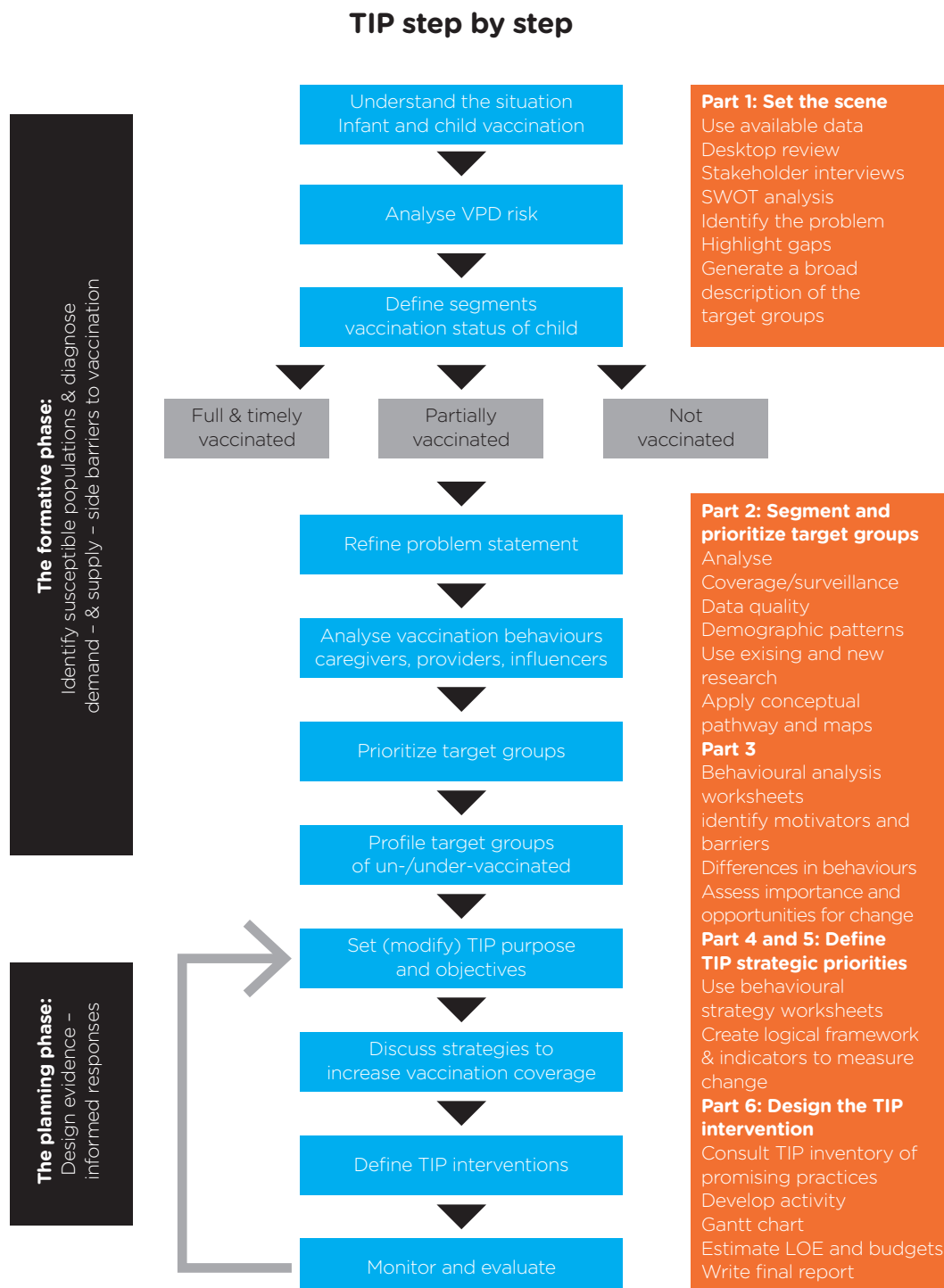
3 Empowerment is, in this case, about individuals and communities increasing control over their lives and their own health.

4 Leask & colleagues (2012); Simone & colleagues (2012); Sturm & colleagues (2005).

5 Participation in infant and child vaccination is not a result of motivation alone; vaccination services and supply are necessary for vaccination to take place.

A step-by-step approach for tailoring infant and child vaccination programmes

Fig. 4. Steps required to implement TIP



A step-by-step approach for tailoring infant and child vaccination programmes

When implementing TIP, it is important to note:

- The formative steps represent the core of the approach. Though the steps are presented in sequence, they will most likely take place simultaneously.
- The steps needed to carry out the TIP process should be modified to meet the unique needs of the Member State. TIP formative research instruments and tools must also be adapted to each Member State situation and needs.
- It is possible to apply only parts of the TIP process. This will depend on how much is already known about the Member State's immunization situation. For example, if a Member State has already defined its strategic priority, for example, to increase vaccination coverage among a specific ethnic community, TIP can be used to analyse motivators and barriers to vaccination within that specific segment of the population, refine the purpose and objectives of the TIP intervention, and propose tailored responses.

When a Member State intends to implement TIP, it may request that WHO/Europe collaborate in the following manner:

1. Pre-mission to Member State: WHO/Europe can visit and assist by presenting the TIP guide, exploring and/or helping to confirm the need to apply the approach, in partnership with the national immunization programme.

2. During the formative phase, WHO/Europe can assist by conducting a review of the immunization situation. This includes a segmentation analysis of the population according to infants' and children's vaccination status.

3. Working closely with the Member State, WHO/Europe can provide tools for, assist in commissioning, or use results of formative research to apply the TIP conceptual framework and maps. This information can then be used to prioritize and profile key target groups and determine associated motivators and barriers to vaccination.

4. At the time of the planning phase, WHO/Europe can provide guidance in conducting a behavioural analysis, determining TIP objectives, and deciding which strategies to put in place to respond to these objectives. WHO/Europe can help guide the Member State to a number of recommended strategies, using the inventory of promising practices in immunization.

5. When the Member State implements the proposed intervention, WHO/Europe can work with the implementing team to review monitoring data, lessons learnt and road blocks, as well as to formulate recommendations for improvement.

At the phase of evaluating the TIP programme by the Member State, WHO/Europe can not only help with advice on the evaluation objectives, methodologies and experts to contract, but also be supportive at the presentation of evaluation findings and provide counsel on what needs to be maintained or changed within the immunization programme. Results from monitoring and evaluations can then be used to review and, when necessary, modify the initial behavioural objectives and strategies. Where possible, it is recommended that the Member State publish the findings of the TIP intervention as this will be helpful to other Member States. WHO/Europe can help with this if needed.

Prerequisites for the application of TIP are:

- desire to maintain or increase existing levels of vaccination coverage;
- low immunization coverage (<95%) within specific geographic areas or populations;
- availability of this information;
- political will and support for this initiative;
- funding;
- competent and dedicated people to carry out the process, including a TIPS point person leading.

Make sure that the scope of work is realistic in terms of the Member State's potential to contribute and the availability of the decision-making authority.

3. THE FORMATIVE PHASE. IDENTIFY AND DIAGNOSE

In the formative phase, the TIP team will:

- assess the strengths, weaknesses, opportunities and threats of the national immunization programme and uncover a range of immunization issues that can be addressed;
- identify susceptible populations, providing an estimation of the size of three segments within the populations — those that are fully and timely vaccinated, partially vaccinated and not vaccinated;
- diagnose supply- and demand-side barriers to vaccination and identify key influencers in the vaccination decision-making and implementation process;
- prioritize sub-segments to target and create profiles for each one, based on an in-depth behavioural analysis of each targeted group.

All of the above will allow the TIP team to identify and prioritize problems in a systematic and thorough manner. The formative steps are difficult but critical. Identification of your target, understanding their knowledge, perceptions and practices and writing... precise (...) objectives should take around 80% of your planning time.¹

1 Parks & Lloyd (2004).

Part One: Setting the scene; determine the role of TIP

The first task in the TIP process is to understand the Member State's institutional, political and social contexts for immunization and VPDs, and to clarify the role TIP can play within these contexts.

This can be done in two steps. 1) The first step is an assessment of the current immunization programme environment, including a strengths, weaknesses, opportunities and threats (SWOT) analysis. 2) The second step uses this information to identify or confirm and clarify problem areas, to create a problem statement and a situation summary.

Step One: Assess the current immunization situation

A thorough review of the current immunization situation serves as a backdrop, setting the scene for the TIP process. Depending on the Member State's needs, this review can be conducted:

- at the national and regional levels, to generate a general understanding of trends in low vaccination coverage;
- within a particular part of the country or a sub-population with low vaccination coverage, to examine issues as they relate to that population.

It enables the WHO/Europe TIP consultant to:

- conduct a preliminary segmentation analysis based on the risk of VPDs, using immunization coverage and the health management information system (HMIS) data¹ (the segmentation process is described in Part Two of this section);
- analyse the NIP strengths, weaknesses, opportunities and threats (SWOT);
- identify important stakeholders and potential interventions;
- determine key challenges in reaching immunization goals and convert them into strategic priorities;
- recognize where the gaps in information about the problem or issue lie, and plan for additional research that can be applied for the intervention.

It is quite possible that the European Region Member State, having conducted an analysis of the situation, is already aware of where the challenges lie.

In this case, setting the scene allows us to confirm and clearly express the problem statement, in terms of:

1. What is happening (what are people doing or not doing) that is a problem?
2. Where and when does this usually take place?
3. Whom does it affect?
4. What are the primary effects of the problem?
5. What are the possible causes?

1 When analysing or reviewing coverage data, it is strongly recommended that you verify the quality of the coverage data, discuss its potential limitations and review the analysis of data and inferences that have been made by the Member State. This will assist in clarifying the evidence used to formulate the problem statement.

Examine available information on infant and child vaccination

Table 1 provides a list of questions to guide information collection in the context of infant and child vaccination. These data can be collected from a variety of sources, using methods such as desktop research, key informant interviews and participatory workshops.

Table 1. Questions to help assess current immunization situation

Area of inquiry	Questions	Sources of information
<i>Vaccination, coverage and trends</i>	<p>What is the national immunization schedule?</p> <p>What is child vaccination coverage to-date?</p> <p>What is the DTP1–DTP3 drop-out rate?</p> <p>To what extent are delays in vaccination apparent?</p> <p>What is the quality of vaccination coverage data? How is it assessed?</p> <p>What potential limitations are there in the data?</p> <p>What are the prevalence and incidence of VPDs? What, if any, outbreaks have occurred? Where? Among whom?</p> <p>Who is not participating in child vaccination services?</p> <p>What do we know about these children and their families?</p> <p>Are there specific geographic areas that are more susceptible to VPDs because of low coverage or high drop-out?</p> <p>What areas or sub-populations do we want to prioritize and why? What is contributing to low coverage?</p>	<p>Demographic and health surveys</p> <p>Multiple indicator cluster survey</p> <p>National-, regional-, district-level immunization data</p> <p>Health, maternal and child health, immunization surveys and research</p> <p>Disease surveillance data</p> <p>Key informant interviews with MOH/EPI, INGO/NGO and medical representatives</p>
<i>Important stakeholders and potential partnerships</i>	<p>Who are the principal stakeholders?</p> <p>Who will be affected by a project to raise vaccination coverage among...?</p> <p>Who can potentially influence a project?</p> <p>Which individuals, groups or agencies should be involved?</p> <p>What roles can these stakeholders play in promoting immunization?</p> <p>Whose capacity needs to be built to participate in the intervention?</p>	<p>EPI review, cold-chain assessments, surveillance assessments</p> <p>Country multi-year plans (CMYP), recent GAVI applications, national immunization policy</p> <p>Immunization surveys and research reports</p> <p>Key informant interviews with MOH/EPI, INGO/NGO, medical, religious, community-based and other participating representatives</p>

<i>NIP programme</i>	<p>What are the NIP strengths?</p> <ul style="list-style-type: none"> • Immunization systems organization • Provision of routine immunization • Training/capacity building • Monitoring and surveillance • Vaccine supply and quality (effectiveness) • Cold-chain logistics • Injection safety • Disease surveillance 	<p>EPI reviews CMYP, national immunization policy</p> <p>Key informant interviews with MOH/EPI, INGO/NGO and medical representatives</p>
	<p>What NIP weaknesses most limit coverage? How is the NIP addressing these weaknesses? How is the NIP addressing limitations in coverage?</p>	
<i>Government policy</i>	<p>What national legislation, strategies and policies guide immunization? How do they address current challenges in immunization coverage?</p> <p>What is the political climate with regard to immunization issues, and to the target groups most affected by low immunization coverage?</p>	<p>National laws, strategies, policies and protocols addressing issues related to vaccination and immunization, as well as target groups</p> <p>Key informant interviews with MOH/EPI, INGO/NGO and medical representatives</p>
<i>Internal resources</i>	<p>What internal resources are available for immunization, in terms of budget, funding sources, procurement, people, time, infrastructure and access to target groups?</p> <p>What expertise is available in the Ministry of Health (MOH) to implement and/or manage the TIP process, as well as programmatic and communications activities recommended as a result of the process?</p>	<p>MOH financial budget and personnel structure</p> <p>Consultation with MOH and EPI</p>
<i>Donor resources</i>	<p>What outside resources are available? Which donors currently provide funding for childhood immunization? To what extent can this funding be leveraged to improve immunization coverage?</p> <p>When funding is available, what are donor expectations?</p>	<p>Donor strategies and reports Key informant interviews with donors, private sector and INGOs</p>

Lessons learnt	<p>What activities has the NIP put into place to increase acceptance of, and participation in, vaccination services? Which populations are targeted? Why? What has worked? What has not worked? What recommendations and/or next steps have been drawn from these experiences?</p>	<p>EPI review, NIP reports</p> <p>Key informant interviews with MOH/EPI, INGO/NGO and medical and other participating representatives</p>
Changes in vaccine market & technology	<p>What, if any, changes in vaccine and vaccination have taken place and affected the immunization programme, for example:</p> <ul style="list-style-type: none"> • introduction of new vaccine products (number of antigens or new vaccines); • new types of administration (injection versus oral); • new manufacturer? 	<p>MOH stakeholder and supplier interviews</p> <p>Market reviews</p>
Changes in social patterns	<p>What changes in population, demographic or economic profiles and lifestyle factors affect gaps in immunization coverage?</p>	<p>Population, lifestyle, health research and reports</p>
Media environment and communications channels	<p>What is the prevailing media environment on children's health and well-being, and on childhood immunization? What, if any, negative press exists regarding vaccination or the health system? Is there an active anti-vaccine lobby? What types of communication channels are most available? Which are the most versus the least trusted? How many people does each channel reach? How frequently?</p>	<p>Key informant interviews with MOH/EPI, INGO/NGO and medical and advertising/communications representatives</p> <p>Media-use surveys</p> <p>Target group interviews</p>
Partnering with communities	<p>To what extent do health facilities partner with communities on immunization:</p> <ul style="list-style-type: none"> • in planning, in tracking children's vaccination status; • in promoting immunization and services; • in providing services; • in monitoring and obtaining consumer feedback on services? 	<p>National, regional, district and health-facility plans and micro-plans</p> <p>Key informant interviews with a small sample of health system and community representatives</p>

Target groups' knowledge, attitudes and behaviours	What is known of target groups' knowledge, attitudes, practices (KAP) with regard to childhood vaccination? What KAP motivates caregivers to vaccinate their children? What KAP prevents them from doing so?	KAP surveys and research with target group Key informant interviews with MOH/EPI, INGO/NGO and medical and other participating representatives
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Conduct a SWOT analysis of the current NIP

Using the information available, the SWOT exercise examines the immunization situation, reflects on what works and what doesn't work, and puts the potential problems into perspective.

A SWOT analysis will yield two lists: 1) a list of opportunities and threats (OT); 2) a list of the programme's chief strengths and weaknesses. Once these lists are generated, the information is then inserted into a SWOT table (Table 2). The analysis can be carried out by means of a facilitated meeting or generated by the TIP consultant(s) and point person. Discussions and the resulting SWOT table should be documented for future use.

Table 2. SWOT table

	Helpful	Harmful
Internal (attributes of the organization)	Strengths What does the NIP do well?	Weaknesses What in the NIP needs improvement?
External (attributes of the environment)	Opportunities What are the promising opportunities facing the NIP?	Threats What obstacles does the NIP face?

Opportunities and threats (OT) are factors that are external to the programme. They provide clues as to which programmatic strengths and weaknesses require attention.

Questions that help generate the OT list are:

- What are the opportunities facing this programme? What interesting trends are you aware of? (These trends can emanate from changes in technology and markets, government policy, social patterns, population profiles and lifestyle or local events).
- What obstacles does your programme face? Are there changes in policy, services, population preferences or funding that challenge your programme?

Strengths and weaknesses refer to factors that are internal to the NIP. Questions to identify strengths include:

- What does the NIP do well?
- What do key NIP stakeholders (institutional, community) see as the programme's strengths?
- How has the NIP been able to adapt to changes (new media, health-sector reform, etc.)?

Questions to identify weaknesses can include the following.

- What can the NIP improve?
- What does the NIP do poorly?
- What should the NIP avoid?

Step Two: Determine the problem to address and create a summary of the situation

At this stage of the formative process, the situation analysis has generated a list of issues that can be addressed.¹ Possible problems to address in the European Region include the following.

1. Immunization coverage for MMR and pertussis is sub-optimal at the sub-national level and in pockets of the population.
2. Transmission and outbreaks of measles are increasing. The primary reason for this is failure to vaccinate. Outbreaks of pertussis are also occurring in the Region.
3. Caregivers are questioning the value of immunization and hesitating to vaccinate their children. Distrust in government regarding vaccination initiatives is growing.
4. Political support for immunization programmes is stagnating.
5. Surveillance systems in place are underperforming; health workers and caregivers do not always identify and/or report VPD cases.
6. Immunization communications and advocacy activities are not targeted and have weak outcomes.
7. Financial resources are limited to both respond to outbreaks and to increase coverage.
8. Intermittent stock-out of basic vaccines.

The next step in the process will be to choose the key problem or problems to be addressed by the national immunization programme and subsequently identify the one that the TIP process will focus on. A problem statement and situation summary can then be elaborated. Tables 3 and 4 present a problem statement and a situation summary that emerged from the exploratory workshops with stakeholders held in Sofia, Bulgaria in September 2012.

1 UNICEF/WHO (November 2000).

Table 3. Example of TIP problem statement

TIP problem statement - Bulgaria (September 2012)	
<i>What is happening?</i>	Low immunization for measles among pockets of the Bulgarian population.
<i>Where and when does this usually take place?</i>	The measles outbreak in 2009–2010 originated within and affected predominantly poor, vulnerable residential neighbourhoods in Bulgaria, labelled as “Roma”.
<i>Who does it affect?</i>	Un- or under-vaccinated children and adults from the most vulnerable, marginalized households in Bulgaria, including a large proportion labelled “Roma”. Children under 12 years of age. (The Bulgarian immunization schedule plans for two doses of MMR: at 13 months and at 12 years of age.)
<i>What are the primary effects of the problem?</i>	The outbreaks resulted in over 21 800 measles cases in 2010. They caused hospitalizations, illness and deaths, augmented the socio-economic burden of disease on families, and may have contributed to heightened discrimination.
<i>What are the possible causes?</i>	Poor access, distrust, competing household priorities of vulnerable populations. Stigma, lack of counselling and communication, and poor mediation, outreach and tracking among primary health-care physicians.

Table 4. Example of TIP situation summary

TIP situation summary – Bulgaria (September 2012)	
Health problem	Low immunization for measles among pockets of the Bulgarian population.
Potential primary beneficiaries	Un- and under-vaccinated children aged 12 years and below (and their caregivers).
The key challenges we should focus on	
Challenges associated with the target group's knowledge, attitudes and behaviours	Poor awareness and knowledge of antigens and diseases they protect from (including measles). Repeated visits are required to meet requirements of the national vaccination schedule. Competing priorities lead to missed vaccinations. Worries and misconceptions about side-effects and safety of certain antigens.
Challenges related to being able to communicate effectively	Low literacy and numeracy, language ability and health culture among vulnerable populations (e.g. "Roma"). Low self-efficacy of "Roma" vis-a-vis medical practitioners and institutions.
Challenges related to creating circumstances that make it easier for the target group to take desired action	Lack of trust between caregiver and primary health-care physicians. Poor ability of primary health-care physicians to communicate effectively with "Roma". High opportunity costs ¹ associated with repeated visits to general practitioners (GPs).
The key opportunities we should focus on	
Opportunities associated with the target group's knowledge, attitudes and behaviours	Caregivers want to provide for and protect their children. Measles outbreaks left reminders of the severity and threat of this VPD in some communities.
Opportunities related to being able to communicate effectively	Health mediators in many areas play an important role in facilitating household-physician interactions. Current low level of targeted media reach might make any initiative in this area new and attractive. (However, care should be taken to avoid stigmatizing the community).
Opportunities related to creating circumstances that make it easier for the target group to take desired action	Wide physician network; incentivizing physicians to conduct outreach has been effective in some municipalities. Vaccine supplies are readily available. Legislation has incentivised childhood vaccination (in exchange for social benefits). Good relationships exist between health mediators and GPs.

¹ Opportunity costs are defined as a benefit, profit or value of something that must be given up to acquire or achieve something else. For example, the multiple costs required to bring a child to be vaccinated could be defined in terms of other siblings' safety, should the caregiver leave them at home without adult supervision; the financial costs of bus fares; the loss of work or participation in an income-generation activity; etc.

Realities (unchangeable factors that might limit our effectiveness)

A long-standing history of social inequities, discrimination, low self-efficacy and distrust is at play within vulnerable communities in Bulgaria.

The strategic priority – we expect we can make the following contribution to achieve the desired health outcome

To increase vulnerable families' understanding and timely participation in childhood vaccination.

Identify and address gaps in available information. The TIP consultant can define and commission primary research with priority target groups, according to the target groups' needs.

Use Parts Two and Three of this section to guide you in defining the scope of your primary research.

A forthcoming annex to the TIP Guide will provide resources on using research to explore, monitor and evaluate vaccination behaviours to further help you in defining the types of research you will require.

Part Two. Segment populations susceptible to VPDs: prioritize those you will target

The process of segmentation and target-group prioritization addresses four major areas of inquiry.

1. Susceptibility of populations

Which segments are most likely to be at risk of contracting VPDs? How large are these segments? Are they clustered?

2. Determinants of behaviour

What factors influence these segments' vaccination practices? What role do health workers play in caregiver decision-making? Who are the other influencers of vaccination decision-making?

3. Degree of opportunity

Which segments are easier to reach and to affect?

4. Targeting

Which are the priority target groups and how can my programme reach them?

Overview of segmentation

Segmentation is a critical step in the formative phase of the TIP approach. Segmentation is a process that divides what is initially a large, heterogeneous population into smaller segments or groups, each of which comprises individuals who are alike in certain ways and are likely to respond to a particular stimulus in a similar manner. The underlying rationale for segmentation is that there is opportunity to identify a group of individuals with a greater likelihood to undertake a given act, and to direct a message to that group, rather than direct a more broad-based message to a larger population, which is less likely to act.¹

1 "Targeting the general public is like using scattershot ammunition to try to hit a bull's eye. It is possible, but not very efficient." Weinrich (1999). See also Opel & colleagues (2009).

Borrowed from marketing practices, segmentation lends itself well to immunization programmes where, because of generally high vaccination rates in the European Region, strategically tailored interventions are necessary to reach caregivers of children who are not fully vaccinated against VPDs and are therefore more susceptible to them.

Segmentation for immunization helps to:

- divide a given population into sub-groups or segments;
- identify sub-segments that are most reachable and position vaccination for each of them;
- create a profile for each sub-segment to help focus your thinking and to keep track of how well you are reaching them;
- spend resources more efficiently through targeting.

Segmenting based on infant and child vaccination

The most effective variables to use for segmentation are those that will capture most effectively the differences between “doers” and “non-doers”. For example, to segment among populations susceptible to VPD, we can employ the vaccination status of a child as a first-level variable for segmentation.

Taking into account that full, timely vaccination is the desired outcome, three main segments can be differentiated using vaccination-coverage data. These segments are labelled as children who are:

- fully and timely vaccinated — the infant or child has received, for a given age, all recommended vaccinations according to the official vaccination schedule;
- partially vaccinated — the infant or child has received some, but not all, of the recommended scheduled vaccinations for a given age (this category includes both drop-outs and delays in vaccination);
- not vaccinated — the infant or child has never received any vaccinations.

This initial segmentation is necessary, but not sufficient. The categories give us a proportion of the differences in parental vaccination behaviour, but are too broad for us to understand the reasons behind these differences. To further differentiate and target groups within these categories, TIP proposes to look at vaccination of infants and children through a number of other variables, explored through the lens of their caregivers’ knowledge, attitudes and behaviours.

Indeed, children may have not been vaccinated for a number of reasons: parental fear of adverse events; low perception of the risk of VPDs; lack of practical knowledge regarding vaccination services; distrust in the underlying motivations of vaccination programmes; alternative health beliefs, etc. More in-depth analysis is needed for each segment, to clearly understand the drivers of this behaviour and the barriers and conduits to vaccination. It is only then that target groups can be described² and prioritized. The pathways and mapping of vaccination decision-making offer a framework to explore the determinants of these behaviours.

2 The TIP approach aims to create a profile-type for each sub-segment that is targeted. A profile-type paints a detailed picture of a typical member of the target group in question. It is intended to help better understand target groups and design effective interventions that reach out to them. The use of profile-types is not meant to over-generalize or over-simplify their realities which, as one reviewer notes, could lead to the creation, or contribute to the use of, stereotypes. In light of this, it is important that immunization programming ensures regular target-group involvement in the planning, design and assessment of its programmes.

Table 5. Some variables to consider in segmenting populations in the TIP process

<i>Epidemiology and coverage of vaccination</i>	Vaccination coverage for each type of antigen, VPD surveillance data
<i>Demographics</i>	Age, sex, family size, family life-cycle, income, occupation, education, religion, ethnicity, nationality
<i>Geographic</i>	Region, county size, city, density, climate
<i>Socio-cultural</i>	Culture, religion, community, lifestyle
<i>Psychological</i>	Personality, individual cognitions, ¹ decision-making, experiences
<i>Behaviours</i>	Use, non-use or interrupted use of vaccination services, occasions and benefits of behaviour, status of use, intention to use, readiness to change
<i>Attitudes</i>	To life in general, health care, child health, vaccination and vaccines ²
<i>Communications and use of media</i>	Trusted sources of information, preferred channels of communication, best time to reach target groups

1 For information on psychological influences on decision-making, see <http://www.ncis.edu.au/immunisation/education/mmr-decision/links.php>.
For example, vaccination behavioural researchers in the USA and Europe named a heuristic among caregivers with regard to childhood vaccination, which provides an explanation as to why some caregivers choose not to vaccinate their children. Omission bias. With omission bias, caregivers anticipate experiencing an excessive degree of responsibility or guilt should an adverse event occur from vaccination; for this reason they choose NOT to vaccinate (omission) rather than vaccinate (commission) their children. These caregivers err on the side of caution rather than accept the risk, however minimal, of an adverse effect occurring from a vaccine. "Until they find a safe vaccine, 1:300 000 is still too large. I wouldn't play Russian Roulette with my child." (Caregiver choosing not to vaccinate her child, quoted in Sturm, 2005).

2 A typology of parental attitudes or "positions" with respect to concerns regarding the necessity and safety of childhood vaccines is proposed in Leask & colleagues (2012), based on population surveys or registers from Australia, the European Union, New Zealand and the USA. Five types or positions are defined. These are the unquestioning acceptor (30%-40%), the cautious acceptor (25%-35%), the hesitant (20%-30%), the late or selective vaccinator (2%-27%) and the refuser (less than <2%).

Segmenting vaccination coverage within vulnerable communities in Bulgaria

The Member State may already know which segment of the total population it wishes to focus on. For example, the Bulgarian MOH identified vulnerable, segregated communities, including Roma, as the priority target group for the TIP pilot project. WHO/Europe facilitated the situation and SWOT analyses, paying particular attention to this segment, and wrote the draft problem statement identifying un- and under-vaccinated children from these communities as the key target group (Tables 3 and 4).

Subsequently, WHO/Europe and the Bulgarian MOH, following a competitive bidding process,¹ selected and commissioned The Open Society Institute (OSI) – Sofia to carry out formative quantitative and qualitative research within a representative sample of the target population. The main objective of the research was to describe the influences of uptake, delay or absence of infant/child vaccination among caregivers of children aged below two years from the vulnerable communities.

The survey was conducted in the last quarter of 2012 in six segregated neighbourhoods; three of the largest urban quarters in Bulgaria Iztok (Pazardahik), Lozenetz (Stara Zagora) and Nadezhda (Sliven), and three villages (in separate municipalities) with a Roma population of over 1000 inhabitants. Children's vaccination coverage was assessed, with the consent of vulnerable families, using caregivers' reports and consultation of the children's vaccination cards. With the permission of caregivers, researchers then verified each child's vaccination status with his/her GP.

Overall, most caregivers (70%) gave permission to OSI-Sofia to contact their GPs.

The analysis of findings shows that partial vaccination appears to be the main driver of vulnerable children's susceptibility to VPDs in these communities.

- Caregivers reported that 75.8% of children were up-to-date on their vaccinations, 19.2% had missed at least one scheduled vaccination for their age and no children were unvaccinated.² Five percent (5%) of caregivers did not know what their children's vaccination status was.
- The GPs' reports were slightly more positive³ regarding vaccination coverage, stating that 82.5% (urban) and 83.3% (rural) of surveyed children had received all scheduled vaccinations for their age, and 16.7% (rural) and 17.5% (urban) were missing at least one scheduled vaccination.
- A simple comparison was made between the proportion of children having received the scheduled vaccine and the proportion of all children of the corresponding age. This comparison revealed that the likelihood of missing vaccinations from one month of age onwards increases with the age of the child. Indeed, the very first vaccinations an infant receives in Bulgaria are provided in a controlled hospital setting just after the mother delivers. Subsequent scheduled vaccinations are administered at the time of children's medical visits with their chosen GP. Fig. 5 provides an example of this pattern for the settlement of Silistra, Filip Totiu.⁴

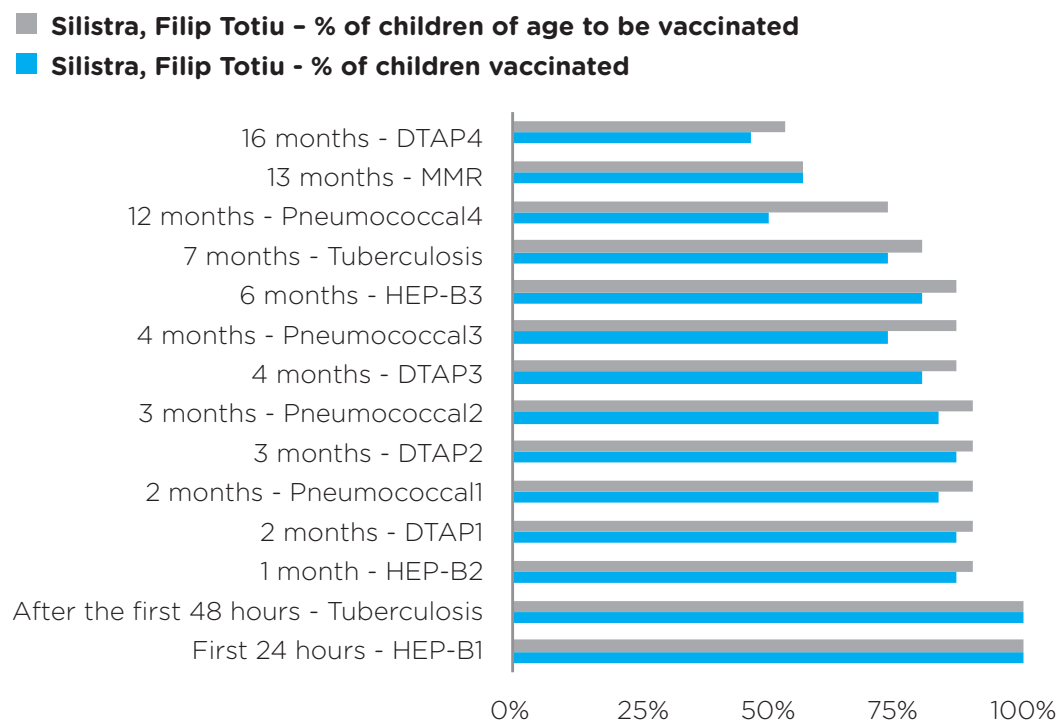
1 The Terms of Reference used to invite proposals from social research agencies is included in the Annex.

2 Though the data indicates that there were no children who had never been vaccinated, Regional Health Inspectorate representatives and GPs report rare cases of children who are not on GP patient lists.

3 OSI-Sofia cautions that the higher rate of complete and timely vaccination may be the result of GP performance bias.

4 Because the cluster subsamples were very small, and not convenient for a regression model or analysis of variance (ANOVA) analysis, a simple comparison was made. These findings are not statistically significant.

Fig. 5. Proportion of children at various ages who had received MMR, tuberculosis, pneumococcal and hepatitis B vaccines in Silistra Filip Totiu, 2012



Unravelling the segments to target

The paragraphs below discuss the steps in the TIP approach to segment populations based on infant and childhood vaccination practices and identify the segments to target.

Two databases can be consulted for data on vaccination and VPD in Europe

1: WHO/Europe's Centralised information system for infectious diseases (CISID). This is the main surveillance platform for the WHO European Region, offering information on communicable diseases, immunization coverage and current outbreaks in the 53 Member States. It includes sub-national data for selected items.

2: The European Surveillance System (TESSy), managed by the European Centre for Diseases Control (ECDC), collects monitoring data on transmission of communicable diseases from 29 European countries. TESSy informs on gender, age, date of onset, mode of transmission, complications and outcomes for each case.

Step One: Assess susceptibility and estimate the size of populations susceptible to VPDs

A child is considered susceptible to being infected with a VPD when he/she has not received the recommended vaccinations to acquire immunity, according to the national immunization schedule, or has not gained immunity naturally.

For the purpose of TIP, susceptibility can be assessed using the vaccination status of the child.

- Fully and timely vaccinated: for a given age, the infant or child has received all recommended vaccinations according to the official vaccination schedule, within four weeks of the recommended age.
- Partially vaccinated: for a given age, the infant or child has received some, but not all, of the recommended scheduled vaccinations and is more than four weeks beyond missing at least one. (This category includes both drop-outs and delays in vaccination).
- Not vaccinated: the infant or child has not received any vaccinations.

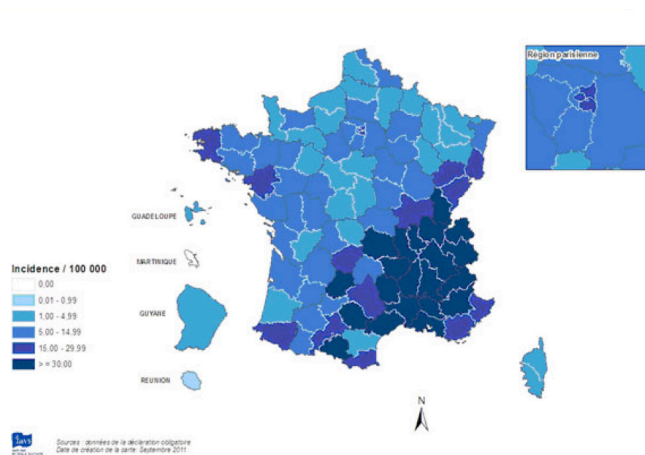
Step Two: Use available data to reveal geographic and demographic patterns

Once the size of the susceptible populations and of each segment is assessed, vaccination-coverage data is analysed to reveal possible geographic and socio-demographic patterns.

Indeed, if vaccination coverage is reported to be low in one geographic area, it is recommended that the area receive increased attention. Regional differences can be identified using regional vaccination-coverage data when available. VPD surveillance data can also indicate areas of low coverage or of high susceptibility.

Distribution and spot maps of measles cases by geographic region, for example, reveal where there is low vaccination coverage. The map presented in Fig. 6 depicts the geographic distribution of measles cases in France from 1 August 2010 to 31 July 2011.

Fig. 6. Geographic distribution of measles cases in France, 1 August 2010 to 31 July 2011



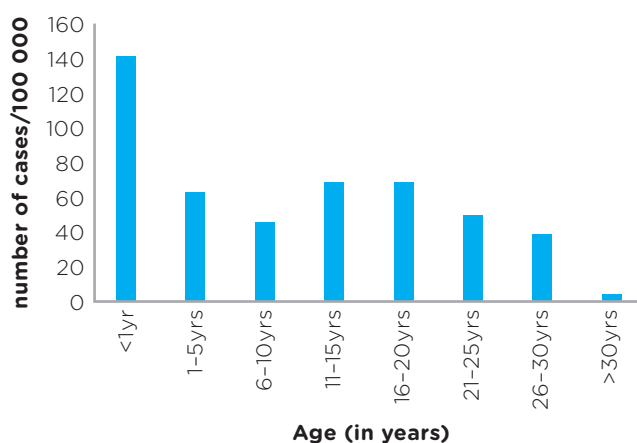
Source: Institut de Veille Sanitaire (2011)

Finally, reports in lay press about VPD occurring in a community offer additional pointers to geographic areas where there is low coverage, but must be interpreted with caution and verified.

Socio-demographic segmentation

A quantitative survey on vaccination/immunization (for example, a sub-national survey that provides data on relevant target populations) can be used to analyse the socio-demographic and health-related determinants of childhood immunization coverage.¹ Socio-demographic information can also be gleaned using information collected on VPD cases. Fig. 7 provides an example of the incidence of measles in France.

Fig. 7. Measles cases by age groups in France, 1 August 2010 to 31 July 2011



Source: Institut de Veille Sanitaire (2011)

Step Three: List your core target groups and who influences them

Traditionally, social and behaviour change communication programmes distinguish between primary target groups and secondary target groups. Primary target groups are those that will constitute the core of your “business”; those who will generate most results in terms of impact. Secondary target groups are the smaller segments you want to reach, as well as the individuals who are capable of influencing, informing, persuading and/or supporting your primary target groups.

Table below lists broadly defined primary and secondary target groups for increasing vaccination coverage. The process of segmentation will provide opportunities to write a more refined definition and description of the primary and secondary target groups, based on their characteristics, and will enable you to prioritize which ones to target and so better tailor your programmes.

¹ Swiss Centre for International Health for WHO/IVB (2010).

Table 6. Examples of primary and secondary target groups

Primary target groups	Secondary target groups
<i>Impact most directly the objectives of the programme</i>	<i>Influence, support, inform and persuade members of the primary target groups</i>
<i>Primary caregivers of children aged XXX to XXX who are either partially-vaccinated or not vaccinated.</i>	<i>Grandparents Siblings Religious/spiritual leaders Community leaders</i>
<i>A primary caregiver is defined as the adult who is legally responsible for the child, and makes decisions regarding their health, including vaccination, e.g. mother, father, foster caregiver or grandparent.</i>	<i>Women's groups Antenatal care (ANC) providers Traditional birth attendants/midwives Schools Day care centres Health insurance companies</i>
<i>Primary-care physicians, paediatricians or health workers. Trusted source of information for caregivers, who provide care, including vaccination, to infants and children.</i>	

Step Four: Understand caregivers' vaccination-related behaviours and the role vaccination providers (and other influencers) play

Behavioural segmentation is an essential step in the TIP targeting process. It generates a detailed understanding of the determinants of caregivers' infant and child vaccination behaviours. Primary research, combining qualitative and quantitative methodologies and conducted in the context of the TIP approach, sheds light on the variables that significantly influence these behaviours, and thus pinpoints possible key variables on which programmes can intervene to effect behaviour change.

Behavioural segmentation
is guided by the conceptual framework presented in Chapter Three of this Guide called Pathway and models for mapping caregiver use of childhood vaccination services.

Segmentation based on behavioural determinants can take place within a sub-segment of the population (specific geographic area and/or within a specific socio-demographic segment) based on where the greatest risk has been identified in the previous stages of the segmentation process.

Behavioural segmentation allows sub-segments of susceptible populations to be profiled, and offers a greater understanding of:

- what drives caregivers to participate in infant and child vaccination services;
- what prevents caregivers from participating in infant and child vaccination services;
- what alternative practices caregivers who are not vaccinating their children adopt to protect their children from VPDs.¹
- what drives or prevents health workers from recommending or providing childhood vaccination to caregivers;
- who else influences caregivers' vaccination decisions and what roles do the other influencers play?

¹ These are COMPETING BEHAVIOURS. There are generally two alternative options to the behaviour that is promoted — do nothing against a particular risk or do something else, which does not necessarily reduce the risk or which can introduce new risks. "Many social managers are (...) presumptuous when they assume that they are operating in an environment devoid of competition; free-choice, apathy, and inertia are powerful competitive forces that often are ignored. Social managers must recognize that there is always competition. For every choice there is an alternative: to be or not to be, to binge drink or drink in moderation, to exercise or remain a "couch potato." See Rothschild (1999) p.28.

Immunization Essentials. A Practical Field Guide¹ published by the United States Agency for International Development (USAID) provides a helpful behavioural analysis worksheet to help you think through and document these questions. Information for each target group is organized around four themes:

- current vaccination behaviour;
- desired vaccination behaviours;
- barriers to vaccination;
- motivating factors that promote vaccination.

Step Five: Explore target groups' use of media and communications

Understanding target groups' use of media helps you to plan how best to use available communications channels to contribute to increasing vaccination uptake. The research should include questions to identify the most trusted channels and the best moments to reach the target audience with information on infant and child vaccination.

An analysis of media and communications can draw from:

- reviews of communications efforts that are already taking place and their effectiveness;
- results from surveys or audits of communications channels and media;
- interviews with advertising and communications agencies;
- information on target groups' access to and perspectives on communications and media;
- analysis of programming in selected media sources.

Step Six: Prioritize the sub-segments to target

Targeting is the process that determines how many and which segments to serve. The selection of target groups lays the foundation for developing the TIP purpose and objectives, and positioning the comprehensive mix of strategic activities of the vaccination programme. The TIP team may choose to target one sub-segment only, or several sub-segments. Where several groups are targeted, it is necessary to differentiate the strategy according to the specificities of each one.

Step Seven: Transform your core target groups into real people: profile-typing

It is now possible to use the descriptive characteristics of each of your target groups to create an illustrative profile. This is presented in the form of a descriptive profile of an individual who embodies the characteristics of the target group and tells their story. Transforming data from the information you have collected into a real person encourages creativity and guides decision-making when it is time to design the TIP response and communications messages.

1 <http://www.mchip.net/node/494>.

Target the fence-sitters

In a Comment published in *Nature* (473:26 May 2011), Julie Leask* argues the need for governments of industrialized nations to target hesitant caregivers in their immunization campaigns. In the introduction to this article, she asks the reader to imagine a hesitant caregiver, Emily. This example tells the story of how Emily's concerns lead her to seek vaccination information in the most convenient place for her — the internet. It also speaks to the necessity to design approaches which ensure that the target group and individuals base their vaccination decisions on credible and trustworthy sources.

Picture Emily, a new mother, whose healthy eight-week old baby is scheduled to receive vaccines against up to eight diseases that Emily has never seen. Emily feels wary of expert knowledge. She is concerned that the vaccines could weaken her baby's immune system and is anxious about the technologies of modern life. Prosaically, she feels daunted by the trip to a clinic full of sick people where there might not be anywhere to change or feed her baby comfortably.

Emily seeks information online. Three of the first ten search results link vaccines to problems such as allergies, autism, diabetes and cancer. One might expect Emily and many other new caregivers in industrialized countries to be rejecting immunization.

*National Centre for Immunization Research and Surveillance, School of Public Health, University of Sydney.

Part Three: A pathway and models for mapping caregiver use of childhood vaccination services

How to use these conceptual maps

The conceptual pathway and maps presented below serve as a framework¹ to guide the planning and implementation phases of integrated marketing and communications design for vaccination programmes.

They aim to provide a checklist of possible variables that influence participation in infant and child vaccination, and that should be taken into consideration to effect vaccination behaviour change. They aim to provide actionable items.

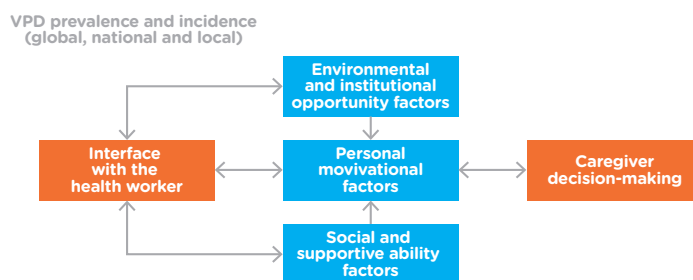
1. Guide formative research (quantitative and qualitative) with caregivers and vaccination providers.
2. Facilitate the identification of key determinants that influence participation in infant and child vaccination in a given context; these are determinants that encourage or discourage vaccination uptake.
3. Segment and profile target groups by highlighting key variables that distinguish them from each other.
4. Track changes in knowledge, attitudes and behaviours or practices of target groups, as a result of the TIP programme.

It is expected that the guiding conceptual pathway and maps will change as we gain experience in their implementation in a variety of contexts across the WHO European Region.

The pathway to caregiver decision-making regarding childhood vaccination

Fig. 8² depicts a pathway to understanding what influences caregivers when they consider whether or not to vaccinate their child. It proposes that vaccination decision-making and behaviour is mediated by a number of determinants providing opportunity, ability and motivation³ (or not), and that the encounter with a health worker is a critical moment in both encouraging and maintaining infant and child vaccination acceptance, and participation.

Fig. 8. Pathway to caregiver decision-making regarding childhood vaccination



1 As described earlier, this guiding framework has been developed using: 1) existing health behaviour change frameworks; 2) a literature review of publications that have analysed determinants that influence vaccination uptake, and subsequent thematic analysis of these determinants.

2 This diagram is adapted from a model presented in Sturm LA et al. (2005) p442.

3 The categorization of behavioural determinants into opportunity, ability and motivation has been employed by Population Services International (www.psi.org) as a guiding programmatic framework and applied to family planning/reproductive health, STI/HIV/AIDS prevention and treatment, malaria prevention and treatment and maternal and child health (MCH). The use of these three categories has also been adapted by a number of other international organizations, such as The World Bank Water and Sanitation Programme (WSP), which introduced the "FOAM" framework for behaviour change communications/social marketing.

In this model, four types of factors play a part in caregiver decision-making with regard to vaccination.

- Environmental and institutional opportunity factors are outside the control of the parent/caregiver. They maximize or minimize parental/caregiver opportunities to vaccinate their infants and children, and to define how pleasant or unpleasant that experience is. These factors are mostly related to the supply of vaccines, vaccination services, and factors and perceptions that influence how a health worker administers, treats and communicates with parents.
- Social and supportive ability factors provide the skills and aptitude needed to participate in infant and child vaccination. They can encourage or dissuade parents/caregivers to act in favour of vaccination. They refer to the factual and practical knowledge related to vaccination held by parents/caregivers, as well as social support of, or pressure from, people who are important to them.
- Parental/caregiver (personal) motivation factors are tied to parental/caregiver beliefs, attitudes, perceptions and heuristics related to the well-being of their children, medical care, vaccines and VPD. They explain personal factors related to parents'/caregivers' desire to participate in infant and child vaccination.
- The interface with the health worker is a critical moment in the provision of vaccination services, and may be when parents'/caregivers' decide to vaccinate a child, and the vaccine is administered. At the other extreme, it can also lead to parental/caregiver refusal or hesitancy to vaccinate. For parents/caregivers hesitant to vaccinate, their acceptance may be determined by how sincere and effective the health worker's recommendation to vaccinate is, as well as by how well he/she frames their communication on risks and benefits. The model recognizes that, at the time of the health-care encounter, the health worker's practices are themselves shaped by a combination of similar categories of factors; environmental/institutional, supportive and personal in nature.

This framework is set against a background of the current incidence and prevalence of VPD at global, national and local levels.

The diagrams presented below describe in more detail the categories of factors which can weigh upon caregiver practices and health workers' recommendations with regard to infant and child vaccination.

Decision-making is a dynamic process. Research in the United Kingdom that explored the decision-making process of caregivers who chose not to vaccinate their children revealed that caregiver choice to not vaccinate involved a number of exploratory steps during which caregivers sought information from a variety of sources before deciding. Sporton & Francis (2001).

Exploring decisions behind vaccination requires us to understand not only the behavioural determinants, but also the complex ways in which these are manifested in the decision-making process. Intention does not always lead to action. Qualitative research helps to uncover these dynamics.

Fig. 9. What influences caregivers' use of infant and child vaccination services?

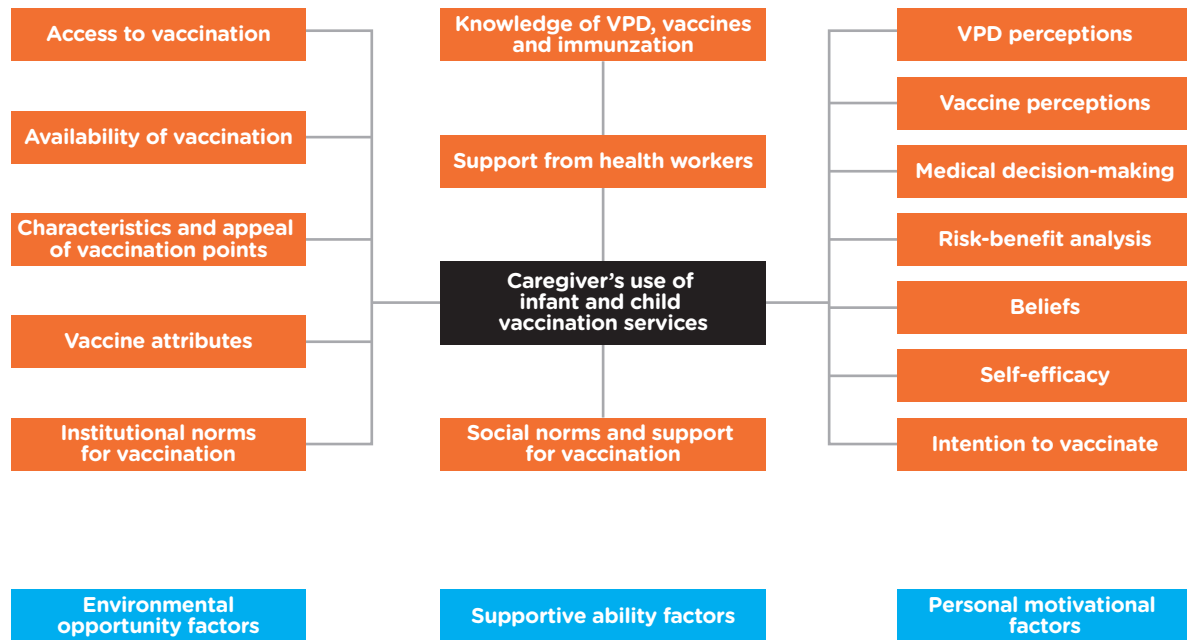


Table 7. Key caregiver issues related to vaccination

Major categories	Sub-category	Potential key issues
<i>Environmental opportunity factors</i>	Access to vaccination services	<ul style="list-style-type: none"> • Caregivers' experiences of how difficult access and/or unsafe travel is to service locations. • Caregivers' concern with the cost (official and non-official) of transport and/or services. • Caregivers' competing responsibilities during available service hours.
	Availability of vaccination services	<ul style="list-style-type: none"> • Caregivers' perceptions of convenience of the days and hours of service. • Caregivers' concerns that they will arrive to find that either the needed vaccine and/or health staff will not be there.
	Characteristics and appeal of vaccination points	<ul style="list-style-type: none"> • Caregivers' level of trust in providers' competence. • Caregivers' perception of the manner in which providers treat them and their children. • Caregivers' perceptions of service efficiency (e.g. long waiting times) and/or effectiveness. • Comfort-level while in health facilities of parents who are very poor, have little formal education, are new migrants, or from ethnic or cultural minorities.
	Vaccine attributes	<ul style="list-style-type: none"> • Caregivers' concerns with risk and seriousness of contraindications. • Caregivers' fear of children receiving multiple vaccines in the same visit. • Caregivers' fear of children receiving combination vaccines. • Caregivers' concerns with vaccine quality and safety, including place of manufacture, or other negative perceptions of a vaccine.
	Institutional norms	<ul style="list-style-type: none"> • Caregivers' comfort with the extent to which immunization is mandatory. • Caregivers' comfort with having to sign a consent form. • Caregivers' confidence in government and medical institutions. • Caregivers' perception of use of financial incentives for vaccination providers.

Social and supportive ability factors

Knowledge (factual, experiential and practical) of VPDs, vaccine and vaccination

- Caregivers' practical knowledge of who, what, when, where.
- Caregivers' understanding that vaccination protects against serious diseases.
- Caregivers' understanding that vaccinations are given for different diseases.
- Caregivers' understanding that vaccination greatly reduces the risk of many (but not all) serious diseases.
- Caregivers' understanding that several doses are required to achieve protection against some diseases.
- Caregivers' experience or knowledge of someone who suffered from a disease preventable by vaccination.
- Caregivers' understanding of risk as numbers, percentages or probabilities (numeracy).
- Caregivers' understanding of the language (written or spoken) in which vaccine and vaccination information is provided (literacy).

Social support for vaccination

- Religious or other beliefs that discourage immunization (e.g. that health is in God's hands, cure is better than prevention, some children are too young or weak to be immunized, etc.).
 - Extent to which mass media, including the internet, encourages or discourages vaccination.
 - Extent to which fathers and grandmothers encourage or discourage vaccination.
 - Extent to which respected civic, religious, or traditional figures encourage or discourage vaccination.
 - Caregivers' perceptions that getting your children vaccinated is the normal, expected behaviour for families like theirs.
-

***Personal
motivation
factors***

Parental VPD perceptions	<ul style="list-style-type: none">• Caregivers perceptions of their children's risk of VPDs.• Caregivers' perceptions of how serious or life threatening VPDs are.
Parental vaccine perceptions	<ul style="list-style-type: none">• Caregivers' concerns with vaccine safety (risk of side-effects).• Caregivers' perceptions of vaccine effectiveness in protecting their children from VPDs.
Medical decision-making and trust	<ul style="list-style-type: none">• Caregivers' degree of desire to be an active decision-maker about child health.• Caregivers' preference for vaccination provider or the parent to be the primary decision-maker regarding infant and child vaccination.• Caregivers' trust in the government, the immunization programme, and/or the health staff who authorize and administer vaccinations.• Caregivers' trust in science, scientists and 'conventional' medicine.• Caregivers' level of exposure to, and trust in, anti-vaccination information.
Beliefs	<ul style="list-style-type: none">• Strength of caregivers' perceptions that getting their children vaccinated is an essential practice of a good parent.• Caregivers' confidence in, and use of, alternative medical care (naturopathic, homeopathic, allopathic).• Caregivers' beliefs about their infant or child's health and how this might interact with vaccination.
Self-efficacy	<ul style="list-style-type: none">• Caregivers' level of confidence in his or her own ability to overcome the barriers to vaccination.
Intention to vaccinate	<ul style="list-style-type: none">• Caregivers' intention to bring child back for the next scheduled vaccination(s).
Risk-benefit analysis	<ul style="list-style-type: none">• Extent to which caregivers perceive that the benefits of vaccination outweigh the risks.

Fig. 10. What influences health workers' practices with regard to childhood vaccination?



Table 8. Key health worker issues related to vaccination

Major categories	Sub-category	Potential key issues
<i>Environmental opportunity factors</i>	EPI norms and standards	<ul style="list-style-type: none"> • Extent to which EPI norms and standards — e.g. eligibility (contraindications, residence requirements), screening and “approval” of vaccinations, guarantees of protection or threat of sanctions to health workers who immunize a child who develops serious side-effects — encourage or discourage vaccination. • Health workers’ knowledge of relevant norms and standards. • Health workers’ practice of relevant norms and standards.
	Availability of quality vaccines	<ul style="list-style-type: none"> • Availability of sufficient, needed vaccine. • Health workers’ confidence that safe, potent vaccine is delivered to their facility. • Availability of sufficient, needed supplies and equipment so health workers can ensure that vaccine is well managed and potent. • Availability of vaccine vial monitors (VVMs) and FreezeWatch.
	Access to vaccination points	<ul style="list-style-type: none"> • Availability of time, vehicles, fuel and per diem to carry out scheduled outreach.
	Facility procedures	<ul style="list-style-type: none"> • Extent to which all antigens are offered every day. • Level of missed opportunities to immunize.

Supportive ability factors	Community engagement	<ul style="list-style-type: none"> • Extent of health workers' dissemination of information and promotion of immunization within communities. • Extent of health workers' engagement with community leaders and groups in planning, implementing and evaluating vaccination services.
	Health workers' knowledge and experience	<ul style="list-style-type: none"> • Extent to which health workers have doubts or concerns about immunization emanating from their training, professional colleagues, technical materials and procedures, or information in the mass media. • Health workers' perception of the importance of vaccination. • Health workers' perception of the importance of communicating with caregivers. • Health workers' attitudes towards caregivers, particularly poor, less educated, minority ones. • Health workers' counselling skills and supportive materials, particularly when caregivers have concerns. • Health workers' ability to counsel parents and minimize discomfort at the time of vaccination.
	Supportive work environment	<ul style="list-style-type: none"> • Health workers' perceptions that they have sufficient time for their immunization as well as other work responsibilities. • Health workers' perceptions that they have sufficient material, managerial, technical and personal support. • Health workers' satisfaction with their salaries, professional and career opportunities.
	Socio-cultural/religious norms	<ul style="list-style-type: none"> • Health workers' religious or other beliefs that discourage immunization (e.g. that health is in God's hands, cure is better than prevention, some children are too young or weak to be immunized, etc.). • Extent to which health worker is influenced by mass media, including the internet. • Health workers' perceptions that getting children vaccinated is the normal, expected behaviour for families.

<i>Personal motivation factors</i>	Beliefs regarding vaccine safety	<ul style="list-style-type: none"> • Health workers' perceptions that the procedures, supplies and equipment in place are sufficient to keep them safe from on-the-job infections.
	Attitudes regarding vaccines and vaccination	<ul style="list-style-type: none"> • Health workers' assessment of the risk of VPDs to local children.
	Perceived risks of VPDs	<ul style="list-style-type: none"> • Health workers' perceptions of risk of VPDs to local children.
	Perceived severity of VPDs	<ul style="list-style-type: none"> • Health workers' perceptions of how serious VPDs would be for local children.
	Self-efficacy	<ul style="list-style-type: none"> • Health workers' degree of confidence in his or her ability to overcome barriers to communicating with, and reaching out to, unvaccinated households.
	Risk-benefit analysis	<ul style="list-style-type: none"> • Extent to which health workers perceive that the benefits of vaccination outweigh the risks. • Extent to which health workers advise caregivers to delay or not vaccinate because they fear punishment if a child they vaccinate develops serious side-effects.

4. The planning phase. Design.

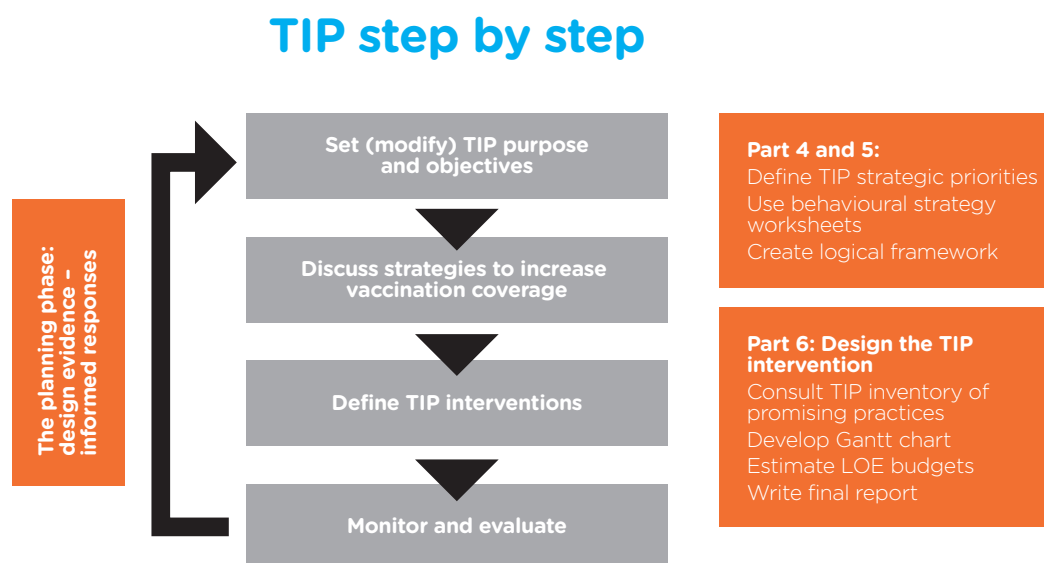
A thorough analysis of the issue helps to understand WHY? It is now important to address the question NOW WHAT?

The planning stages of TIP will:

- convert your refined problem statement into a strategic priority — a forward-looking, constructive statement that guides you in designing the TIP intervention;
- set the TIP purpose and the specific objectives;
- define the mix of programmatic strategies to be implemented to achieve expected results in vaccination uptake;
- create a logical framework for the TIP intervention;
- document the final report describing the TIP intervention, with an activity Gantt chart, expected level of effort (LOE) and budget, and possible funding sources.

It is expected that the guiding conceptual pathway and maps will change as we gain experience in their implementation in a variety of contexts across the WHO European Region.

Fig. 11. Step-by-step TIP approach



Part Four: Set the TIP purpose and specific objectives

Formulate the TIP purpose

Use the refined problem statement that you have formulated to help you to 1) state the TIP strategic priority; 2) formulate the purpose of the TIP intervention.

The TIP purpose expresses your end-goal, i.e. what you want your strategies to ultimately achieve.

For example:

TIP strategic priority

To increase participation in infant and child vaccination among families living in segregated communities in Bulgaria.



TIP purpose

To increase from % to % the proportion of caregivers of children aged 24 months and under, residing in segregated neighbourhoods in Bulgaria, who have their children vaccinated according to the national schedule.

TIP purpose includes three main features.

1. A clearly identified target audience (or target audiences).
2. A detailed description of the behaviour to be promoted and its frequency.
3. A measure of the impact you hope to have achieved over a specific period of time. The period of time should correspond with the time when the behaviour will be measured.

The following behavioural objective, developed using the COMBI (WHO) approach, drove UNICEF Georgia's nationwide communications campaign for immunization in 2008. To have 90% of all mothers who have given birth in the past 12 months take their infant child to the nearest health facility on schedule at 2 months, 3 months, and 4 months for the appropriate vaccinations of diphtheria, pertussis, tetanus, polio and hepatitis B. It is expected that this will lead to an increase of total coverage of these vaccines from approximately 84% for most of these vaccines to 90% on schedule for each of these specific months. This will require about 3000 more mothers than usual bringing in their children for these vaccinations.¹

Make your behavioural objectives “SMART”

Specific—Does the objective state precisely what is desired in terms of behavioural results?

Measurable—Are measurement criteria specified in terms of quality, quantity, timeliness and/or cost?

Appropriate—Are objectives culturally and locally acceptable?

Realistic—Are objectives achievable by the target group, yet still ambitious?

Time-bound—Is the time (and/or milestones) by when the objective is to be achieved stated?

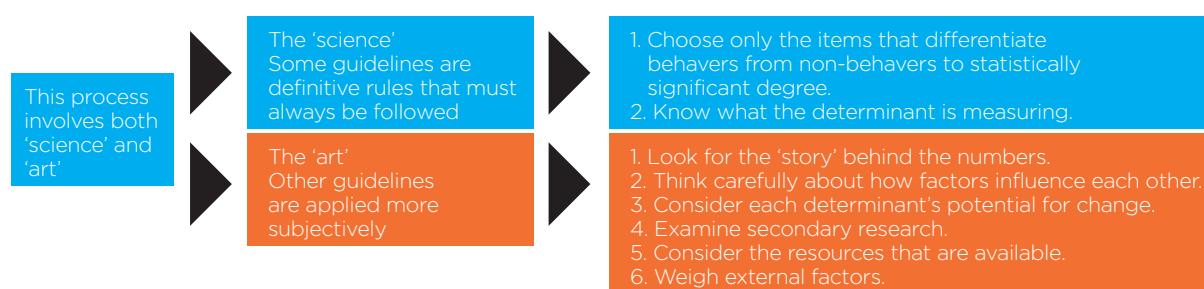
¹ Presentation document of Georgia's nationwide immunization communications campaign: Timely immunization is your child's bodyguard. Courtesy of Maya Kurtsikidze, UNICEF Georgia.

Prioritize and write TIP objectives

The specific TIP objectives you choose are those you believe are feasible to achieve and most likely to contribute to the achievement of the TIP purpose. To do this, you will need to consult the research and behavioural analysis conducted during the formative phase of the TIP approach, to identify which behavioural determinants to influence. The formulation of specific TIP objectives will help guide you in choosing the strategic mix of activities you implement.

PSI's Delta Companion (Population Services International 2009) offers a step-by-step approach to developing specific TIP objectives. This has been adapted to suit the TIP approach and is summarized in Fig. 12.

Fig. 12. Summary of PSI's process for establishing “determinant” objectives



The process of choosing the specific TIP objectives is both a ‘Science’ and an ‘Art’. It begins with ‘Science’, whereby a first list of determinants is selected among those which significantly distinguish vaccination “doers” from “non-doers”. It is essential that there is a clear understanding of the meaning of each determinant so that, at this stage of the process, incorrect assumptions are avoided.

The ‘Art’ can then commence. This part of the process involves creative thinking, which draws on the in-depth understanding of the target group, and patterns of vaccination decision-making and participation generated through primary research.

1. First understand and tell the target group’s ‘story’ regarding their behaviour using the findings generated by quantitative and qualitative research and the subsequent behavioural analysis.
2. Think about which determinants influence the behaviour in question most heavily. In fact, quantitative research reveals correlation, but not causality. To decide which variables to focus on, hypotheses must be made regarding their causality with the desired behaviour.
3. Examine the determinant’s potential for change.
4. Review secondary research to see if there is any support for choosing one determinant over another.
5. Assess your choice of determinants against current resources; financial, human and in terms of duration.
6. Weigh external factors. What communications channels are available? What are other organizations doing in the area? How well are they currently reaching the target groups?

It is important that the strategic choices made at this point complement what other organizations are doing in the field.

Here are a few points to remember about specific TIP objectives.

- TIP objectives should be reviewed and altered when required, in light of new research findings generated during the initial formative phase, as well as the subsequent monitoring of programmatic activities.
- Keep your objectives simple and feasible. COMBI recommends focusing on no more than three objectives at a time. Too many behavioural expectations are as bad as none at all.
- There is no set formula to develop TIP objectives. A number of analyses and tools have been provided in earlier sections of this toolkit.¹ A thoughtful planning process, combining these methods, will lead to the development of clear and concise TIP objectives.

¹ Another method used to identify specific objectives is the problem tree analysis. See Jensen (2012) work on creating a logical framework.

Part Five: Create the TIP logical framework

Now that they have been defined, the TIP purpose and specific determinant objectives will become part of the TIP project's logical framework.¹

What is a logical framework?

A logical framework is a tool for planning and managing development projects. Used originally in the United States of America, it has since been adapted and adopted by both government and international donors, including European Commission (EC) and Department for International Development, United Kingdom (DFID), and global health agencies.

The logical framework offers a tool to summarize, in a standardized way:

- what the TIP project is going to achieve (the TIP purpose and objectives);
- what activities will be carried out to achieve the TIP purpose and objectives;
- what resources (inputs) are required;
- what are the possible problems that could affect the success of the project;
- how the progress and success of the project will be monitored and evaluated.

A logical framework is presented and outlined in the form of a table.

1. The narrative statements, or logic, of the intervention.
2. Objectively verifiable indicators.
3. Means of verification.
4. Assumptions and risks.

Your logical framework is a powerful tool.

It helps by:

- encouraging you to design your project in a disciplined, specific and clear manner;
- creating a handy summary to inform TIP donors, partners and stakeholders of your TIP intervention;
- describing how you will monitor your progress and measure the success of the TIP intervention;
- providing a document that should be consulted on a regular basis and changed, when needed, during the course of the project.

¹ This section draws from two summaries on how to use the logical framework approach; Jensen (2012), and BOND (2003).

Table 9. Logical framework.¹

Logic	Indicators	Means of verification	Assumptions and risks
Goal <i>The high-level health objective and vision that your project contributes to.</i>	The impact or extent of your contribution (difficult to measure).	How you will measure your contribution (difficult to measure).	
TIP purpose <i>What you intend to change during the life of the TIP project.</i>	How you will know that the intended change has happened.	How you will measure this change (the basis for your evaluation).	Assumptions made about external factors necessary to sustain the achievement of the TIP purpose in the long term.
TIP objectives (outputs) <i>Specific TIP objectives which are expected to contribute towards achieving the TIP purpose. (These can be also stated as outputs, the tangible results that are expected).</i>	How you will know that the results expected of your project have been achieved.	How you will measure the results (the basis for periodic review).	Assumptions made of external factors that must be in place for the outputs to contribute to the purpose, or that pose a risk.
Activities <i>Group of tasks needed to achieve each expected result.</i> <i>(Refer to Part 7 of the planning phase).</i>	The means, inputs and resources needed to carry out each task.	Proof that each activity is completed (that will be regularly monitored).	Assumptions made of external factors that may influence activities achieving the expected output, or that pose a risk. Preconditions that need to be fulfilled before the start of the project.

¹ For a summary of the pros and cons of this approach, see Jensen (2012) p.6.

Creating and using a logical framework for your TIP intervention.

Step One: Narrate the logic of your TIP intervention

Start with the question: What is the TIP project going to achieve? Start at the top of the column and work your way down.

The overall goal of the TIP intervention refers to the ultimate issue or objective that the project is trying to contribute to, for example, to reduce infant and child morbidity and mortality from VPDs in the WHO European Region.

Your TIP purpose and specific determinant objectives have been defined as a result of the formative research phase of the TIP process. The design of the TIP intervention will help you to prioritize and describe the activities you plan to implement to achieve the specific determinant objectives, or TIP outputs, you wish to achieve (see the next section of this guide).

Step Two: Identify how you will measure the achievement of the TIP intervention

For each level — goal, purpose, outputs and activities, ask: How can the progress of the project be measured against its objectives?

Specific questions to answer.

- What indicators can be used to measure achievement?
- What information is needed? How should it be gathered?
- What obstacles or problems might arise to prevent the project from progressing?

A good indicator should:

- be used repeatedly to measure the same condition or event;
- measure only the condition or event it is intended to measure;
- reflect changes in the state or condition over time;
- require reasonable measurement costs;
- be defined in clear and unambiguous terms.

(A list of possible output-level indicators will be provided in a forthcoming annex to the TIP Guide).

Step Three: Reflect on the external conditions that must be met for the intervention to succeed

The logical framework approach recognizes that external factors can strongly influence the progress, success and/or failure of your project. Thinking in advance about the assumptions that are made regarding the conditions in which the project is implemented and the possible risks, helps you to anticipate, understand and monitor the progress of the TIP intervention.

Some of these external factors, which play a role in helping or hindering the positive changes in vaccination coverage that you wish to achieve, will require mid- to long-term action. For example: availability of vaccines; improved stock management; change in human resources management of vaccination providers; changes in policy and legislation; arrival of new funding, and civil unrest or conflict. While some factors may be in the control of the NIP, others may be under the broader MOH. In the latter case, an advocacy component should be included as part of the intervention's communications strategy.

Step Four: Double check and discuss with stakeholders

Once your logical framework is completed, go over it again thoroughly, to check its overall logic. It is important to involve key stakeholders in the development of the logical framework before it is finalized.

Step Five: Refer to your logical framework regularly

This will keep the project on course. Revise it when the situation changes. Your logical framework can serve as the basis of a table or “dashboard” of indicators that help you to keep track of the progress of your project.

Monitoring and Evaluation for TIP

Monitoring and evaluation refers to the measurement of the progress and achievement of the TIP intervention. As discussed above, a summary of the monitoring and evaluation plan is reflected in the TIP logical framework that guides the intervention.

Both monitoring and evaluation are critical in the life-cycle of the TIP intervention since ideally they will allow you to:

- track whether activities are happening as planned;
- assess the quality of each activity;
- obtain feedback on whether the chosen strategy and activities are having impact;
- modify the logical framework of the intervention to increase success;
- guide corrective actions to improve the project’s performance;
- measure the changes at the end of the intervention.

Most immunization programme managers are familiar with monitoring and evaluation frameworks and plans for their immunization programmes. A brief description of monitoring and evaluation are provided in the next few paragraphs.

Monitoring

Monitoring aims to determine if activities are being implemented as planned and what, if any, adjustments to programme actions are needed to improve their effectiveness and increase the likelihood that they will achieve the desired outcomes.

Table 10. Monitoring of TIP intervention

What is monitored?	How is it monitored?	When? For how long?
<p><i>Routine monitoring</i> Of inputs: human and financial resources; physical facilities, and equipment and supplies required to implement the programme.</p> <p>Of process. The completion of discreet and planned activities such as:</p> <ul style="list-style-type: none"> • materials produced and disseminated; • providers trained in client counselling; • media events held/ broadcasted/ printed; • budget spent. <p>Of outputs: immunization service delivery.</p> <ul style="list-style-type: none"> • Measles vaccinations provided. • Measles cases detected. 	<p>Data collected regularly from reports, workplans, meeting minutes, programme reviews, registration records, clinic service statistics, surveillance reviews and reports, and routine data collected from other surveys.</p>	<p>Routinely. Data collection, analysis and reporting are integrated into work schedules.</p> <p>For short-term and ongoing achievements.</p>
<p><i>Special monitoring</i> Systematic, intense reviews of the TIP intervention in action. For example, in improving service accessibility, utilization or quality.</p> <ul style="list-style-type: none"> • Are target audiences reached as planned? • Are target audiences reacting as expected? • What adjustments must be made to ensure that the programme is more likely to reach its objectives? 	<p>Use of a mix of quantitative and qualitative methods, such as:</p> <ul style="list-style-type: none"> • observations and interviews of health staff, parents and community leaders; • stakeholder field visits; • exit interviews with clients; • focus group discussions; • small sample surveys; • spot checks. 	<p>Adapt to your intervention schedule.</p> <p>About a week for data collection. Additional time must be allocated for review, analysis, writing and reporting.</p> <p>More time is required for processing and decision-making using key findings.</p>

Evaluation

Evaluation describes the difference that the TIP intervention has made. It measures the changes in outcomes of changed knowledge, attitudes and practices for immunization, and helps attribute factors to strategies implemented under the TIP approach.

Table 11. Evaluation of TIP intervention

What is evaluated?	How is it evaluated?	When? For how long?
<p><i>Vaccination outcomes and outputs.</i> To what extent has the TIP purpose been met?</p> <ul style="list-style-type: none"> • Changes in indicators of vaccination behaviour within the target groups, as defined by the TIP purpose indicator. <p>How have TIP outputs changed? To what extent have TIP strategies contributed to reaching the overall TIP purpose?</p> <ul style="list-style-type: none"> • Changes in determinants, such as knowledge, attitudes, perceptions and practices of target groups and vaccination providers. 	<p>Typically, baseline and endline surveys designed by technical and evaluation specialists. A midline survey in the middle of the intervention is also possible.</p> <p>Review of changes in municipal-, district- or national-level immunization coverage over time, and contribution of the TIP strategy to this.</p>	<p>Beginning and end of the TIP intervention. Possibly in the middle also.</p> <p>Quantitative baseline and endline surveys often take 2-3 months to complete, depending on the budget and sample size, how information is collected and the geographic scope of the evaluation.</p>
<p><i>Health impact</i> Long-term cumulative effects of the intervention over time on a larger social system, or on a population's health and well being.</p> <p>Example: infant mortality due to vaccine-preventable diseases.</p>	<p>Typically, these will be measured at the time of national surveys, such as Demographic and Health Survey (DHS) or Multi-Indicator Cluster Survey (MICS). (Not in the scope of a TIP intervention.)</p>	

Part Six: Design the TIP intervention

Now that the TIP purpose and objectives are formulated and there is a sound understanding of the target groups, it is possible to develop the positioning statement(s) for each target group, and the strategic mix of activities. This part provides tips and tools for designing the strategies that will be employed to increase participation in infant and child vaccination. It should be accompanied by a review of the inventory of promising practices in increasing infant and child vaccination uptake.

Positioning vaccination to your target groups

The positioning statement is a concise definition of a core target group to whom the desired behaviour is directed, and a compelling picture of how the TIP implementers would like the target group to view this behaviour. The positioning statement is tailored to each core target group, based as it is on the understanding of the views and values (generated through research) of the target group in question.

A well-defined positioning statement provides focus and clarity to the development of the strategy and activities of the programme. It serves as a filter for all TIP decisions and each programmatic decision is judged against how well it supports the positioning statement. Moreover, its role becomes particularly obvious at the time of the design of the communications strategy, as communications is a key moment when the positioning statement is expressed through messaging tone and visuals.

There are four main parts of a positioning statement.

1. A concise yet accurate description of the target group.
2. The behavioural context or frame of reference in which the behaviour takes place.
3. The most compelling feature or benefit that the behaviour can hold in the hearts and minds of the target group, in comparison with the competing behaviour(s).
4. The reason to believe that the behaviour will deliver what it promises.

Assessing a positioning statement

- Is it memorable, motivating and focused?
- Does it provide a clear, distinctive and meaningful picture of the behaviour?
- Is it credible?
- Does it allow growth?
- Does it serve as a filter for decision-making?

For upscale American families, Volvo is the family automobile that offers maximum safety.

VOLVO positioning statement

Defining the TIP intervention

An American-based review of evidence regarding interventions to improve vaccination coverage in children, adolescents and adults¹ documents that interventions including multiple components, and including education (or communications), demonstrate strong evidence to improve vaccination coverage in children. Multi-component interventions that include education (or behaviour change communications):

- provide knowledge to target populations, and sometimes to vaccination providers, and use at least one other activity to improve vaccination coverage;
- address health concerns and barriers in an integrated way, with the premise that health includes the physical, social and political environment in which health risks occur.

Integrated marketing and communications offers a well-known framework to design a comprehensive strategy in response to the TIP purpose and specific objectives. Though the terminology may differ, depending on whether it is presented in the context of commercial marketing, social marketing or integrated marketing communication for behavioural impact (COMBI), there are, at a minimum, four main components to be considered when developing an integrated marketing and communications strategy.

Fig. 13. Four main components of a marketing and communications strategy



1 Briss & colleagues (2000).

For example, if your TIP purpose is to:

- increase children’s participation in measles vaccination from XX% to XX% among hesitant¹ parents;
- your TIP objectives could be the following.

1. Increase hesitant parents’ access to comprehensive measles vaccination consultations with their infant/child health provider.

Table 12.

<i>Service</i>	Improve capacity of infant/child vaccination providers to address parental questions and concerns regarding measles vaccine and vaccination at the time of an infant/child consultation. Improve the quality of parents’ experience when their infant/child receives a measles vaccination.
<i>Place</i>	Increase opportunities when parents can receive tailored measles vaccination information and/or comprehensive measles vaccination consultations from their infant/child’s vaccination provider.
<i>Price</i>	Ensure availability of free infant/child measles vaccination consultation for hesitant parents.

2. Increase awareness of risks associated with measles and benefits of measles vaccination during infancy and childhood among hesitant parents.

Table 13.

<i>Promotion</i>	Encourage hesitant parents to discuss their concerns and questions regarding measles and measles vaccination with their infant/child’s vaccination provider and/or other parents, using multiple media. Improve capacity of infant/child vaccination providers to “frame” measles vaccination messages to effectively convey comprehensive and factual information. Improve community and social support for completion of childhood measles vaccination by making available “champion parents”, who have adopted measles vaccination, for hesitant parents to talk to.
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¹ The definition of this purpose requires a measurable definition of what constitutes a “hesitant parent” and what is a “comprehensive measles vaccination consultation

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3. Strengthen collaboration between public and private health sectors to support a comprehensive approach for measles vaccination among hesitant parents.

Table 14.

<i>Advocacy (promotion)</i>	<p>Improve measles vaccination stakeholders' awareness of the risks associated with low measles coverage in infants and children.</p> <p>Increase the number of opportunities and means for measles vaccination stakeholders to engage in, monitor and provide feedback on the comprehensive approach to improving childhood measles vaccination coverage.</p>
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Vaccination as a solution to a need

A SOLUTION is proposed in response to a target group's desire or need, which may be conscious or unconscious. Most commonly proposed as a tangible product or a service, the solution is adopted by the target group because it simultaneously conveys an IDEA that answers a need that the specific segment has.¹ For example, infant and child vaccination can be adopted by some parents in response to a need to protect their children from a disease, and thus to identify themselves as caring and loving parents. Other parents might emphasize the role of infant and child vaccination in contributing to social good or to the health of their community.

When creating the solution in the area of vaccination, two important and related ideas can be kept in mind.

1. There are most likely different needs to be met. This can lead TIP strategies to propose infant and child vaccination interventions to different target segments in a variety of ways.
2. We are doing ourselves a disservice by applying universal principles in immunization.

Different features can be considered to ensure that the solution meets the target's needs. Table 15 offers examples of possible strategies that address these features.

¹ "Good marketers do not seek to persuade the target audience to do what the marketer believes they ought to do... Rather, they recognize customers only take action when they believe it is in their interest." Weinrich (1999).

Table 15. Strategies to address target group’s needs

Solution	Features	Possible strategies
<i>The product – vaccines</i>	Attributes	<p>Offer a stand-alone measles vaccine (instead of providing measles vaccination as part of a trivalent or pentavalent vaccine).</p> <p>Design alternative ways to administer vaccines (oral versus injectable) to improve the vaccination experience.</p>
	Benefits – rational and emotional	<p>Provide information that the vaccine provides safe immunity against measles infection. Conveys the love a parent has for their child.</p>
	Quality	<p>Procure vaccines from a WHO-approved source and communicate to inform how vaccine manufacturing quality is ensured.</p>
<i>The service – vaccination</i>	Health workers	<p>Build vaccination providers’ capacity in communicating with, and counselling, hesitant parents.</p>
	Processes	<p>Ensure reliability of vaccination services.</p> <p>Increase the time dedicated for each vaccination consultation, to share information and respond to parental queries.</p> <p>Introduce protocols for managing pain at the time of the vaccination injection.</p>

Supportive solutions	Address barriers	<p>Create an easy-to-use active patient/data management system for vaccination providers to be informed of vaccinations before or during a scheduled appointment.</p> <p>Use effective reminder systems (phone, mail, text messaging) to inform parents of scheduled vaccinations.</p> <p>Develop easy-to-understand vaccination tracking cards or systems, including schedules, to be given to parents.</p> <p>Translate infant and child vaccination information into additional languages.</p> <p>Create a toll-free number or e-mail mailbox for hesitant parents to call when they have concerns or need additional information.</p> <p>Make available vaccine “champion parents” for vaccine-hesitant parents to talk with about their concerns and queries.</p> <p>Offer travel and/or food vouchers to vulnerable households to reduce the costs associated with obtaining vaccination.</p>
Quality	Understand in what terms the target group defines quality	Adapt vaccination service provision to meet the target group’s definition of quality.

The cost of vaccination

The cost of vaccination takes into account monetary and non-monetary considerations, as well as the inherent value of vaccination. TIP strategies should aim to minimize the cost of vaccination and maximize the value of participating in this behaviour in the perception of parents and vaccination providers. The question of cost-related equitable access is raised in cases where cost of vaccination is a barrier for certain target groups.

Table 16. Vaccination costs

Monetary costs	Non-monetary costs
These are the financial considerations influencing the decision to vaccinate.	Non-monetary costs introduce competing priorities.
Official vaccination fees.	<p>Time</p> <ul style="list-style-type: none"> - Travel - Loss of work
Non-official fees associated with vaccination, such as under-the-table payments, cost of transportation and loss of wages.	<p>Competing priorities</p> <ul style="list-style-type: none"> - Single parenting - Work or other income-generating activity - Need to care for large family - Illness in the family - Socio-cultural obligations (funeral, wedding, holidays)
Health insurance coverage for vaccination.	<p>Physical discomfort</p> <ul style="list-style-type: none"> - Anticipated pain of the injection - Subsequent discomfort or mild reaction
	<p>Psychological risk</p> <ul style="list-style-type: none"> - Illegal status - Discrimination/stigmatization - Fear of side-effects

Place: creating convenient opportunities for vaccination

“Place” refers to where the opportunities are for caregivers to vaccinate their children. The idea of opportunity considers, not only the physical location in which vaccination can take place, but also a number of other features that will make vaccination appropriate, acceptable and more likely in that location. These can relate to the factors below.

Table 17. ‘Place’ factors that influence caregivers’ vaccination behaviour

Monetary costs	Non-monetary costs
<i>Caregiver preferences</i>	Do caregivers prefer public or private clinics, visiting a vaccination provider they know; or would any vaccination provider do?
<i>Type of opportunity and minimizing of missed opportunities</i>	Do caregivers prefer vaccination to be a planned event, convened by appointment? Are they willing to vaccinate their child if the provider requests them to at the time of their child’s or a sibling’s routine or emergency medical visit?
<i>Vaccination tracking</i>	How is infant and child vaccination coverage tracked? What parental reminder systems have been put in place? Which reminder methods are used – print, phone, text messaging, smart phone applications?
<i>Vaccination point</i>	What are the best times for caregivers to bring their child for vaccination services? Are staff and vaccines available at the time of vaccination? Are there infant/child vaccination information materials in the waiting room? Is it feasible and acceptable to deliver vaccinations in settings in which they were not previously offered, such as using mobile vaccination units? Can vaccination consultations and services be provided in places where target populations congregate?
<i>Vaccination provider</i>	Does the provider use all opportunities to assess the vaccination status of the child? Does the provider discuss and respond to the vaccination concerns and questions of parents? Does the provider have the knowledge and skills to identify and reassure a hesitant parent? Is it feasible and acceptable for vaccination to be provided by a non-physician provider, by protocol, without direct physician involvement?

Communicating about vaccination (promotion)

Vaccination communications is central to achieving the main objective(s) set out by the TIP approach. Effective communications strives to express a health solution in such a way that the target group will be able to adopt it, and perceives an advantage in doing so. The way in which messages are framed, that is, the subtle selection of certain aspects of a story that cues a specific response,¹ is essential in the communications process.

¹ For more information on Strategic Frame Analysis® and the potential of framing at www.frameworksinstitute.org.

Table 18. Ten lessons learnt in successful vaccination communications

Monetary costs

1. There are no one-size-fits-all communications strategies. Strategies with tailored messages that use appropriate channels are required to reach specific segments of the population, whether decision-makers or remote “hard-to-reach” populations.
2. Proactive communication actions are needed to curtail and prevent negative publicity and resistance to immunization, and to build continuous trust in vaccination programmes by working with opinion leaders who influence caregivers’ perceptions and behaviours.
3. Positive attitudes and good interpersonal communications skills, of frontline health workers, are decisive to promote long-term compliance, and well-designed, easy-to-use tools can often bridge the gap if interpersonal communication skills-building programmes cannot be assured.
4. Strengthening and supervising communications skills of health providers should be integral to immunization planning and training.
5. In-country advocacy coalitions are essential in building and maintaining awareness about the value of immunization programmes, as well as securing sustainable funding from governments and donors. One important way to do this is to make regular public announcements recognizing those districts that have achieved high coverage. Raising public awareness about the impact of vaccination programmes on reducing disease incidence and saving lives, is also key.
6. Although personal anecdotes and experiences have persuaded government officials to support specific vaccine programmes, advocacy programmes need to use evidence (i.e. data) to show the benefits and cost-effectiveness of vaccination over other health interventions. Without well-planned advocacy, new vaccines are not likely to be funded by governments or meet demand from health providers and caregivers.
7. The impact of print materials, or other single information mediums, depends in part on whether they are used with other communication channels.
8. Communication interventions should be tailored, based on information distinguishing knowledge and attitudes among users and non-users, of immunization services.
9. Grassroots communication strategies are more likely to succeed if they are integrated with the provision of other community health and social needs.
10. Effective communication interventions can increase demand, but if the quality or availability of services is poor, many caregivers are not likely to return to complete schedules.

Source: Waisbord & Larson (2004) p.13.

The development of the communications strategy involves a series of steps. The first step is to define the communications objectives of your strategic mix. It is important to refer back to the TIP purpose and objectives, as well as to your research, to define your communications objectives. These will help you to determine if your communications strategy will be developed as a stand-alone communications campaign, to support existing infant and child vaccination service delivery, or to support a strategic decision or change related to the vaccination solution, cost or opportunity.

The objectives of vaccination communications can vary; these may be to:

- increase awareness of the benefits and advantages of infant and child vaccination;
- overcome or reduce attitudinal barriers to adopting infant and child vaccination;
- dispel myths related to vaccines and vaccination;
- portray the consequences of not vaccinating infants and children;
- encourage social support for infant and child vaccination;
- recognise and maintain positive parental practices with regard to children’s vaccination and health.

Audience involvement in the TIP communications strategy is a necessary part of the design process. This includes, at a minimum, piloting communications materials and obtaining audience feedback on them. Methods and tools for pre-testing and evaluating communications materials are available in many of the health communications handbooks referenced in the TIP guide. When there are several core target groups to reach, communications must be adapted to each unique target group.

There is a diversity of communications methods to choose from, and the choice will depend on the objective of the communications strategy and target audience. Table 19 presents some selected behaviour change communications methods used in immunization programming, their rationale and illustrative activities.

Table 19. Behaviour change communications methods

Method	Rationale	Illustrative activities
<i>Vaccination provider – parent communications</i>	The TIP conceptual pathway places the vaccination provider-caregiver encounter as a critical moment in the vaccination decision-making process. Studies ¹ in the European Region, and other regions, have shown that vaccination providers are the most trusted source of information to guide parental vaccination decision-making. ² Paying attention to the quality of communications and vaccination at the time of the interaction between the vaccination provider and the parent is an essential part of the TIP approach.	<p>Communications at the time of consultations to address parental concerns and queries on VPD, vaccines and vaccination.</p> <p>Decision-making aids for parents and vaccination providers.</p> <p>Communications on vaccine safety.</p> <p>Vaccination reminder and recall systems (for providers and parents).</p> <p>Assessment of, and feedback to, providers.</p>

1 Simone & colleagues (2012).
 2 Briss & colleagues (2000).

Peer-to-peer communications	An approach whereby community members are encouraged to support positive health behaviours among their peers. ¹ Peer education or communications is effective because it motivates and influences, using face-to-face exchange and participatory dialogue within similar groups.	Mobilization of vaccine “champion parents” to respond to questions and concerns of vaccine-hesitant parents. Promotion of infant and child vaccine and vaccination information through mothers.
Cross-cultural communications tools	Using a variety of communications materials and tools with culturally-diverse target groups reduced possible barriers, linked to language, literacy and numeracy, for both parents and vaccination providers.	Low-literacy and low-numeracy communications materials. Availability of multilingual information, education and communication (IEC) materials. Creation of cross-national materials for vaccination of migrants or travelling households (external to national immunization schedules). Availability of interpreters at the time of vaccination consultations for hesitant or concerned parents.
Social and community mobilization by local leaders and other partners	A process to engage and motivate a wide range of partners at national and local levels (such as community networks and civic and religious groups) to raise awareness of, and demand for, a health product, service or behaviour. Participatory, face-to-face approaches are used by influential and credible members of society or the community, to promote infant and child vaccination in a positive way.	Event-based communications to raise awareness of VPD risk. Use of community media and live performances: newspapers; local radio; mobile video units; street theatre; puppet shows, contests. Integration of positive infant and child vaccination messages at the time of community, civic or religious events. Employment of paid/volunteer community health or outreach workers.
Multi- and mass- media communications campaigns	Using mass media allows the TIP programmer to reach a large audience and/or the public with the same message in a highly creative way and through a range of formats (radio, TV, internet or mobile technology).	Public-service announcements and commercials. TV talk and call-in shows (e.g. “ask-the-expert” shows). Serial dramas, animated cartoons, music videos.

1 Simone & colleagues (2008).

Social media and information and communication technologies (ICT)³

Using social media tools such as really simple syndication (RSS) feeds, Tweets, online Podcasts, text messaging and social networks, to expand reach, foster engagement and increase access to credible, science-based health messages. New technologies, such as the internet and mobile phone, are used as the main channels for these activities.

Mobile text messaging to remind parents of scheduled vaccinations.

Smartphone technology to assist vaccination providers in maintaining vaccination coverage data up-to-date and personalized.

Virtual messaging, video content production offering targeted evidence-based and compelling infant and child vaccination information.

Advocacy

Recognizing the potential for communications to build public will and further social change, advocacy is dedicated to using strategic communications and action to help transform systems and improve policies and environments that shape health behaviours.

Use strategic framing as an advocacy tool to tell the story to the public in favour of, and build trust in, infant and child vaccination.

Promote legislative and policy changes to government bodies and key partners in support of the TIP intervention.

Engage stakeholders and collaborators in the TIP purpose and objectives through the use of professional working groups, such as the ICC for Immunization.

Other Components for Consideration

Weinrich (1999) proposes four additional Ps to take into consideration in health marketing: Public, Partnerships, Policy and Purse Strings.

Public

- Who are the people outside your organization you need to address to be successful?
- Who are the people inside your organization whose support you need to be successful?

Partnerships

- Are there other organizations addressing a similar problem that you could partner with?
- Are there other organizations that could bring needed resources or skills to the programme?
- Are there any organizations that would be strategically or politically advantageous for you to work with?

3 US Centers for Disease Control and Prevention. The health communicators' social media toolkit. (July, 2011).

Policy

- Are there any policies that would create an environment more conducive to infant and child vaccination?
- Is there any pending legislation that would affect your immunization programme's goals, in either a positive or a negative way?
- Are policymakers knowledgeable about, or interested in, the problem you are addressing?

Purse strings

- Is the funding you currently have enough to tackle all of your objectives?
- Are there additional sources that you can apply to for funding?
- Are there potential corporate partners that might participate in the project in exchange for positive publicity?

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