

## Measles & Rubella Partnership Outbreak Response Fund

# Standard Operating Procedures to Apply for Measles Outbreak Response Support

*The Measles and Rubella Partnership (M&RP) is a collaboration between the American Red Cross; the Gates Foundation; Gavi, the Vaccine Alliance; the United Nations Children's Fund (UNICEF); the United Nations Foundation (UNF); the United States Centers for Disease Control and Prevention (CDC); and World Health Organization (WHO).*

The purpose of the Measles & Rubella Partnership Outbreak Response Fund (ORF) is to support rapid and effective responses to measles outbreaks by providing funding for vaccines, injection equipment, and operational costs. The purpose of this document is to facilitate rapid ORF applications and subsequent interventions by defining the essential information required to make an ORF decision.

## Background

The ORF (mail [mrp-orf@who.int](mailto:mrp-orf@who.int)) is designed to provide rapid support for measles outbreak responses in countries where local resources are not enough to control the spread. Measles is a highly contagious viral disease with serious health complications, especially for children who are malnourished and those with weakened immune systems. Timely intervention is crucial to prevent the outbreak from escalating, reduce mortality, and alleviate strain on health systems.

The ORF provides bundled vaccines and/or funding to support operational costs associated with outbreak response efforts, such as logistics, staff mobilization, and clinical management for Gavi-eligible countries.<sup>1</sup> This document clarifies eligibility criteria, funding details, and the process for requesting support.

## Utilizing Local Resources for Outbreak Response

Once the M&RP Outbreak Working Group (OBWG) grants approval, it is essential to promptly initiate the outbreak response using available local resources. This involves deploying locally available vaccines and supplies, and using local funds. The vaccines, supplies, and funds provided through the M&RP ORF can be used to reimburse and replace local resources used to launch the response. This applies from the **date the ORF was approved** until its resources become available, and only up to the amount approved by the M&RP OBWG. If needed, this support can also cover resources required to complete the approved outbreak response in phases, even if the initial local supplies were limited in the initial phase. This ensures an ORF-supported rapid and efficient response while not disrupting planned immunization activities for which the advanced resources were originally intended.

<sup>1</sup> <https://www.gavi.org/types-support/sustainability/eligibility>

This allows for a response to be initiated as soon as possible after requested approval, with a target of no more than two weeks between approval and the start of vaccination. However, if local resources are not mobilized for any reason, the timeline may also be measured from the arrival of vaccines. As these operating procedures are implemented, practical experience will help refine expectations regarding feasible timelines.

## Eligibility<sup>2</sup> and Outbreak Criteria

### Operational Definition of a Measles Outbreak

Each country may have its own definition of a measles outbreak, specifying thresholds for the number of cases, affected areas, and population size that trigger a local response, regardless of ORF support or Gavi-eligibility. Typical definitions include:

- » **Suspected Outbreak:** Five or more suspected measles cases in one month within a population of less than 100,000. (*Measles Toolbox<sup>3</sup>: Five or more measles cases with rash onset dates occurring 7–21 days apart that are epidemiologically linked*).
- » **Confirmed Outbreak:** Two or more lab-confirmed cases in one month within a population of less than 100,000. (*Measles Toolbox: Two or more laboratory-confirmed measles cases that are temporally related, with rash onset dates occurring 7–21 days apart, and epidemiologically or virologically linked*).

### Required Conditions for ORF Request

- » **Laboratory confirmation** of a minimum of two cases in the past 60 days is mandatory.
- » **The outbreak must be deemed unmanageable** based solely on locally available efforts and resources.
- » **Locations proposed for ORF support must have confirmed measles cases within the past 60 days and ongoing transmission.** Areas showing a clear upward trend in cases indicate greater urgency.
- » **For localized outbreaks, pre-emptive vaccination may be proposed for high-risk yet unaffected neighboring areas if epidemiological data supports imminent risk** (e.g., very high risk, as indicated by the WHO Measles Risk Assessment Tool<sup>4</sup>). Approval will be considered on a case-by-case basis and should not be assumed as a standard outcome.

### Vaccination Criteria for Age Groups

- » ORF support typically targets children ages 6 to 59 months (under 5 years).
- » Expanding to older age groups:
  - Decisions about extending vaccination to older age groups are guided by local epidemiological analysis. If more than 20% of cases are over the age of 5 years old, consider expanding coverage to older cohorts (e.g., up to 15 years old) to encompass up to 80% of cases.
    - If most confirmed cases in children older than 5 years are concentrated in the 5–9 age group, and together with children under 60 months these constitute 80% of cases, then these groups should be prioritized over older children.

In some settings, individuals older than 9 years of age may significantly contribute to transmission; in such cases, vaccinating children up to 15 years of age could be included in outbreak response immunization. Further expansions could be explored if local data indicates substantial transmission among additional age groups.

<sup>2</sup> Eligibilities will be updated once GAVI 6.0 is approved, including support to Fragile and Humanitarian Settings in Middle Income Countries

<sup>3</sup> <https://www.who.int/emergencies/outbreak-toolkit/disease-outbreak-toolboxes/measles-outbreak-toolbox>

<sup>4</sup> <https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/surveillance/measles-programmatic-risk-assessment-tool>

# Activities Typically Supported

## Outbreak Immunization

- » Includes microplanning, social mobilization, and training.
- » Focuses on in-country logistical costs, operational support, and community engagement.<sup>5</sup>
- » Operational costs up to \$0.65 per child do not include the cost of vaccines and devices, which are provided at no cost to Gavi-eligible countries that have not transitioned out of Gavi support. Countries can request either bundled vaccines, operational costs **or both**.
  - M&RP will consider supplementing the \$0.65 per child operational costs on an exceptional basis for countries faced with humanitarian emergencies, disasters or refugee situations, based on Gavi's FED policy and settings within countries facing acute humanitarian emergencies.
  - Countries can only request the type of Measles Containing Vaccine (either Measles monovalent or Measles-Rubella) that matches the type used in their national Expanded Programme on Immunization (EPI). As Measles-Mumps-Rubella (MMR) vaccine is not recommended for use in campaign settings, countries using MMR in their national EPI can only request Measles-Rubella vaccine.

## Clinical Management

Support for diagnostics (including specimen transport), case management, and treatment protocols.

## Post-Outbreak Assessments to Prevent Recurrence

- » Rapid and light assessments to identify immediate actions that prevent outbreak recurrence, to be budgeted within the ceiling.
- » Methodologically, it may take the form of a Rapid Assessment of Immunization Services to identify routine immunization gaps that led to the outbreak, or an After-Action Review (AAR) to evaluate response strengths and weaknesses, or a Root Cause Analysis (RCA) to pinpoint key contributing factors.
- » Regardless of the methodology applied, the assessment should lead to recommendations for complementary interventions to preclude outbreak recurrence, such as strengthening routine immunization (e.g., communication campaigns), Supplementary Immunization Activities (SIA), and Periodic Intensification Routine Immunization (PIRI), implementing catch-up campaigns or mass vaccination in at-risk areas.
- » Using the measles outbreak as a signal and tracer to guide the geographical focus of other planned interventions, prioritize areas needing immediate action, reach communities with high numbers of zero-dose children, identify immunity gaps, and determine appropriate follow-up actions.

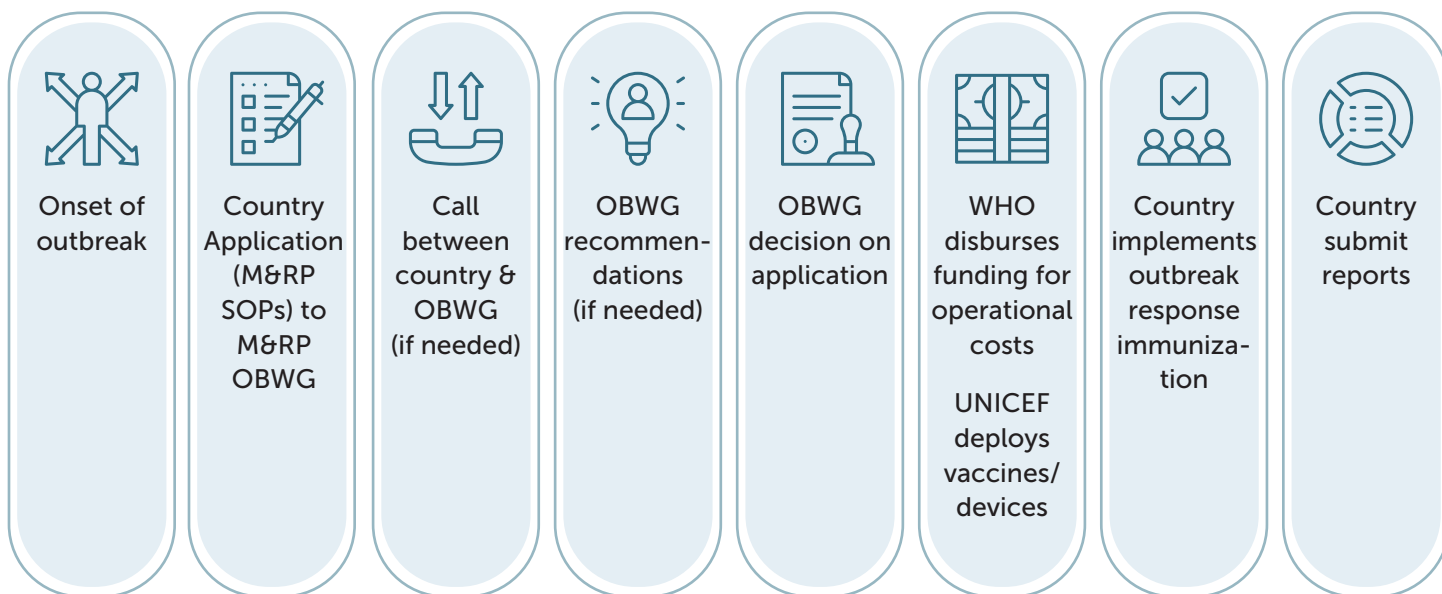
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<sup>5</sup> [Targeted and selective strategies in measles and rubella vaccination campaigns: Interim guidance](#)

# Application and Process

The key steps of the ORF process are described below and summarized in Figure 1.

**Figure 1.** Summary of the ORF Application, Implementation and Reporting Process



## 1. Initiation of the Request

The Ministry of Health (MoH) and/or WHO Country Office (on behalf of the MoH) and/or UNICEF (on behalf of the MoH) submits a formal request to the ORF (**Annex 1: Application Cover Sheet and Annex 2: Request Form**), including an Excel budget detailing cost assumptions. Frequently, the application benefits from the technical assistance of WHO, including the regional level.

The M&RP outbreak funding request must include:

- » Epidemiological description of the outbreak.
- » Rationale for ORF support, including local response efforts made and their limitations.
- » An outline of the proposed response activities and associated resources, in the budget template (see Annex 2).
- » If the application is submitted by the WHO or UNICEF Country Office, as is usually the case, it must include a letter from the MoH committing necessary human resources for planning and implementing the vaccination activity. In areas without full state presence, WHO and UNICEF may provide this information in consultation with relevant local actors.

## 2. Review and Approval

The Measles & Rubella Outbreak Working Group (M&RP OBWG) reviews the request within two working days against the eligibility criteria (**Annex 3: Eligibility Criteria**).

If additional information is required, the OBWG will seek clarification.

Decision-making is based on both data and expert judgment to account for the dynamics of the epidemic.

## 3. Funding Allocation

Funding is allocated based on the scale and scope of the outbreak response and does not include activities that should be covered under routine EPI activities (e.g., Adverse Events Following Immunization (AEFI) monitoring).

Any unutilized funds from ORF that remain in the country office after successful completion of ORI and submission of report must be returned to headquarters.

## 4. Implementation

Once approved, the MoH or implementing partner receives the funds via WHO or UNICEF.

Implementing agencies are expected to:

- » Initiate activities promptly (within 14 days of request approval). If there is a delay in vaccine arrival, and once the application is approved, vaccines and devices may be temporarily advanced from the regular immunization stock where possible.
- » Ensure continuous monitoring and proposed adjustments based on the outbreak's evolution.

## 5. Monitoring, Evaluation and Reporting

Implementing partners must submit progress and financial reports within two months of completing the vaccination activities (**Annex 4: Report Form**). Reports should include:

- » Outbreak response activities and outcomes.
- » Initial surveillance data post-response.
- » Expenditure details for any funds awarded.
- » Assessment of the vaccination response.
- » Recommendations for corrective actions to be implemented after the response, based on a Rapid Assessment of Immunization Services, After Action Review, or Root Cause Analysis.

Continuous data collection is essential for evaluating the intervention's impact and identifying necessary adjustments.

## Critical Steps for Requesting and Implementing Support

- » **Confirm Local Efforts:** Ensure that an initial response has been attempted locally and that ORF is a secondary escalation.
- » **Prepare a Comprehensive Request:** Include all critical epidemiological data and a clear description of why the outbreak is unmanageable locally.
- » **Engage Stakeholders Early:** Coordinate with WHO, UNICEF, and other partners to align on the need for support.
- » **Clarify Operational Costs:** Ensure that all ORF proposed costs, except for vaccines and devices, fall within the \$0.65 per child threshold, with exceptions considered as per GAVI's FED policy.
- » **Maintain Timeliness:** The ORF is designed for rapid response. Delays in submission or incomplete requests may jeopardize funding approval.
- » **Document Lessons and Implement Immediate Complementary Actions:** A measles outbreak signals an underlying immunity gap and underscores the need to strengthen both routine and expanded immunization in targeted geographic areas. To quickly address these risks in the short term, conduct a rapid assessment, light Root Cause Analysis (RCA), or After-Action Review (AAR) to document lessons learned, identify programmatic gaps, and prioritize targeted interventions. Complementary actions should focus on rapidly closing the immunity gap, such as prioritizing Supplemental Immunization Activity (SIAs), adjusting catch-up strategies, and strengthening and expanding regular immunization to prevent outbreak recurrence.

## Monitoring and Evaluation

- » **Continuous Monitoring:** Implementing partners must monitor real-time data on case numbers, vaccination coverage, and other key indicators.
- » **Adjustments:** Adjustments to the response strategy can be made based on ongoing transmission patterns and as part of a Mid-Response Review.
- » **Final Evaluation:** Two months after the end of the intervention, a comprehensive report must be submitted to assess the impact, coverage, and effectiveness of the response activities. This report should include: The Rapid Assessment and derived complementary measures agreed or suggested to reduce the risk of another outbreak. The number of zero-dose and one-dose children vaccinated during the response, even if that number is estimated.

## Annex 1

# Application Cover Sheet for Measles & Rubella Partnership (M&RP) Outbreak Response Fund (ORF)

Country Name	
Date of Submission to M&RP ORF	
<b>Summary of Outbreak Information</b> <i>The quantified information below is required and should be summarised here, not by referencing an annex.</i>	
Date of rash onset of first reported suspected case	
Date of rash onset of the first laboratory-confirmed case	
Date of laboratory confirmation of outbreak (based on lab criteria)	
Date when outbreak was declared by health authority (if)	
Total number of suspected cases to date	
Total number of suspected cases tested serologically	
Total number of lab-confirmed cases	
Total number of epidemiologically linked cases	
Total number of confirmed cases (lab + epi-linked)	
Total number of clinically confirmed cases	
NB: Number of districts with active outbreaks (at least two confirmed cases) in the last 60 days	
<b>Summary Of Response Plan</b>	
<b>Population</b>	
Target population	
Targeted geographical areas: XXX districts/counties in XXX provinces/regions	
Target age group (if different, kindly specify geographical areas)	

<b>Costs</b>			
<i>NB: Should government self-finance part of the outbreak response, kindly indicate/add column</i>			
	UNICEF	WHO	Total
Vaccine & device costs (USD)			
Operational costs (USD)			
Total (USD)			
<b>Vaccines and devices</b>			
Requested number of vaccines (in doses). Please indicate if there is a need for 5 or 10 dose vials and monovalent measles or MR.			
Are devices requested? (AD syringes, RUP syringes, and Safety Boxes)			
Is there existing stock of the requested vaccines and devices available for immediate use, to be replenished by the incoming ORF supply?			
<b>Vaccination campaign</b>			
<i>Note: Unused funds from the approved ORF application must be returned to headquarters unless additional approval is granted for reallocation in line with SOPs.</i>			
Planned start date of vaccination and expected duration until completion			
Will vaccination be done in one or multiple phases?			
Date of last measles/measles-rubella SIA or measles/measles-rubella outbreak response			
Date of upcoming measles/measles-rubella SIA or measles/measles-rubella outbreak response			
<b>Technical Assistance and Measles Kit</b>			
Does the country request technical assistance for monitoring and evaluation activities?			
Number of Measles kits (2021) <sup>6</sup> requested			

<sup>6</sup> [Measles kit 2021](#)

## Checklist for country colleagues

- Summary information filled
- Application and budget (and any additional critical information) attached
- MOH endorsement letter attached
- UNICEF/WHO Country Office consulted
- Alert RO of intent to submit an application
- Only propose locations with confirmed measles cases within the past 60 days and ongoing transmission. For a localized outbreak, pre-emptive vaccination may be proposed for high-risk yet unaffected neighboring areas if epidemiological data supports imminent risk.<sup>7</sup>
- The application should include an explanation of how the proposed outbreak campaign, including selected age groups and locations, aligns with any prior or upcoming immunization activities.
- Submit to [mrp-orf@who.int](mailto:mrp-orf@who.int), and include RO focal points

**Reminder:** any unutilized funds from ORF that remain in country office (CO) after successful completion of ORI and submission of report must be returned to WHO headquarters (HQ) in collaboration with regional office (RO)

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<sup>7</sup> Approval will be considered on a case-by-case basis and should not be assumed as a standard outcome.

## Annex 2

# Request Form for Measles & Rubella Partnership (M&RP) Outbreak Response Fund

This form should be completed and submitted to the ORF by the Ministry of Health (MoH), or through the WHO Country Office when requesting support from the Measles & Rubella Partnership Outbreak Response Fund (M&RP ORF). The form is designed to capture essential epidemiological data, justification for ORF support, and the proposed activities for the outbreak response.

All sections must be filled in accurately to ensure prompt review and decision-making. If submitted directly, the WHO Country Office should be copied, which will notify the regional office.

[Contact Information](mailto:mrp-orf@who.int) of the OBWG-ORF: [mrp-orf@who.int](mailto:mrp-orf@who.int)

Contact is also possible via the country's WHO or UNICEF representations. The WHO Country and Regional Offices should be copied by the WHO Country Office.

Section A: General Information		
Country		
Requesting Entity [Ministry of Health / WHO Country Office]		
Date of Request [dd/mm/yyyy]		
Point of Contact at the MoH (IHR, EPI/ VPD, EOC)	Name	
	Title/ Position	
	Email	
	Phone	
	Alternate Contact(s)	
Other Points of Contact	WHO	
	UNICEF	
	Other	

## Section B: Epidemiological Information and Outbreak Description

### Outbreak Location(s)

Region(s)	
District(s)	
Specific Communities/ Villages with Active Case Transmission (< 60 days)	
Population of the Area(s) Currently in Active Transmission	

### Outbreak Description

Start Date	
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<p><b>Outbreak Timeline and Evolution</b></p> <p><i>Describe how the outbreak started and evolved, including identification of proximate and root causes.</i></p> <p><i>Provide the definition used to declare an outbreak in the affected region, district, or community.</i></p>	
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<p><b>Summary of Confirmed Cases and Deaths</b></p> <p>Provide a table summarizing confirmed cases, deaths, and case fatality rate (CFR) in the affected areas (optional, add a map)</p>	Province	District	Suspected Cases	Confirmed Cases	Date of the latest confirmed case	Deaths	CFR (%)
	Total						

<p><b>Confirmed Cases in the Last 60 Days</b></p>	Province	District	Community/ Village	Confirmed Cases (Last 60 Days)	Date of Last Lab Confirmed Case

	Age Group	Suspected Cases	Confirmed Cases	Deaths	CFR (%)
<b>Age Distribution of Cases (last 60 days)</b>	0-4 yrs				
	5-9 yrs				
	10-14 yrs				
	15+ yrs				
<b>Current Response Capacity</b> <i>Describe local resources and response activities already initiated.</i>  <i>Explain why the outbreak is considered locally unmanageable.</i>					
<b>Laboratory Confirmation</b>					
Number of Samples Tested					
Results (e.g., positive, negative)					
Laboratory Name and Contact					
<b>Recent Outbreak History</b> <i>Provide information on other recent measles outbreaks in the area, including locations and case numbers.</i>					
<b>Potential for Spread</b> <i>Describe the potential risk of the outbreak spreading to neighboring regions or districts.</i>  <i>Specify high-risk areas for pre-emptive vaccination and methods applied to evaluate high or imminent risk (measles risk assessment tool).</i>					

## Section C: Justification for ORF Support

### Rationale for ORF Support

*Provide a brief justification for why ORF support is necessary, including current gaps in response capacity, ongoing transmission, and the risk of further spread.*

**Proposed Response Strategy**

*Clearly outline the response strategy, activities to be funded, specifying if the strategy includes communication, demand generation, outbreak immunization, prioritized locations, clinical management, post outbreak assessment or additional activities.*

*If the country has other preventive measles/MR activities (such as a follow-up or catch-up campaign, PIRI or BCU), clarify how the outbreak response immunization (ORI) will complement or differ from these.*

**Vaccination Target Population**

*Justify the proposed target population and age groups based on outbreak dynamics.*

*Specify whether expanding beyond the standard under-5 age group is warranted (e.g., if children age 5–9 or 10–15 years account for 20% or more of confirmed cases).*

## Section D: Funding Request Details

### Operational Costs

Estimated Number of Target Children

#### Breakdown of Costs

*Provide details (e.g., logistics, transportation, staff mobilization, training, demand generation).*

*Fill in the Excel form: <https://www.who.int/publications/m/item/gavi-budget-template-for-operational-costs>, sections 1, 2 and 6 (budget template English/French)*

### Requested Supplies

Requested Quantity of Vaccine (In Doses)

Devices needed?  
Yes/No

Vial Size for Requested Vaccines (5-dose or 10-dose)<sup>1</sup>

Optional: current stock levels of Measles/MR vaccine at national and subnational levels

### Clinical Management Costs (If Applicable)

Provide details on training, case management support, and additional operational costs.

<sup>1</sup> Five-dose vials will be made available for replenishment only to countries already using the 5-dose in their national EPI that have used RI doses to initiate the OBR.

Post-Response Resilience Building (Refer to Activity 4 of the Budget Template)

Rapid Assessment of Immunization Services

After Action Review

Root Cause Analysis

Section E: Monitoring and Evaluation

Monitoring Plan

Describe the mechanisms for tracking progress, case numbers, vaccination coverage, and other key indicators during the intervention.

Indicate the frequency of progress reports (e.g., weekly, monthly) and specify the entities responsible.

## Post-Intervention Evaluation

Specify plans for optional After-Action Review, Root Cause Analysis, and final evaluation.

Detail how lessons learned will support complementary actions agreed upon beyond the outbreak response to decrease the risk of recurrence.

## Section F: Additional Comments or Considerations

Use this section to provide any additional information that may support the funding request or clarify specific elements of the proposed application.

## Section G: Local Endorsements of the Quality and Completeness of the Request

### Ministry of Health Signature

Name	
Title	
Signature	
Date	

### WHO Country Office Representative Signature

Name	
Title	
Signature	
Date	

## Submission Instructions

This form should be submitted to the Measles & Rubella Partnership Outbreak Working Group (OBWG) for review and approval. Ensure that all sections are completed, and all supporting documents are attached as necessary. If further guidance is required, please contact the OBWG-ORF team at [mrp-orf@who.int](mailto:mrp-orf@who.int) or via the WHO or UNICEF country representations.

## Annex 3

# Eligibility Criteria for Measles & Rubella Partnership (M&RP) Outbreak Response Fund (ORF)<sup>1</sup>

Please complete the checklist below to ensure you fulfill the eligibility criteria.

Criteria	Yes/No	Comments/Inputs
1. Are the proposed interventions targeted at susceptible age groups that account for 80–90% of the cases, per the WHO guidance on targeted and selective strategies in measles and rubella vaccination campaigns? <sup>2</sup>		
2. Have all included districts reported at least 2 confirmed cases within the past 60 days and ongoing transmission?		
3. Is there evidence of an unmanageable outbreak? (i.e., large size of the outbreak with increasing case counts, local response that is insufficient in addressing the outbreak)		
4. Have other interventions, such as upcoming preventive campaigns or ongoing efforts to strengthen routine immunization, that target the same areas been described? And is it clear that the proposed outbreak response will complement, not duplicate, these efforts?		
5. Has the country provided sufficient information on how the ORI activity will be monitored (e.g., in-process or rapid convenience monitoring, or similar)?		
6. Is there provision for a post-outbreak assessment and using this to link to routine immunization strengthening investments to prevent future outbreaks?		
7. Are there additional non-financial resources (e.g., human, material) for the outbreak response that will be provided by the government?		
8. Are social mobilization activities to raise awareness and demand for the outbreak response campaign included? Are they adequate?		

<sup>1</sup> Funding is allocated based on the scale and scope of the outbreak response and does not include activities that should be covered under routine EPI activities (e.g., AEFI monitoring). Any unutilized funds from ORF that remain in CO after successful completion of ORI and submission of report must be returned to WHO HQ.

<sup>2</sup> [Targeted and selective strategies in measles and rubella vaccination campaigns: Interim guidance](#)

## Annex 4

# Report Form for Measles & Rubella Partnership (M&RP) Outbreak Response Fund (ORF)

Please submit the reports and provide necessary updates on the ORI implementation via email to the OBWG Secretariat at [mrp-orf@who.int](mailto:mrp-orf@who.int) within 2 months of completion of the vaccination activity.

The Measles and Rubella Partnership (M&RP) is a partnership of ARC, CDC, Gavi, the Gates Foundation, UNF, UNICEF, and WHO. The M&RP Outbreak Response Fund's (M&RP ORF) purpose is to support rapid and effective response to measles outbreaks with funding for vaccines, injection equipment and operational costs. This form is for the report on the use of M&RF outbreak response funds as outlined in the standard operating procedure.

General information	
Country	
Date of request	
Date of receipt of funds from M&RP:	
Date of receipt of vaccines from M&RP	
Date of receipt of devices from M&RP	
Date of outbreak response	From: To:
Reporting agency <i>Please ensure the report is reviewed and endorsed by all these agencies.</i>	<input type="checkbox"/> Ministry of Health / National public health institute <input type="checkbox"/> WHO <input type="checkbox"/> UNICEF country offices
Contact person at reporting agency	Name: E-mail: Telephone:
Outbreak report	
The number of people targeted and the number and percentage vaccinated, by age or age group (e.g., 6-11m, 1-4y, 5-9y, 10-14y, 15-19y, etc.), by district and province (or village, if a small response).	

<p>The number of persons targeted, and the number and percentage reached by additional interventions (e.g., vitamin A).</p>	
<p>Rapid convenience monitoring results, if conducted.</p>	
<p>Post campaign coverage survey results, if conducted.</p>	
<p>Impact of the response with respect to cases and deaths over time (e.g., an updated epidemic curve stacked by classification status and indicating the dates of outbreak responses.)</p>	

## Statement of expenditures

Include a detailed breakdown of the expenses for each activity against the budgeted amount and funding source.

## Lesson learned and plan

Findings from the root cause analysis and the resulting budgeted plans should directly address immunity gaps, surveillance performance, and outbreak preparedness and response. Countries must include how findings from these analyses will be used to leverage routine immunization strengthening investments (e.g. HSS), how missed children and missed communities will be enrolled in routine immunization, and how the outbreaks will inform the planning of different strategies for future preventive campaigns.