

Guidance for Post-campaign surveys to measure campaign-vaccination coverage of Gavi supported campaigns

Countries receiving Gavi support for vaccination campaigns are required to conduct a high quality, nationally representative survey using probability sampling to assess the coverage of each Gavi-supported campaign. The rationale for this is to 1) have an independent estimation of coverage of the completed campaign supported by Gavi, and 2) hold in-country leaders and other stakeholders accountable for the campaign. The post campaign coverage survey, if of high quality, can also help to plan future campaigns and other strategies¹.

As of 2017, vaccination campaigns against Japanese Encephalitis, Measles, Measles/Rubella, Meningitis A and Yellow Fever are supported by Gavi. Each Gavi-supported vaccination campaign for all these vaccines, will need to be followed by a post-campaign survey.

For example, to be able to apply for measles-rubella vaccine introduction for routine immunization, the Board-approved Gavi Measles and Rubella Strategy requires that countries that do not have routine immunization coverage for the first dose of Measles-Containing Vaccine (MCV) higher than 80% by WHO/UNICEF estimates of vaccination coverage (WUENIC), will be required to have higher than 80% coverage in their last measles campaign, validated with a post-campaign coverage survey². This highlights the importance of and need for a reliable post-campaign coverage survey to support that a country meets the criteria for measles-rubella vaccine introduction.

To ensure post-campaign coverage surveys are conducted with good quality and produce results that can be used for their intended purpose, the following key principles are highlighted for countries' and technical partners' consideration.

- **Objectives of a post-campaign coverage survey from a Gavi perspective**
 - To estimate the national coverage of vaccination campaign using probability sampling
 - To provide accountability for the conduct of campaign for national authorities and stakeholders
- **Planning for a post-campaign coverage survey**
 - At the time of Gavi application for campaign support, countries must indicate the scope and objectives of a planned post-campaign survey and include the survey cost as a part of the operational budget to ensure the inclusion of necessary support for the survey.
 - The technical and operational planning for a post-campaign survey should start at least 6-12 months in advance of the planned campaign.

¹ Examples include lessons learnt and improvements in next campaign from triangulation of information from multiple sources, planning for strategies that could be used to improve routine immunisation based on results on proportion of children reached for the first time by campaigns, and improving strategies for a particular age group for next campaign, if sampling is stratified by age group

² Country must also have DTP3 coverage (WUENIC) $\geq 70\%$

- It is critical that countries take ownership and lead the planning and oversight of a campaign in a timely manner. Technical partners can support countries for the planning of a vaccination campaign **and** a post-campaign survey to ensure quality and efficiency. This support could be coordinated by the Inter-agency Coordinating Committee (ICC) or an equivalent body, to promote coordinated partner support and oversight as needed.
 - Countries should clearly define the roles and responsibilities of key persons for planning, conducting and disseminating the post-campaign survey.
 - To ensure an objective assessment of the campaign coverage, the management of a post-campaign survey should be led by an independent interdisciplinary team with inputs from the immunisation programme and its partners. Countries are encouraged to work with the national statistical office or an equivalent government programme to obtain the best available sampling frame. Considering difficult realities in some countries, a close engagement and support from partners is key especially during early planning and budget estimation process.
 - A post-campaign coverage survey should be conducted as soon as it is feasible, and no later than within 3 months, after the completion of a campaign to reduce recall bias.
 - Countries are encouraged to use and adapt WHO's readiness assessment tool for vaccination campaigns to be adequately prepared to conduct high quality post campaign coverage survey:
<http://apps.who.int/entity/immunization/diseases/measles/SIA-Readiness-Assessment-Tool.xlsx>
 - Countries are encouraged to consider including necessary technical support for a planned vaccination campaign and post-campaign survey in the planning of Gavi Targeted Country Assistance by the Alliance technical partners.
 - Countries are encouraged to identify and engage technical institutes (e.g. National Statistics Office) or survey experts from within the country or the region to ensure continued engagement and local capacity strengthening.
- **National versus sub-national coverage estimates**
 - National level reliable coverage estimates should be the priority of a post-campaign survey using a probability sampling methodology.
 - Countries are strongly encouraged to carefully consider the intended use of post-campaign survey data. District level estimates of post-campaign survey coverage are strongly discouraged because of the potential negative impact on the process and quality. Experiences in some countries showed that aiming to produce sub-national estimates can delay the survey process potentially increasing recall bias, significantly increase the survey cost and potentially compromising the survey quality.
 - If there are specific questions about certain high-risk population sub-groups based on existing evidence, countries may consider oversampling specific

areas or target groups. The intended use of such data will need to be clarified at the time of survey planning.

- Considerations for sub-national and/or specific population sub-groups can be discussed with Gavi and technical partners on a case-by-case basis. The WHO coverage survey guidelines (http://www.who.int/immunization/monitoring_surveillance/Vaccination_coverage_cluster_survey_with_annexes.pdf?ua=1) describe the implications and considerations for sample size, resources and quality control of stratifying surveys to different levels of the health system.
- **Sample size and degree of precision for a post-campaign coverage survey**
 - The survey needs to be of sufficient sample size relative to the target population of interest and the purpose of the survey.
 - Countries must determine the expected use of post-campaign coverage survey data before deciding a sampling strategy and the level of precision.
 - Technical experts recommend that countries aim for a national campaign-coverage estimate with a precision of $\pm 5\%$, when coverage is expected to be at least 80%. Aiming for more or less precision may depend on the programmatic decisions expected as a result of the survey.
- **Adding routine immunisation questions to a post-campaign coverage survey**
 - Adding routine immunisation (RI) questions in a post-campaign survey would increase the planning and data collection time and resource requirements because of different target populations for routine immunisation and campaigns. The survey questionnaire becomes longer and more complex than a questionnaire with a focus on the campaign only; this increases not only time for field work but also greatly increases the complexity and duration of data entry, data management, analysis and report writing. Given that the target age-group for RI is usually narrower than that of a campaign, many more households would need to be visited to locate children in the target age group for routine immunisation, and another step of visiting health facilities to obtain documentation of RI for children without a home-based record is also added.
 - Nonetheless, with advance planning, careful quality assurance and availability of adequate funds, it may be manageable to add a small number of routine immunisation questions in a post-campaign coverage survey targeting national level estimates; this may however increase the budget needed. Aiming for subnational level estimates of routine immunisation would usually not be feasible in the timeframe for a post-campaign survey and would further greatly inflate costs and may jeopardise data quality.

- Routine immunisation questions may be integrated to post-campaign surveys, provided that
 - there is adequate planning time and funding and
 - that the addition of routine immunisation questions does not add unnecessary burden on data collection and does not hamper the quality or timeliness of a post-campaign coverage survey
- If there is a desire to add routine immunisation questions in a post-campaign coverage survey, countries and technical partners must agree on a small number of routine immunisation questions to be added based on the intended use of data. For a measles vaccination campaign, priority should be given to MCV1/MCV2 coverage and limit the coverage estimation to the national level.
- If there was a recent high quality immunisation coverage survey (such as DHS or MICS) in the country, i.e., within 3- 5 years, or one is being planned, it is not necessary to prioritise the inclusion of routine immunisation questions in a post-campaign survey.
- **General considerations**
 - Consider the use of standardised post-campaign survey questionnaires, or questionnaires that have been reviewed by an expert committee, and validated for collecting data on immunisation in order to ensure conformity with best practice.
 - Conduct appropriate statistical analyses given the survey sampling design.
 - Develop a report with:
 - sufficiently detailed description of the rationale and purpose of the survey, scope of the survey, target population, sampling procedures, planned sample size, strategies used to minimise bias (e.g. revisits to target populations) and limitations, in order to facilitate the interpretation of the results and replication of similar surveys in the future;
 - sufficiently detailed description of the actual sample from whom data were collected
- A probability-based post-campaign survey with national-level coverage estimates is mandatory under Gavi support. If countries are faced with exceptional circumstances that do not allow a post-campaign survey (e.g. security issues or disease outbreaks), they should provide written justifications to Gavi.