

PLEASE READ FIRST

This document contains guidance for using the Behavioural and Social Drivers (BeSD) of vaccination tools to assess and address the reasons for low vaccination uptake.

Following the SAGE meeting in October 2021, this document will be updated to reflect the conclusions and recommendations of SAGE, as well as any related revisions to the tools and indicators.

This version therefore represents a ‘final draft’.

The final version – with added graphic design for enhanced usability – will be published and disseminated in November 2021.

Data for action: achieving high uptake of vaccines

Gathering and using data on the behavioural and social drivers of vaccine uptake

A guidebook for immunization programmes and implementing partners

15 September 2021



World Health
Organization

unicef 
for every child

This guidebook is intended for immunization programme managers, researchers and others engaged in collecting, analysing and using data for vaccine programme planning and evaluation. BeSD is a set of tools to systematically assess and address factors that impact uptake, and to track consistent and comparable data over time.

To enable the World Health Organization (WHO) and partners to gather feedback and any lessons on these tools, please inform Lisa Menning at WHO headquarters (menningl@who.int) if you use any of these tools.

Contents

Acknowledgements

Abbreviations

| | |
|--|-----------|
| Data for action: achieving high uptake of vaccines | 2 |
| Contents..... | 3 |
| Acknowledgements..... | 5 |
| Abbreviations | 6 |
| 1. Introduction | 7 |
| Quick Start Guide: Using the BeSD tools | 8 |
| 2. Plan to use the tools | 9 |
| 2.1 Key steps in planning | 9 |
| 2.2 Select the data collection tools..... | 9 |
| 2.3 Integrating the BeSD tools in other data collection processes..... | 10 |
| 2.4 Adapt and test the tools to match the local needs and context | 10 |
| 3. Investigate the drivers: data collection, analysis and reporting | 13 |
| 3.1 Preparing to collect data | 13 |
| 3.2 Determine a sampling plan and data collection methods..... | 13 |
| 3.3 Immunization coverage measures | 15 |
| 3.4 Quantitative analysis and reporting of survey data..... | 15 |
| 3.5 Qualitative analysis and reporting of data from interview guides | 17 |
| 3.6 Sharing of plans, data and reports..... | 20 |
| 4. Act: Using BeSD data to drive action | 21 |
| 4.1 Using BeSD indicators | 21 |
| 4.2 Planning interventions | 21 |
| 4.3 Selecting interventions when BeSD data is not available | 22 |
| 4.4 Triangulating BeSD data with other routine data sources..... | 22 |
| Annex 1: BeSD tools for childhood vaccination | 27 |
| Childhood vaccination survey core indicators | 27 |
| Childhood vaccination survey and item rationale | 28 |
| Visual response scale | 37 |

| | |
|---|-----------|
| Childhood vaccination in-depth interview guides | 38 |
| Qualitative framework analysis template for caregivers, health workers, community influencers and programme managers..... | 46 |
| Annex 2: BeSD tools for COVID-19 vaccination | 47 |
| COVID-19 vaccination survey core indicators | 47 |
| COVID-19 vaccination survey for adults and health workers | 48 |
| Visual survey response scale..... | 62 |
| COVID-19 vaccination in-depth interview guides for Adults and Health workers..... | 63 |
| Qualitative framework analysis template for BeSD COVID interviews..... | 69 |
| Annex 3: Guidance for adapting the BeSD tools | 70 |
| Adapting the BeSD surveys | 70 |
| Adapting the BeSD interview guides..... | 71 |
| Annex 5: Example visualisations and reporting of findings | 74 |
| BeSD data visualisations | 76 |
| BeSD reporting template | 78 |
| Annex 6: WHO policy on use and sharing of data | 81 |

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Conflicts of interest

For the development of this document, a global and multidisciplinary group was established by WHO consisting of individuals with expertise across multiple areas of specialization and regional representation (see above list of names and affiliations). Declarations of interest have been collected from all external contributors and assessed for any conflicts of interest. Potential conflicts of interest have been managed according to WHO's policies and procedures.

Terms of reference for the group described the required set of duties and contributions of the members, in addition to scope, objectives and expected outputs. In the process of developing this guidebook, it was recognized that working group members acted in good faith and in the best interests of the group, WHO and its purposes. All procedures were followed in accordance with ethical standards. The document was developed via an iterative, open and transparent process of development and review, with the full working group being offered the opportunity to comment at the end of each round of revisions.

All working group members contributed in their individual capacity and no one member was ever given added preference. At each stage of content development, inputs were collectively reviewed by the working group or a subgroup of the broader group. It was expected that group members acted honestly and fairly in the interests of WHO, as was the case. Discussions were managed by the working group chair in a manner to ensure that scientific integrity, process and reputation were sustained.

These actions together helped to ensure that working group members brought their best experience, expertise and commitment to the discussions.

Abbreviations

| | |
|----------|---|
| BeSD | Behavioural and social drivers |
| CDC | Centers for disease control |
| CI | Confidence interval |
| DHS | Demographic and health survey |
| EPI | Expanded programme on immunization |
| HW | Health worker |
| KAP | Knowledge, attitude, practices |
| MICS | Multiple indicator cluster survey |
| M&E | Monitoring and evaluation |
| ODK | Open Data Kit |
| OR | Odds ratio |
| UNICEF | United Nations Children's Fund |
| VPD | Vaccine preventable disease |
| WHO | World Health Organization |
| WHO SAGE | Strategic Advisory Group of Experts on Immunization |

1. Introduction

This guidebook supports the use of the Behavioural and Social Drivers (BeSD) tools to understand what drives uptake of vaccines. It is intended for immunization programme managers and others collecting, analysing and using data for vaccine programme planning and evaluation. Routine tracking of BeSD data will offer insights into how to continually improve programme implementation.

The guide follows a structured, three-step process (**Plan, Investigate, and Act**) and includes the following:

- A **Quick Start Guide**, a summary overview on how to gather, analyse and use BeSD data
- A **detailed explanation of each step** and best-practice recommendations
- **The tools** to measure the changeable drivers of uptake, available in the annexes:
 - **Childhood vaccination** surveys and interview guides ([Annex 1](#))
 - **COVID-19 vaccination** surveys and interview guides ([Annex 2](#))

Behavioural and social drivers are the factors about people and their circumstances that affect whether they get vaccinated or not. The BeSD tools **measure 4 domains** that influence vaccine uptake (Figure 1):^{1,2}

1. What people **think and feel** about vaccines;
2. The **social processes** that drive or inhibit vaccination;
3. **Motivations** (or hesitancy) to seek vaccination; and
4. **Practical issues** involved in seeking and receiving vaccination.

While many factors can affect uptake, the BeSD tools focus primarily on proximal factors that are **measurable in individuals, specific to vaccination, and potentially changeable by programmes**. BeSD are not distal influences such as politics, health literacy, education, rurality, age, etc., many of which operate through BeSD. Exploring distal influences is possible using the BeSD in-depth interview guides and survey items on demographics.

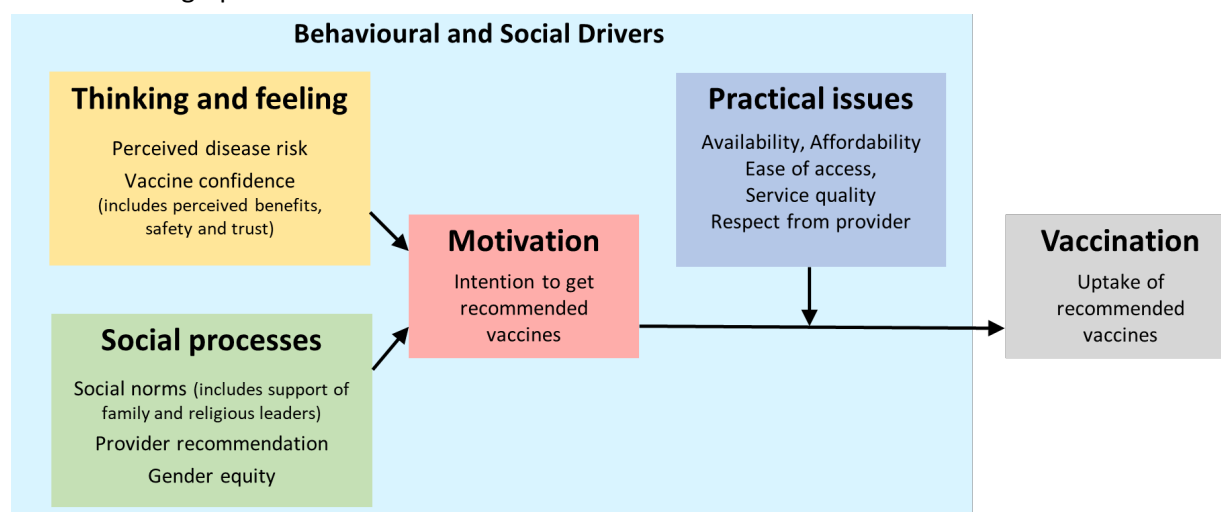


Figure 1. The Behavioural and Social Drivers (BeSD) Framework. Source: The WHO BeSD working group. Based on *Increasing Vaccination Model* (Brewer et al., 2017)

¹ The BeSD expert working group. Based on: Brewer NT, Chapman GB, Rothman AJ, Leask J, Kempe A (2017). Increasing vaccination: putting psychological science into action. *Psychol Sci Public Interest*. 18(3):149–207.

² Shapiro, G. K., Kaufman, J., Brewer, N. T., Wiley, K., Menning, L., Leask, J., ... & Wiysonge, C. S. (2021). A critical review of measures of childhood vaccine confidence. *Current Opinion in Immunology*, 71, 34-45.

Quick Start Guide: Using the BeSD tools

PLAN



1. MAKE A PLAN

Set a specific goal such as “understanding the changeable drivers and barriers to vaccination in [country] to improve uptake”. **Establish a team** that includes partners and a representative of the population you will collect data from, how to recruit participants, funding, timelines and ethics approvals. Develop a plan, timeline and budget. Guidance on planning is available [here](#).



2. CHOOSE YOUR TOOLS

Decide on the tools to match your goal. The BeSD surveys and interview guides can be found [here](#). Translate or adapt them as needed. Guidance for adaptation is available [here](#). Identify a sample, a data collection protocol, and obtain any necessary approvals

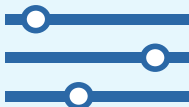
INVESTIGATE



3. COLLECT AND ANALYSE DATA

Collect, clean and analyse data. Summarise and report findings. Tools and guidance for analysing and presenting quantitative and qualitative BeSD data are available [here](#).

ACT



4. USE FINDINGS TO DESIGN INTERVENTIONS

Develop an intervention plan, including indicators for monitoring and evaluation of processes and outcomes. Recommendations for interventions to increase acceptance and uptake are [here](#).



5. CONTINUE TO MONITOR AND IMPROVE

Repeat BeSD data collection as needed. Routinely monitor drivers and barriers, track trends over time and long-term impact of interventions. This will build an understanding of what interventions work well and sustain over time.

2. Plan to use the tools

Why assess the behavioural and social drivers (BeSD) of vaccination?

It is vital for countries to gather local data on how people think, feel and act in relation to vaccination to inform the development of strategies to increase uptake of vaccines. Gathering and using quality data on the BeSD of vaccination will enable programmes to design, target and evaluate interventions to achieve greater impact with more efficiency, and to examine and understand trends over time. Routinely gathering and using such data will offer insights into how to continually improve implementation strategies and tailor communication approaches. These data on health workers will be particularly important, given their critical role in relation to vaccination.

2.1 Key steps in planning

Before starting to use the tools, immunization programmes should:

- ✓ Establish a small core team of immunization staff, partners and others with research expertise. Involve this group and local community representatives throughout the process.
 - If a dedicated research agency, academic unit or company will conduct the data collection and analysis, the core team will still carry out planning and coordination among the researchers and other stakeholders.
- ✓ Select data collection tools (see section 2.2 for details)
- ✓ Develop a data collection and analysis plan (e.g., protocol) based on the resources available.
- ✓ Establish a realistic timeline by phase (e.g., protocol development and ethics review, data collection and analysis, recommendations and dissemination).
- ✓ Obtain the required permits and/or ethical approvals prior to data collection.

2.2 Select the data collection tools

BeSD provides a range of tools to assess the drivers of uptake for childhood vaccination and COVID-19 vaccines. The BeSD surveys and in-depth interview guides can be implemented as stand-alone assessments or integrated into other data collection activities (see section 2.3). Core indicators for tracking can be found in the annexes above the relevant survey.

BeSD tools for childhood vaccination – [Annex 1](#)

- [Childhood vaccination survey core indicators](#)
- [Childhood vaccination survey for caregivers](#)
- [Childhood vaccination in-depth interview guide for caregivers](#)
- [Childhood vaccination in-depth interview guide for health workers](#)
- [Childhood vaccination in-depth interview guide for community influencers](#)
- [Childhood vaccination in-depth interview guide for programme level managers](#)

BeSD tools for COVID-19 vaccination – [Annex 2](#)

- [COVID-19 vaccination survey core indicators](#)
- [COVID-19 vaccination survey for adults and health workers](#)
- [COVID-19 vaccination in-depth interview guide for adults and health workers](#)

Table 1: Main differences between the surveys and interview guides

| Surveys | Qualitative interview guides |
|--|---|
| <ul style="list-style-type: none"> - Use fixed questions to quantify topics related to drivers and barriers that programmes have already identified. - Have 300+ participants, surveyed at one point in time or at multiple points. - Yield numerical summaries with frequencies and associations. | <ul style="list-style-type: none"> - Use flexible questions to hold a discussion to identify new topics related to drivers and barriers. - Have 10-30 participants, interviewed at one point in time. - Yield narrative summaries with key themes and quotations. |

The **BeSD surveys** can be adapted to various interview modes, e.g. online, telephone, or in-person.

The **in-depth interview guides** can be used in a stand-alone assessment with individuals or in focus group discussions, or both. They can also be used for the purpose of pre- or post-survey exploration to gather in-depth information about a particular population group of survey finding of interest.

2.3 Integrating the BeSD tools in other data collection processes

To facilitate data collection and use, the BeSD surveys can be integrated into other data collection activities, such as an Expanded Programme on Immunization (EPI) review, coverage survey, a Multiple Indicator Cluster Survey (MICS) or a Demographic and Health Survey (DHS). Integration into these large national surveys requires good coordination, expert input, and strong partner engagement. It is also possible to integrate the BeSD tools into local data gathering activities, academic studies, and regional assessments.

When integrating, include at least the six BeSD core indicators, in addition to other BeSD survey questions that are relevant to the country or research objective. Ensure the chosen questions align with the target audience of the broader activity (e.g., caregivers, health care workers), remove duplicate questions (if any) and order questions to create a logical flow.

2.4 Adapt and test the tools to match the local needs and context

A global group of experts and partners carried out a rigorous process to test and validate the tools available here (more details about this process is available here: [link to published SAGE background paper](#)). Questions and response options should therefore not be revised, to maintain accuracy and standardization for tracking trends. Additional questions can be included to accommodate specific contexts. To assist with local translation, all BeSD tools include details on the rationale for each question and related descriptions.

Adaptation of the tools requires two steps:

1. **Translation** into local language(s) with review by stakeholders to ensure the intended meaning of concepts is retained.

- Translated surveys can be tested using *cognitive interviewing* to ensure each question and its response options convey the intended meaning. See [Annex 3](#) for more details.
2. **Pilot testing** (or pre-testing) to ensure the tools work in the field and yield usable data.
- **The qualitative interview guides** should be pilot tested via 2-3 interviews (minimum) with the target population to make sure the questions are understood in the local context and flow well.
 - The **surveys** should be pilot tested with a sample of 5-10 people to check for flow and skip logic.
 - **Data collection procedures** may also be tested to guide refinements to tools and processes.

Box 1: RECOMMENDATIONS FOR ENHANCING DATA QUALITY

When adapting the BeSD surveys for local needs, remember:

- Use **consistent response scale** wording and direction from negative to positive responses.
- **Do not add or remove response options** from the four-point scale to ensure that responses remain comparable and valid. A visual four-point scale is available to help improve understanding of the response options ([Annex 1](#)).
- When adding new questions, consider how these fit within the four BeSD domains (Figure 1) and align response options to BeSD response option patterns. Box 2 contains further recommendations for adding new items.
- The order of questions should **follow the flow: 1) facts, 2) opinions, 3) attitudes, 4) intentions**. Items about intentions to accept vaccines should be last in a survey.
- Adapt the demographic section of the survey to suit the target population (e.g. response options for ethnicity, education, religion). Ask the minimum necessary demographic questions to support disaggregation of results according to the analysis plan. Demographic questions can be asked at the start or end of a survey.

The BeSD surveys have been validated on the above principles, following these will allow for data to be comparable across countries.

When **adapting the BeSD surveys for online data collection** methods:

- Remove interviewer instructions.
- Develop simple interviewee instructions at the beginning of each section to help the respondent understand what to expect.
- Keep question wording as close to the original items as possible. Do not remove or add response options or change scales.
- Certain items will need to be adapted – the consent item – to be read by the respondent rather than the interviewer.
- Where possible, test any changes to the wording of specific items. Test for both understanding of the question, and how changes affect their answers.

The qualitative interview guides have been developed to mirror the four domains in the survey (Figure 1). However, if a topic needs deeper exploration it can be expanded in the interview. For further information on adapting the qualitative interview guides in response to a local context, please see [Annex 3](#).

Box 2: Adding new items for specific contexts

Countries should consider whether to add questions to BeSD tools to understand context specific issues such as the impact of gender on uptake. Be sure to:

- Use evidence to determine which questions to add.
- Include demographic questions to facilitate sub-group analysis
- follow quality guidance in Box 1

Examples of additional questions for gender and religious considerations:

mother's decision-making autonomy:

“In your household, who made the decision about vaccinating your child? Would you say... the mother of the child, the father of the child, both parents of the child, or someone else?”

3. Investigate the drivers: data collection, analysis and reporting

3.1 Preparing to collect data

This section outlines steps to support the collection of quality data through the use of the survey and qualitative interview guides and offers frameworks to facilitate data analysis. For both tools, data collection may take place using pen and paper, or digital tools, e.g. using the Open Data Kit (ODK) application. In the process of gathering and using the data associated with these tools, consider policies on data ownership and sharing. Obtain the required permits and ethical approvals prior to data collection and anonymize all data and respect local principles of data protection. Note the ethical principles of the [Helsinki Declaration](#) for medical research.

3.2 Determine a sampling plan and data collection methods

Once you have identified your target population (e.g. caregivers to children under 5 years old, health workers), you will need to develop a plan for sampling. Consider introducing sample quotas so that the sample you get looks as close to the population you're trying to represent. For example, set approximate limits on the gender prevalence that's possible in your sample (no more than 60% female). Consult with a researcher, ideally experienced in the area of social sciences, in the development of the research protocol to ensure the correct data collection approaches are used.

For the **qualitative interviews or focus groups, purposive sampling is recommended** to identify a maximum variability sample suitable to the research objectives. For the surveys, the sampling methodology will depend on the resources available and the research objectives (e.g. does the data need to be nationally representative?).

There are three main ways to identify and sample members of a population to participate in a study include:

1. **Population sampling** provides data representative of the population. It requires substantial resources and sophisticated data analysis. Consider working with existing population-based surveys in your area to integrate BeSD items.
2. **Convenience sampling** recruits people where they are easy to find (e.g., survey people as they walk by on the street or exit a health clinic). It is used when population-based sampling is too expensive or logistically impossible, but it is subject to biases that limit the generalizability of the findings. It requires use of a sampling plan with days, times and targeted locations to reduce bias in recruitment.
3. **Purposive sampling** involves finding and interviewing people with the trait of interest (e.g., working mothers, or single parent households), rather than a general sample.

Table 2: Target population and sampling methods

| Example target population | Example sampling methods |
|---|---|
| Parents and caregivers to children under the age of 5 years old | <ul style="list-style-type: none"> • Integrate BeSD module into an existing population-based survey (e.g. Demographic and Health Survey, EPI Coverage Surveys, MICS Household surveys, etc.). • Post flyers in nurseries, schools, and women’s groups. • Recruit people exiting a health care clinic |
| Adults over age 65 | <ul style="list-style-type: none"> • Integrate BeSD module into an existing population-based survey (e.g. Demographic and Health Survey). |
| Health workers | <ul style="list-style-type: none"> • Post flyers at health clinics. • Advertise in professional associations or societies. • Recruit health workers who exit a selected health clinic during a pre-determined timeframe. |
| Individuals with underlying health conditions | <ul style="list-style-type: none"> • Use a national chronic disease registry. • Recruit people attending an outpatient clinic related to the health conditions of interest |

Sampling or data collection can be conducted using face-to-face, online, or a combination of both. For example, you may circulate an online survey using parent associations and collect responses online. Alternatively, you may conduct in-person surveys with parents at safe locations such as their home, public parks or libraries, or if appropriate at health clinics.

Online methods can be used to survey probability or convenience samples. If you choose to use internet-based methods for sampling for data collection, you will need to consider whether individuals who have access to the internet and can take part in your study may be systematically different than those that do not (e.g. higher socioeconomic status, higher education, etc.). If this difference exists, your conclusions may not generalize to the broader population, particularly if conclusions are drawn based on the descriptive data. The differences are generally less of a problem when inference statistics (e.g. looking at relations between the variables) is used. It is vital to gather demographic information as part of the survey, so that you can spot differences between the target population and the sample.

Additionally, it will be important to understand whether within your sample the critical aspect (e.g. education) is related to vaccine uptake or the willingness to vaccinate. E.g., if the online sample is higher educated, assess whether higher educated people in your sample differ in vaccination willingness from those with lower education in your sample. This can help you understand how much bias your sample has, and therefore, whether your findings can be applied to the broader population.

All data collection requires careful data cleaning before data analysis; [straight lining, partial answers, and nonsensical answers](#) are all potential problems. Great care should also be taken in handling the private and personal information shared by respondents, including personally identifiable information.

Regardless of the sampling and data collection mode, it is important to describe in the research protocol:

- How potential subjects will be identified.
- What attempts will be made to contact them.

- Who will approach them.
- How consent will be obtained and anonymity of data protected.
- How the response rate will be measured (the number of people who take the survey divided by the total number of people asked to take the survey).
- How the completion rate will be measured (the number of questions answered divided by the total number of questions asked in your survey).
- How the sample demographics will be compared with the overall target population demographics, where possible.

3.3 Immunization coverage measures

In addition to the BeSD items, and the minimum socio-demographic items recommended for each survey, researchers should plan to collect immunization status from participants, particularly for childhood immunization. The WHO has published guidelines for collecting, processing, analysing and reporting of coverage indicators. For practical information on coverage measures and indicators for vaccination delivered through routine immunization (RI) services, please see [Annex 4](#).

3.4 Quantitative analysis and reporting of survey data

QUANTITATIVE ANALYSIS OF SURVEY DATA

General descriptions of broad analytical approaches are summarized below but it is strongly advised that you consult a statistician or other researcher for help with developing a statistical analysis approach *before* data collection. This will help to ensure that data are collected and analysed appropriately.

Descriptive statistics provide information about a variable or a summary of a variable. Examples of descriptive statistics include **percentages** (example: number of women in a sample/total number of respondents), **ranges** (e.g. youngest respondent was 18 years old and the oldest was 95 years old), and **means/averages** (adding up all of the responses and dividing the total by the number of respondents to find the average of the responses).

Hypothesis verification analyses draws on data to check our assumptions or expectations. This approach involves stating what the researchers expected to find before the data is collected, and then using the data collected to support or disprove those assumptions (hypothesis). This approach can also be applied to qualitative or mixed methods research.

More advanced analyses include:

Bivariate analyses provide information about relationships between two variables. Examples include **Chi-squared analyses** for measures with categories (e.g. a table with gender and education level of the caregiver, or gender of child and socio-economic status of household) and **correlations** for measures with linear/numeric responses (e.g. relationship between age of caregivers, or total number of children and vaccination intentions).

Multivariate analyses are used to determine the relationships between an outcome variable with another variable, controlling for the potential influence of other variables. An example is using **linear regression** to determine if age is associated with vaccination intentions controlling for gender, income and education. These types of analyses can help you determine if a variable is actually associated with vaccination intentions or whether the relationship is the result of another variable (e.g. if gender was no longer associated with vaccination intentions, you may consider differences in income; this may happen as there are systematic differences in income between men and women).

REPORTING SURVEY FINDINGS

Analyses must be concise with clearly presented findings. Directly address the research questions posed, and do not extend the conclusions beyond the data. Report data as percentages in every instance. In instances where the sample size is small, the percentage may be supplemented with the raw numbers (e.g. n=12). [Annex 5](#) contains some initial examples for data reporting and presentation.

Survey data should be reported in a manner that they can be easily understood and are useful for the target audience. Start by:

- 1) **Identify who the main audience is:** Who are the people who have an interest in these data? What is the best way to present these data to them?
- 2) **Decide on a structure:** What is the best way to tell the story of this research to the audience? The most straightforward way to structure results is an explanation of the key concepts that were found and how they answer or relate to the research question.
- 3) **Describe the methods:**
 - Overall research design, and sampling approach with justification
 - Recruitment methods
 - How the data were handled, including how missing or incomplete data were dealt with
 - What analysis was done and why
 - Any ethical considerations
- 4) **Describe the results of the study:**
 - The response rate of the survey
 - Characteristics of the sample (e.g. age, gender, geographic location)
 - The percentage of respondents who report willingness or intention to accept vaccines
 - The BeSD core indicators
 - Association of vaccine uptake with core indicators (and other BeSD survey constructs if measured) and demographics

Further analyses can assess variation in the uptake or intention to accept vaccines by BeSD indicators and demographic variables.

Some suggestions for reporting:

- **Report what is most important.** There is no need to report on every survey item and repeat all the data captured in tables into the body of the text.

- **Present data visually** when possible to make interpreting the results easier (e.g. use tables, graphs, images or icons if possible, e.g. show percentages of a sample that are women and men).
- **Interpret the data** to show or explain why the result is important - do not simply provide the frequencies or percentages.
- If comparing results in a figure, make sure they are displayed using the same y-axis (e.g. y-axis in both figures goes from 1 to 100) so that any differences are easy to see.
- Even non-significant results can be important because they sometimes challenge assumptions. Reporting these instances is vital especially if a hypothesis validation approach has been taken.
- Where possible, use qualitative findings to explain or support quantitative survey data and their interpretation.

Resources that may assist in reporting the survey findings:

- Improving the quality of web surveys: the checklist for reporting results of internet e-surveys (CHERRIES) (<https://www.equator-network.org/reporting-guidelines/improving-the-quality-of-web-surveys-the-checklist-for-reporting-results-of-internet-e-surveys-cherries/>).

Boynton PM. Administering, analysing, and reporting your questionnaire [published correction appears in BMJ. 2004 Aug 7;329(7461):323]. BMJ. 2004;328(7452):1372-1375.
doi:10.1136/bmj.328.7452.1372 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC420299/>).

3.5 Qualitative analysis and reporting of data from interview guides

QUALITATIVE ANALYSIS OF BeSD DATA

There are many approaches to qualitative data collection and analysis. For the purposes of this guidance, a **framework analysis** approach is suggested, and templates **to assist the framework analysis are available in Annex 1 (childhood) and Annex 2 (COVID)**. The framework analysis approach is well-suited to a team with varied levels of qualitative research experience. At least one team member should have strong expertise in qualitative methods.

For more information on the framework methodology, including an illustrative example, refer to:

- Gale NK, Health G, Cameron E, Rashid S, Redwood S (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC Medical Research Methodology. 13(117) (<https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/1471-2288-13-117>).
- Furber C (2013). Framework analysis: a method for analysing qualitative data. African Journal of Midwifery and Women's Health. 4(2) (https://www.researchgate.net/publication/272449955_Framework_analysis_A_method_for_a_nalysing_qualitative_data).

For a general overview of how qualitative approaches differ from epidemiologic approaches see:

- Carter SM, Ritchie JE, Sainsbury P (2009). Doing good qualitative research in public health: not as easy as it looks. NSW Public Health Bulletin. 20(7-8) (<https://pubmed.ncbi.nlm.nih.gov/19735621/>).

Data Collection: Carry out your interviews and / or focus groups as planned, collecting data in the form of detailed interview notes, audio recordings, and any materials gathered during the interviews (e.g. self-complete socio-demographic forms).

Data Analysis: The main stages in the framework analysis process are as follows:

Stage 1: Transcribe and familiarize. This involves converting the interview into a format for analysis using verbatim notes from a recording, or detailed notes taken during the interview, usually by a second person. Immersion in the data will build familiarity with them. This occurs through reading and re-reading, reflection and taking notes about the data.

Stage 2: Develop codes. Codes are used to formally organize concepts in the data. Codes are simply a label given to data units. For example, if someone mentions their concerns about vaccine safety, the line of text in the interview transcript that covers that could be labelled as “safety concerns”, and all lines in the remaining interviews that describe similar concerns expressed by other participants are also coded as “safety concerns”. This allows for a systematic comparison of the codes across all of the interviews and can be done using comments or annotation functions in a Word document, or using specialized software such as Dedoose, QSR NVivo, ATLAS.ti or MAXQDA. After a few interviews, patterns may emerge where the same codes appear in several interviews. Ideally, for rigour, several members of the team should independently code the first few interviews to enable comparisons and agreement on what codes will be applied to the whole dataset.

Stage 3: Develop and apply an analytical framework. After the reoccurring codes are identified, similar or related codes may be grouped into defined sub-codes (or categories). Building on the example above, the “safety concerns” code might include more granular categories such as “side-effects,” “testing”, “newness” and “vaccine components”. This makes up a framework that can be used for subsequent interviews and revised to cover the concepts arising from the interviews. To help with interpretation, a summary spreadsheet can be developed with an interview per row, and data charted across codes and categories per column (see templates in the appendices for examples).

Stage 4: Interpret the data. Themes are generated from the data by viewing the codes in the summary spreadsheet and drawing connections across participants and categories. Interpret the data to develop themes, which may offer explanations for what has emerged in the interviews. This could involve creating typologies (or classifications) and mapping relationships between themes.

Researchers involved in interviewing and data analysis should keep a **researcher diary**. This is a place for each researcher to record their impressions from the interviews and analysis and document their thinking and ideas as they occur. This helps in the analysis and enhances reflexivity (i.e. acknowledging and addressing how one’s thoughts and actions affect the research process).

REPORTING ON QUALITATIVE FINDINGS

Reporting qualitative research findings involves constructing a representation of the social occurrences and experiences based on the accounts of the people who were interviewed. Writing up findings also

forms part of the qualitative analytical process, which starts with the researcher diary (see section 3.4). There are a number of ways to report qualitative data, and many good references are available.³ The COREQ checklist is also helpful⁴ (https://cdn.elsevier.com/promis_misc/ISSM_COREQ_Checklist.pdf). Below are a set of general steps to guide reporting of qualitative data.

1) **Identify who the main audience is:**

- Who are the people who have an interest in these data?
- What is the best way to present these data to them?

2) **Decide on a structure:**

- What is the best way to tell the story of this research to the audience?
- The most straightforward way to structure results is an explanation of the key concepts that were found and how they answer or relate to the research question.

3) **Describe the methods:**

- It is important to clearly state the methods used in data collection and analysis, including:
 - Overall research design, and sampling approach with justification
 - Recruitment methods
 - How the interviews were conducted and recorded
 - Analytical approach
 - Ethical considerations and approval.

4) **Describe the results of the study:**

- Start by describing how many interviews were undertaken and over what time period.
- Tell the story of the results, and how they relate to the research questions.
- Focus on the concepts and themes, and how they relate to the research questions.
- If links between the themes and concepts were identified, describe these links also, but take care to justify how and why these links were made, using the data as evidence.

Some suggestions for reporting:

- **Avoid using numerical statements:** Avoid sentences that describe how many participants had a certain trait or described a certain attitude. Qualitative data are not about prevalence, but about understanding *why* or *how* something is happening. The purposive method of sampling and the smaller sample sizes mean that statements such as, “25% said they were worried about vaccine safety” can be misleading. When reporting qualitative results, it is best to focus on the concept rather than how many people said it. For example, the previous statement could be better phrased as “the safety of the vaccine was a concern among some of the participants...”.
- **Use quotes to illustrate the concept or theme being reported:** Quotes should be carefully de-identified, short and to the point.
- **Where possible, illustrate the range or diversity in the findings:** When discussing the concepts, be sure to discuss any opposing findings, and include illustrative quotes where appropriate.

³ White C, Woodfield K, Ritchie J, Ormston R. Writing up qualitative research. In: Ritchie J, Lewis J, McNaughton Nicholls C, Ormston R (2014). Qualitative research practice. London: SAGE (https://books.google.com.au/books/about/Qualitative_Research_Practice.html?id=EQSIAAQBAJ&redir_esc=y); and Charmaz K (2014). Constructing grounded theory (2nd edition). Chapter 11.

⁴ Tong et al (2007) <https://academic.oup.com/intqhc/article/19/6/349/1791966>

- **Where possible**, relate to qualitative data to support findings. Qualitative data can be helpful to explain unclear or counterintuitive quantitative data.

3.6 Sharing of plans, data and reports

Sharing and discussing plans for data collection, study hypothesis, data and draft reports with key stakeholders throughout the process of planning, analysis and report writing will strongly improve the quality of the final report often elevating the profile of the work and surfacing other relevant studies conducted to allow for cross-comparison of data. Particularly where in-depth or more complex analysis are needed sharing of data and consulting with experienced researchers is recommended. Where resources for data collection are limited, data sharing is more efficient because it allows programmes and researchers to share resources.

Consider sharing plans materials or establishing discussion with the following groups:

- **other stakeholders**, for broad expertise, contextualisation and resource mobilisation
- **experienced researchers** can support informal peer review of the data, encourage better connection with other datasets, often resulting in deeper analysis and new findings.
- **target population** can also help improve the quality of analysis and is a well-established method for validating analysis and interpretation of results.

For further reference, the WHO policy on data sharing is available in [Annex 6](#).

4. Act: Using BeSD data to drive action

The BeSD tools are focussed on generating data and using data to increase uptake of vaccines. The four BeSD domains (Figure 1) represent the main factors that influence vaccine uptake in an individual. The core indicators for tracking these factors over time can be found in the tool annexes of this guidebook above the relevant survey.

The data generated from the tools can and should be used:

- To inform the design and evaluation of interventions to increase uptake
- To develop targeted interventions to address context-specific drivers and barriers
- To evaluate effectiveness of strategies and track trends over time through repeated BeSD assessments
- For advocacy and resource mobilization
- For triangulation with other data sources to support more complete understandings and holistic programme planning

This section describes how you can use BeSD data to achieve the activities listed above.

4.1 Using BeSD indicators

The BeSD survey indicators are helpful when planning to monitor changes over time or measure the impact of interventions. The BeSD indicators are framed around immunization programme gains, to align with existing immunization indicators such as coverage. **When the percentage value corresponding with an indicator is low, the indicator is faring poorly, and an intervention action is recommended.** For example, a country may decide to take action when an assessment reveals that only 15% of parents know where to get their child vaccinated. Thresholds for action must be determined at the country level taking local context and other data into consideration.

4.2 Planning interventions

There are four broad intervention areas that can be considered as foundational to any immunization programme. These are:

1. Community engagement
2. Communication and education
3. Service quality (e.g. provider recommendation, reminder recall)
4. Supportive policies (e.g. requirements, incentives)

The BeSD indicators support tracking of how these foundational interventions are working, where and for who. Where interventions are not working, BeSD assessments can support an understanding of why that is, particularly through use of the interview guides. At a subnational level these assessments can be conducted as part of a Human Centred Design (HCD) or Tailoring Immunization Programmes (TIP) process to diagnose the reasons for low uptake and evaluate the effectiveness of tailored interventions.^{5,6}

In addition to the four broad interventions listed above, other types of interventions that are effective for increasing uptake include those listed in the table 3 below. Several of these interventions may also be

⁵ <https://www.hcd4health.org/>

⁶ <https://apps.who.int/iris/bitstream/handle/10665/329448/9789289054492-eng.pdf>

effective for improving intention or motivation to accept vaccines. It will be important to track the BeSD indicators over time as part of monitoring and evaluation of interventions. The interventions have been grouped by the BeSD domains (Figure 1) to support a smooth transition from measurement to action.

Table 3: Interventions by domain

| Domain where problem is identified | Interventions shown to increase vaccination* ⁷ |
|--------------------------------------|--|
| Thoughts and feelings and Motivation | Educational interventions ^{1 2 3 4 5} Person-centred counselling for behaviour change ^{6 7} |
| Social processes | Community engagement ^{2 8 5 9} Positive social norm messages ¹⁰ Vaccine champions and advocates ^{11 12 9} Healthcare provider recommendations |
| Practical issues | Free / affordable vaccination ¹³ Service quality improvements ^{14 13 5} Reminder for next dose /recall for missed dose ^{15 16 17 18} Onsite vaccination (work, home, school) ^{19 20 5 21 13 12} Default appointments ¹⁰ Incentives ^{4 22} School and work requirements (mandates) ^{13 23} |

4.3 Selecting interventions when BeSD data is not available

Collect data using the BeSD tools ahead of intervention design, even if just a small number of items to support tracking of indicators. Findings should be shared with local experts, partners, and community representatives to contribute to a broader understanding of the reasons for low uptake, and to contribute to discussions about intervention selection and design. Decisions may need to be made in prioritizing target populations or other elements of implementation. Care must be taken not to ascribe one’s own hunches or anecdotal stories as a diagnosis of the problem in place of measurable indicators.

4.4 Triangulating BeSD data with other routine data sources

The BeSD tools support an understanding of **why** gaps in immunization coverage exist. BeSD data can enable programmes to:

- Identify and address influences on behaviour
- Target and evaluate strategies in specific contexts
- Examine and understand trends over time
- Better plan for future needs.

* Systematic reviews or meta-analyses showing increased vaccine uptake from the intervention. Where possible, reviews cited focus on LMICs.

Triangulating BeSD data with other sources of data serves to:

- Gain deeper insights into the social and behavioural drivers to answer the “why” for understanding issues around vaccination confidence, demand, and uptake
- Identify findings that are reinforced from different populations or different sociodemographic characteristic e.g. Both HW and caregivers inform that vaccine misinformation is an important issue in their community or context. This can provide insights on what common strategies can be employed to target caregivers and HW.
- Validate findings based on consistency of data collected using different methods and across different data sources. The validity of findings is increased because the triangulation helps to address the limitations of findings and/or biases associated with any one method can be compensated by findings
- Identify findings that are disparate among different types of respondents or different based on stratification variables such as sociodemographic or geographic characteristics. For example, differences in vaccine access issues in urban vs. rural settings or among different subpopulations. This can provide insights on different strategies to address access issues in specific communities.

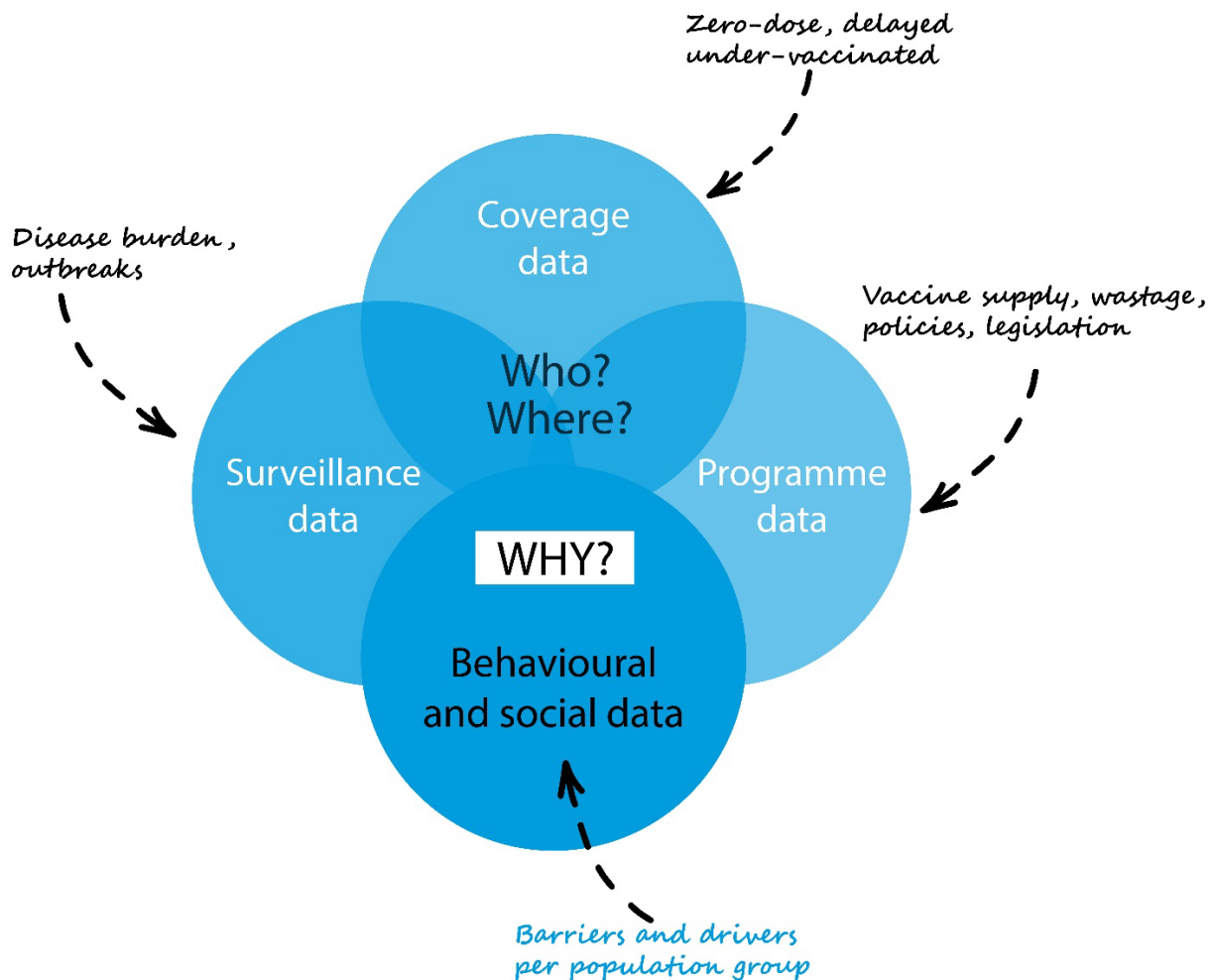


Figure 2: Triangulation of insights on reasons for low uptake together with other programme data.

BeSD data can also be triangulated with other data sources to understand key areas of focus and unique interventions that may be required:

- **Coverage data:** BeSD data from specific regions can be assessed alongside vaccine coverage data from the same regions to identify trends and patterns in the relationship between determinants of uptake with vaccine coverage. If coverage data are available from different subpopulations, resulting analyses help to understand key differences in the pattern of these associations as well.
- **Census data:** BeSD data can be analysed alongside census data in the specific country context on how uptake relate to large sociodemographic characteristics, which can inform policy level decisions by health authorities. For example, poor social norms around vaccination are specific to areas belonging to specific ethnic groups, which can indicate that more targeted interventions would be needed in these areas to improve vaccine uptake. Please note that census data may not be up to date in resource-poor settings.
- **Surveillance data:** Vaccine preventable disease (VPD) surveillance data can help to understand increases or decreases incidence of VPDs in specific areas over time, and BeSD data within the region can help to inform whether behavioural and social issues may be correlated with outbreaks temporally or geographically. Triangulation of findings can help inform adapting vaccination campaigns following VPD outbreaks.
- **Other health system data:** BeSD data can be analysed with other health data on maternal and child health services, which can help to highlight any similar trends over time or geographic pattern across sub-populations of interest in uptake of other child health services in comparison to immunization services. This may provide insights on whether low vaccination uptake is related to health system issues or behavioural and social issues or a combination of both.
- **Social listening data:** Social listening data can provide useful insights on vaccine sentiment, information gaps and misinformation in the public, specific groups, and related geography and sociodemographic characteristics. Findings from the BeSD data can be compared with trends and vaccine sentiment from social listening data to understand public opinion on vaccines, sources of (mis)information on social media, and public intention to get vaccinated.

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Annex 1: BeSD tools for childhood vaccination

Childhood vaccination survey core indicators

The table below highlights the core indicators for tracking the drivers of childhood vaccination. If it is not possible to implement the childhoods vaccination survey in full, measure at least the items that correspond with the indicators below.

| DOMAIN | CONSTRUCT | QUESTION & RESPONSE OPTIONS | INDICATOR |
|----------------------|-------------------------------------|--|--|
| Thinking and feeling | Confidence in vaccine benefits | How important do you think vaccines are for your child's health? Would you say... - Not at all important - A little important - Moderately important - Very important | % of parents who think that vaccines are "moderately" or "very" important for their child's health |
| Motivation | Intention to get child vaccinated | [COUNTRY NAME] has a schedule of recommended vaccines for children. Do you want your child to get none of these vaccines, some of these vaccines, or all of these vaccines? - None - Some - All | % of parents who want their child to get "all" of the recommended vaccines |
| Social processes | Family norms | Do you think most of your close family and friends want you to get your child vaccinated? - No - Yes | % of parents who think most of their close family and friends want their child to be vaccinated |
| Practical issues | Know where to get child vaccination | Do you know where to go to get your child vaccinated? - No - Yes | % of parents who know where to get their child vaccinated |

| | | | |
|-------------------------|----------------------|--|--|
| Practical issues | Affordability | <p>How easy is it to pay for vaccination? When you think about the cost, please consider any payments to the clinic, the cost of getting there, plus the cost of taking time away from work. Would you say...</p> <ul style="list-style-type: none"> - Not at all easy - A little easy - Moderately easy - Very easy | % of parents who say vaccination is "moderately" or "very" easy to pay for |
|-------------------------|----------------------|--|--|

Childhood vaccination survey and item rationale

The table below compiles survey items for parents and caregivers to children under 5 (0-59 months). Table cell colours are indicative of the domain (**thinking and feeling**, **social processes**, **motivation** and **practical issues**).

The BeSD childhood vaccination survey is made up of a total of 20 questions and corresponding response options. To support analyses and use of the BeSD items, included below are also recommended consent script (S0) with adaptable fields for countries to modify and use as appropriate, and six socio-demographic items (S1–S9) for country adaptation. These supplementary items (S0–S9) are considered the minimum necessary for quality data collection and analysis. These can be used and adapted as needed to support the research objectives.

Researchers may also carefully choose to add specific new socio-demographic items to support more granular interpretation of the data. The survey flow adopts the logic of “facts” before “attitudes”, and “attitudes” before “intentions”, and moves from general immunization items to COVID-19 vaccine specific items. The column “item rationale” contains important information for translation and local adaption of items, including how to adapt items for post-vaccine introduction.

Wording in [square brackets] is to indicate terminology that will likely need to be locally adapted.

Text all in CAPITALS is an instruction for the interviewer and must not be read aloud for participants.

| No. | Construct and indicator | Item rationale | Childhood vaccination survey item |
|-----|-------------------------|---|--|
| S0 | Consent | <p>This item serves as an example of text to be included to capture respondent's informed consent to their participation in the study.</p> <p>The wording in [square brackets] can be adapted at the local level to reflect accurate information in the relevant fields.</p> <p>Text in ALL CAPITALS is an instruction for the interviewer and must not be read aloud for participants.</p> | <p>Hello, I am [INTERVIEWER'S NAME] with [INSTITUTION OR ORGANIZATION NAME]. We are interviewing people to help improve vaccination services in [NAME OF COUNTRY].</p> <p>I know you are busy, so this will take only a few minutes. Your participation is completely voluntary and anonymous. If you do not want to answer a question or wish to stop the interview, just let me know.</p> <p>Would you be willing to take the survey?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>IF "YES" TO S0: Thank you very much. Do you have any questions for me before we begin? PROCEED TO SURVEY SCREENER AFTER ADDRESSING ANY QUESTIONS.</p> <p>IF "NO" TO S0: Thank you very much. END INTERVIEW.</p> |
| S1 | Gender | <p>Item collects gender identity of respondents to allow for stratified analysis. The third response option can be included in contexts where specific third gender categories are culturally recognized; this response option can be adapted as appropriate based on in-country considerations or consultation.</p> | <p>What is your gender?</p> <p><input type="checkbox"/> Woman <input type="checkbox"/> Man <input type="checkbox"/> Non-binary <input type="checkbox"/> Prefer not to say</p> |
| S2 | Age | <p>Item collects age in number of completed years, this will allow for stratified analysis by age of respondents. This item can also serve to screen in or screen out participants for inclusion based on the study sampling methodology.</p> | <p>How old are you?</p> <p>_____ years</p> |
| S3 | Parent/caregiver | | <p>Are you the parent or primary caregiver of any children who are younger than 5 years old?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>IF "NO" TO S0: Thank you very much. END INTERVIEW.</p> |

| | | | |
|----|--|---|--|
| S4 | Total number of children | | How many children do you have in total? <input type="checkbox"/> _____ RECORD NUMBER OF CHILDREN |
| S5 | Number of children under 5 | | How many children do you have who are <u>younger</u> than 5 years old? <input type="checkbox"/> _____ RECORD NUMBER OF CHILDREN |
| S6 | Relationship to child | | What is your relationship to your child? <input type="checkbox"/> Mother <input type="checkbox"/> Father <input type="checkbox"/> Grandparent <input type="checkbox"/> Uncle or Aunt <input type="checkbox"/> Brother or Sister <input type="checkbox"/> Other [IF "OTHER": Please specify _____] |
| S7 | Ages of child | | How old is your child? <input type="checkbox"/> _____ years |
| S8 | Gender of child | | Is your child.....? <input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Non-binary |
| S9 | Vaccinations status | | [COUNTRY NAME] has a schedule of vaccines for children. As far as you know, has your child had none of these vaccines, some of these vaccines, or all of these vaccines? <input type="checkbox"/> None <input type="checkbox"/> Some <input type="checkbox"/> All |
| 1 | Confidence in vaccine benefits CORE ITEM % of parents who think that vaccines are "moderately" or "very" important | This item assesses positive attitude toward vaccination of the child. The main idea is that vaccination is good, important, and valuable. A related idea is that vaccination is effective, prevents disease, saves lives, and protects children vaccinated. | How important do you think vaccines are for your child's health? Would you say... <input type="checkbox"/> Not at all important <input type="checkbox"/> A little important <input type="checkbox"/> Moderately important <input type="checkbox"/> Very important |

| | | | |
|---|--|---|--|
| | for their child's health | | |
| 2 | <p>Confidence in vaccine safety</p> <p>% of parents who think vaccines are "moderately" or "very" safe for their child</p> | <p>This item assesses negative attitude toward vaccination of the child. The main idea is the belief that that vaccination is safe and is not dangerous or harmful.</p> <p>"Do you think" is included so that parents do not see the survey as a test or demeaning them for what they may not know.</p> | <p>How safe do you think vaccines are for your child? Would you say...</p> <p><input type="checkbox"/> Not at all safe</p> <p><input type="checkbox"/> A little safe</p> <p><input type="checkbox"/> Moderately safe</p> <p><input type="checkbox"/> Very safe</p> |
| 3 | <p>Know where to go to get vaccination</p> <p>CORE ITEM</p> <p>% of parents who know where to get their child vaccinated</p> | <p>This item assesses whether the parent knows where to take the child for vaccination. The item is about knowing that the facility or vaccine provider exists and where it is located. The item is not about ability to access or use the services.</p> | <p>Do you know where to go to get your child vaccinated?</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes</p> |
| 4 | <p>Took child for vaccination</p> <p>% of parents who have taken child for vaccination</p> | <p>This item assesses whether the parent, personally, has been with the child when the child went a vaccine provider.</p> <p>This item sets up a skip pattern for later items about their experience with the providers.</p> | <p>Have you personally ever taken your youngest child to get vaccinated?</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes</p> |
| 5 | <p>Missed or delayed vaccination</p> <p>% of parents who have never missed or delayed child's vaccination</p> <p>% of parents who have been contacted about missed or delayed</p> | <p>This item has two purposes, it assesses follow-up mechanisms in place when parents who missed or delayed vaccines for their child.</p> <p>"Missed" refers to parents who skipped a vaccination session intentionally or unintentionally; either because they forgot, were unable to make the appointment, or did not want the vaccine</p> <p>"Delayed" includes parents who intentionally postpones vaccination having made a conscious decision to get a vaccine later than what was recommended.</p> | <p>Have you ever been contacted about missed or delayed vaccination for your youngest child?</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> I have never missed or delayed my child's vaccination</p> |

| | vaccination for child | | |
|----|---|--|--|
| 6 | <p>Intention to get child vaccinated</p> <p>CORE ITEM</p> <p>% of parents who want their child to get “all” of the recommended vaccines</p> | <p>This item assesses intention to get the child vaccinated. “Want” is similar to desire, prefer, like, plan, and intend. It might identify a plan for future action but can also be about willingness. “Recommended” is similar to advised, suggested, standard or nationally recommended; it refers to the national vaccination schedule of recommended vaccines for children. The text in square brackets is to be locally adapted to include the country name.</p> | <p>[COUNTRY NAME] has a schedule of recommended vaccines for children. Do you want your child to get none of these vaccines, some of these vaccines, or all of these vaccines?</p> <p><input type="checkbox"/> None <input type="checkbox"/> Some <input type="checkbox"/> All</p> |
| 7 | <p>Mother’s travel autonomy</p> <p>OPTIONAL ITEM</p> <p>% of mothers who do not need permission to take child for vaccination</p> | <p>This item assesses freedom of women to leave the home to get the child vaccinated. “Time to get vaccinated” is similar to the child being due for vaccines. “Clinic” refers to the clinic, doctor’s office, primary care practice, vaccination clinic, centre, or mobile service that delivers the vaccines for the child.</p> | <p>IF RESPONDENT IS THE MOTHER OF THE CHILD: If it was time for your child to get vaccinated, would you need permission to take your child to the clinic?</p> <p>IF RESPONDENT IS NOT THE MOTHER OF THE CHILD: If it was time for your child to get vaccinated, would the mother need permission to take your child to the clinic? No Yes</p> |
| 8 | <p>Descriptive social norms</p> <p>% of parents who think most parents they know will get their children vaccinated</p> | <p>This item assesses descriptive social norms—beliefs about what other parents are doing. “Most parents you know” includes friends, people at work, and people in the neighbourhood who they may not have close social ties to. It does not include people they have never met.</p> | <p>Do you think most parents you know get their children vaccinated? No Yes</p> |
| 9 | <p>Family norms</p> <p>CORE ITEM</p> <p>% of parents who think most of their close family and friends want their child to be vaccinated</p> | <p>This item assesses injunctive social norms— beliefs about what close social contacts want the parent to do. “Close family and friends” include people with opinions the parent would listen to or feel some degree of pressure to heed.</p> | <p>Do you think most of your close family and friends want you to get your child vaccinated? No Yes</p> |
| 10 | <p>Religious leader norms</p> | <p>This item assesses injunctive social norms—beliefs about what opinion leaders want the parent to do.</p> | <p>Do you think your religious leaders want you to get your child vaccinated? Yes</p> |

| | | | |
|----|--|--|--|
| | <p><i>OPTIONAL ITEM</i></p> <p>% of parents who think their religious leaders support vaccination</p> | <p>“Religious leader” includes priests, clerics, imams, rabbis and others in similar roles.</p> | <p>No</p> |
| 11 | <p>Community leader norms</p> <p>% of parents who think their community leaders support vaccination</p> | <p>This item assesses injunctive social norms—beliefs about what opinion leaders want the parent to do.</p> <p>“Community” may refer to a neighbourhood or region or a social group defined by a characteristic such as race or national origin.</p> <p>“Community leader” includes people who represent a neighbourhood, region, or subgroup of people.</p> | <p>Do you think your community leaders want you to get your child vaccinated?</p> <p>No Yes</p> |
| 12 | <p>Confidence in providers</p> <p><i>OPTIONAL ITEM</i></p> <p>% of parents who trust the health care providers who give children vaccines “moderately” or “very much”</p> | <p>This item assesses confidence in people who provide vaccines.</p> <p>“Trust” refers to belief that the provider will be competent, reliable and give good health care.</p> <p>“Health care provider” will need local adaptation to indicate the medical professionals responsible for recommending and administering childhood vaccination (i.e. general practitioner, or paediatrician and assisting nurses or vaccinators)</p> | <p>IF RESPONDENT ANSWERED “NONE” TO WHICH VACCINES THEIR CHILD HAS HAD: How much do you trust the health care providers who give children vaccines? Would you say you trust them...</p> <p>IF RESPONDENT ANSWERED “ALL” OR “SOME” TO WHICH VACCINES THEIR CHILD HAS HAD: How much do you trust the health care providers who give your child vaccines? Would you say you trust them...</p> <p>Not at all A little Moderately Very much</p> |
| 13 | <p>Provider recommendation</p> <p>% of parents who say a health care provider has recommended vaccines for their child</p> | <p>This item assesses whether the parent recalls a medical professional or health provider recommending vaccination.</p> <p>“Recommended” includes raising the topic during a clinic visit, saying the child is due, and offering advice to get the child vaccinated.</p> <p>The term health care provider must be locally adapted to indicate the medical professional most likely to /responsible for recommending childhood vaccination (i.e. general practitioner, or paediatrician)</p> | <p>Has a health care provider recommended your child be vaccinated?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes</p> |

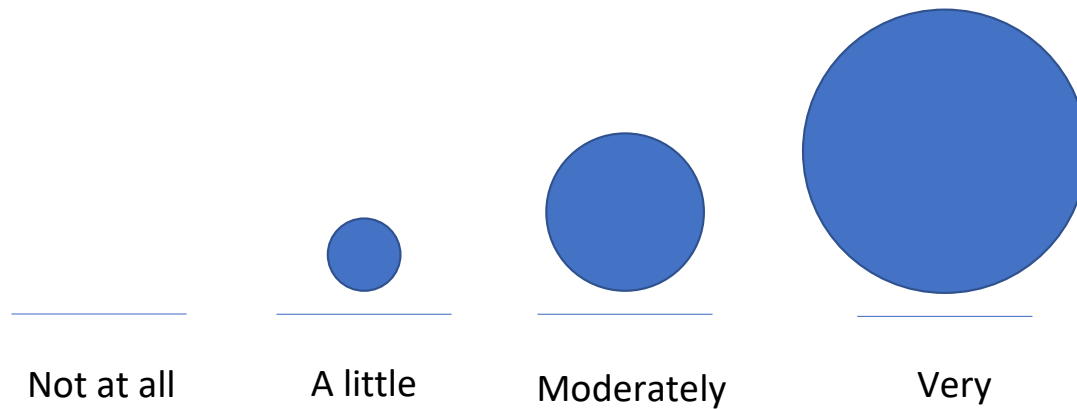
| | | | |
|----|---|---|---|
| 14 | <p>Ease of access</p> <p>% of parents who say it is “very” or “moderately” easy to get vaccination services</p> | <p>This item assesses the degree to which vaccination is easy to get for child. The item looks at ease-of-access in general and leads-into the next question.</p> <p>“Easy” refers to achievable, possible without great effort, not hard, and not difficult.</p> <p>“Vaccination services” refers to access to vaccination.</p> | <p>How easy is it to get vaccination services for your child? Would you say...</p> <ul style="list-style-type: none"> <input type="checkbox"/> Not at all easy <input type="checkbox"/> A little easy <input type="checkbox"/> Moderately easy <input type="checkbox"/> Very easy |
| 15 | <p>Reasons for low ease of access</p> <p>% of parents who say “nothing” makes it hard to access vaccination</p> <p>% of parents who say “getting to the clinic is hard”</p> <p>% of parents who say “clinic opening times are inconvenient”</p> <p>% of parents who say sometimes the clinic “turns people away”</p> <p>% of parents who say the “waiting time takes too long”</p> | <p>This item assesses the reasons why vaccination is difficult to get for the child.</p> <p>“hard to get to” refers to geographical distance and barriers related to transportation.</p> <p>“Inconvenient” refers to opening hours that do not suit the parent.</p> <p>“turns people away” refers to the clinic sending people, who came specifically for vaccination, home without vaccination.</p> <p>“Takes too long” refers to the waiting times at the clinic.</p> | <p>ASK IF “NOT AT ALL”, “A LITTLE”, OR “MODERATELY” AT CVS_14, OTHERWISE SKIP:</p> <p>What makes it hard to get vaccination services for your child?</p> <p>Check all that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Nothing. It’s not hard. <input type="checkbox"/> Getting to the clinic is hard <input type="checkbox"/> The clinic opening times are inconvenient <input type="checkbox"/> The clinic sometimes turns people away without vaccinating <input type="checkbox"/> The waiting time in the clinic takes too long <input type="checkbox"/> Something else, please specify: _____ |
| 16 | <p>Affordability</p> <p>CORE ITEM</p> <p>% of parents who say vaccination is “moderately” or “very” easy to pay for</p> | <p>This item assesses the perceived cost of vaccination. Cost is the monetary value associated with vaccination.</p> <p>“easy to pay” refers to the total costs associated with vaccinating being something the parent can pay for, costing an amount the parent can pay for, and being within the parent’s means.</p> | <p>How easy is it to pay for vaccination? When you think about the cost, please consider any payments to the clinic, the cost of getting there, plus the cost of taking time away from work. Would you say...</p> <p>Not at all easy A little easy Moderately easy Very easy</p> |

| | | | |
|----|---|---|--|
| 17 | Vaccination availability % of parents who have never been turned away from vaccination | This item assesses the experience of going to the vaccination clinic and not receiving vaccination for the child that day. “Turned away” refers to staff at the clinic saying the vaccine is not available, a sign saying the clinic is out of stock, or being unable to see a vaccine provider because of other problems at the clinic. | Have you ever been turned away when you tried to get your child vaccinated? <input type="checkbox"/> No <input type="checkbox"/> Yes |
| 18 | Service satisfaction % of parents who are “very” or “moderately” satisfied with vaccination services | This item assesses satisfaction with vaccination services received during the last visit. “Satisfied” refers to how good the services and experience was for the parent, how pleased or happy they felt about the visit and the interactions that took place. “Vaccination services” refers to work done by vaccination clinic staff who greet the patient, handle paperwork and payment, and administer the vaccine. “Not at all” is bad and not acceptable. “Not very” is okay, adequate, and not bad. “Somewhat” is positive but not the best possible. “Very” is great, fantastic and outstanding. | ASK IF “YES” AT CVS_4, OTHERWISE SKIP: During your last visit, how satisfied were you with the vaccination services? Would you say... <input type="checkbox"/> Not at all satisfied <input type="checkbox"/> A little satisfied <input type="checkbox"/> Moderately satisfied <input type="checkbox"/> Very satisfied |
| 19 | Service quality % of parents who say “vaccine was not available” % of parents who say “the clinic did not open on time” % of parents who “waited a long time” % of parents who say “the clinic was not clean” % of parents who say “staff was poorly trained” % of parents who say “staff were not respectful” | This item assesses reasons why the parent was not satisfied with their last vaccination visit. “the clinic did not open on time” refers to the clinic not operating as per the hours advertised. “I waited a long time” is the perception that the service was poorly organised for time, staff unable to prioritize efficient, quick service. “the clinic was not clean” refers to any complaint about the place where vaccines are given; including location and building structure. This includes lack of cleanliness, poor maintenance. This could include vaccine vials, needles, fridges for storing vaccines but also furniture in the clinic, reception and waiting rooms, or even appearance of personnel, such as appropriate attire, clean appearance, and uniforms. “Staff seemed poorly trained” is the perception that the service received is not as promised, the quality of service is not reliable or consistent. The perception that staff did not fulfil their role very well, that the staff is not well trained or prepared for their responsibilities, lacked confidence or skill to deliver the service expected. | ASK IF “NOT AT ALL” OR “A LITTLE” AT CVS_18, OTHERWISE SKIP: What was not satisfactory about the vaccination services? Check all that apply. <input type="checkbox"/> Vaccine was not available <input type="checkbox"/> The clinic did not open on time <input type="checkbox"/> I waited a long time <input type="checkbox"/> The clinic was not clean <input type="checkbox"/> Staff seemed poorly trained <input type="checkbox"/> Staff were not respectful <input type="checkbox"/> Staff did not spend enough time with me <input type="checkbox"/> Something else, please specify: _____ |

| | | | |
|----|--|---|---|
| | % of parents who say "staff did not spend enough time" with them | <p>"Staff were not respectful" is inability to inspire confidence, put parents at ease and communicate competence. It includes staff being discourteous, impolite and unable to reassure parents. Staff can show respect in verbal and non-verbal ways.</p> <p>"Staff did not spend enough time with me" is the perceived lack of empathy a parent may experience from vaccination clinic staff, and perception of a rushed service or lack of time dedicated to reassure parents and or answer any of their questions.</p> | |
| 20 | <p>Information needs</p> <p>% of parents who say their concerns about vaccination were addressed during vaccination appointment</p> | <p>This item assesses unmet informational needs from parents. "Concern" is similar to worry or thinking about a problem; it is not directly about fear or anxiety or emotion, it could relate to any questions the parent had at the time of the appointment related to vaccines and vaccination.</p> | <p>Do you have any concerns about vaccination for your child that were not addressed at your last visit to the vaccination clinic?</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes</p> |

Visual response scale

The following visual response scale may also be useful in certain settings to facilitate understanding of the four-point response options. We recommend providing all participants with the below visual scale to support their answering of BeSD survey items. If you choose to deploy the survey together with this visual scale, it will be important to ensure all participants are offered it.



Childhood vaccination in-depth interview guides

BeSD for childhood vaccination provides a set of four adaptable qualitative interview guides indented for use with different audiences. These guides can be used for in-depth interviews with individuals or used to guide focus group discussions. Questions should be adapted to suit the cultural context of the people being interviewed, and the research question being investigated.

Interview guide for caregivers of children under 5

| BeSD Model Construct | Question / [Instruction] | Rationale |
|--|--|---|
| General | <p><i>Introduction: Hello, I am [INTERVIEWER'S NAME] with [INSTITUTION OR ORGANIZATION NAME]. We are interviewing people to help improve vaccination services in [NAME OF COUNTRY].</i></p> <p><i>The interview is expected to take __ minutes. Your participation is completely voluntary and anonymous. The answers you give will be completely confidential. If you do not want to answer a question or wish to stop the interview, just let me know. Would you be willing to take part in an interview with me? [if audio recording the interview] Would you be happy for me to record our conversation?</i></p> | <ul style="list-style-type: none"> - Clear introduction to ensure true informed consent for participation is obtained before proceeding |
| | <p>Tell me a little about yourself and your family</p> <p>Probe:</p> <ul style="list-style-type: none"> - Who lives in your household with you? - How old is your child / are your children? - Are your children up to date with their vaccines? | <ul style="list-style-type: none"> - Warm-up question - Enables understanding of the participant's family situation and personal context |
| Motivation Social Processes | <p>Thinking back to the first time you had your child vaccinated, tell me why you decided that you would go ahead with it. [If first vaccine was administered at birth, ask about the first time they took their child back for their next set of scheduled vaccines]</p> <p>Probe:</p> <ul style="list-style-type: none"> - Did anyone suggest it? | <ul style="list-style-type: none"> - Aim to understand how the caregiver came to the decision about whether or not to vaccinate their child - Aim to understand who else was involved in the decision |

| BeSD Model Construct | Question / [Instruction] | Rationale |
|--------------------------|---|--|
| | <ul style="list-style-type: none"> - Who decided that you should take your child to have their vaccines? - Who usually takes your child(ren) to have their vaccines? | |
| Social Processes | <p>Do you talk about vaccination with anyone else?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Who do you talk to? - What do they say? - Do other parents you know vaccinate their children? | <ul style="list-style-type: none"> - Aim to understand what the social norms are for this caregiver (i.e. what is the usual vaccination behaviour of other caregivers in their community) |
| Practical Factors | <p>Thinking back to the first time you took your child to have their vaccines, tell me how you knew it was time to do so?</p> <p>Probe:</p> <ul style="list-style-type: none"> - What kind of reminders do you use? | <ul style="list-style-type: none"> - Aim to understand what prompts the caregiver to seek vaccination for their child |
| Practical Factors | <p>Thinking about vaccination day for your child, tell me about what happens before you arrive at the place where your child gets their vaccine. Start with before you leave home.</p> <p>Probe:</p> <ul style="list-style-type: none"> - What do you need to do to prepare before you leave home? - How do you travel to the vaccination place? <p>Once you arrive at the vaccination place, tell me what happens next.</p> <p>Probe:</p> <ul style="list-style-type: none"> - Who do you talk to when you get there? - What happens in the waiting room or queue? - Do you need to pay a fee? - Are other health checks done while you're there? <p>What happens when it's your child's turn to get their vaccine?</p> | <ul style="list-style-type: none"> - Aim to understand the practical and logistic considerations the caregiver must address or overcome to get their child vaccinated. - Describe the process they follow on vaccination day - [note: "vaccination place" should be substituted with the correct word for the particular vaccination service the caregiver uses, for example, hospital, clinic etc] |

| BeSD Model Construct | Question / [Instruction] | Rationale |
|-----------------------------|--|--|
| | <p>Probe:</p> <ul style="list-style-type: none"> - What happens first? - [probe for each step until the vaccination is completed] - What do the health workers talk to you about while you're there? How do you feel when you talk with them? <p>After your child has had their vaccine, tell me what happens next.</p> <p>Probe:</p> <ul style="list-style-type: none"> - What happens when you leave the vaccination place? - How do you travel home? - What happens after you arrive home? | |
| Practical Factors | <p>What do you like about what happens on vaccination day?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Ask about each step described by the caregiver in the question above - [If there is something identified that they like] Why do you like it? | <ul style="list-style-type: none"> - Aim to understand positive aspects of the vaccination process described |
| Practical Factors | <p>What don't you like about what happens on vaccination day?</p> <p>Probe:</p> <ul style="list-style-type: none"> - [If the response is "nothing", list the steps described in the process they describe and ask is there anything they don't like about them individually] - Is there anything you find difficult? Why do you find it difficult? | <ul style="list-style-type: none"> - Aim to understand any barriers to getting their child vaccinated in detail |
| Thinking and feeling | <p>Tell me how you feel about childhood vaccination?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Why do you feel this way? - Do you think it's a good thing? Why? - Do you think it's important? Why? - Is there anything you feel isn't good about vaccination? Can you tell me more about it? | <ul style="list-style-type: none"> - Aim to understand underlying feelings about childhood vaccination in general |

| BeSD Model Construct | Question / [Instruction] | Rationale |
|----------------------|--|--|
| Thinking and feeling | <p>How do you feel when your child is vaccinated?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Do you think it's good for your child? Why? - Is there anything that worries you? Why does it worry you? | <ul style="list-style-type: none"> - Aim to understand their feelings when it comes to vaccinate their child specifically (different from the question above which aims to understand how they feel about vaccination in general) |
| General | <p>Is there anything g else you'd like to say?</p> | <ul style="list-style-type: none"> - Aim to capture any other issues or thoughts that haven't been captured in previous questions. |

Health workers

| Question / [Instruction] | Rationale |
|--|---|
| <p><i>Introduction: Hello, I am [INTERVIEWER'S NAME] with [INSTITUTION OR ORGANIZATION NAME]. We are interviewing people to help improve vaccination services in [NAME OF COUNTRY].</i></p> <p><i>The interview is expected to take __ minutes. Your participation is completely voluntary and anonymous. The answers you give will be completely confidential. If you do not want to answer a question or wish to stop the interview, just let me know. Would you be willing to take part in an interview with me? [if audio recording the interview] Would you be happy for me to record our conversation?</i></p> | <ul style="list-style-type: none"> - Clear introduction to ensure true informed consent for participation is obtained before proceeding |
| <p>Tell me a little about yourself and what you do</p> <p>Probe:</p> <ul style="list-style-type: none"> - What are you responsible for? - How many days do you work in this role? - Where do you perform your duties? | <ul style="list-style-type: none"> - Warm-up question - Enables understanding of the participant's professional role - Understanding of the breadth of the participant's responsibilities - Understanding how many days per week the participant works and where they are situated physically (e.g. do they work at multiple sites) |

| Question / [Instruction] | Rationale |
|--|---|
| <p>To what extent does your role involve immunisation?</p> <p>Probe:</p> <ul style="list-style-type: none"> - What parts of your job involve immunisation? - Can you tell me more about that? | <ul style="list-style-type: none"> - To understand how much of the participant’s role is immunisation-related - To understand in some detail what those immunisation-related responsibilities are |
| <p>I’d like to understand the process you follow to immunize a child, starting from the very beginning.</p> <p>Probe:</p> <ul style="list-style-type: none"> - Does it involve work for you even before the family arrives at the centre for vaccination? - Can you summarize the procedure of immunization in around 5 steps starting once a family arrives at the centre for vaccination? [note adjust this question for non-clinic settings if required] - Are there are follow ups or steps involved once they leave the centre? [note: other probes such on going door-to-door, systems of recording vaccinations, making vaccination cards and so on could be added, as required.] | <ul style="list-style-type: none"> - This question is for workers who administer immunizations to children. - Aim is to understand the work processes followed by the participant <ul style="list-style-type: none"> o may shed light on logistic or practical barriers they may encounter when delivering immunization services o may shed light on facilitators that could be applied elsewhere - [Note: The wording of this question is currently framed for a health worker in a clinic-type setting. The wording will have to be adjusted for the approach used in the setting being researched, for example, outreach or mobile vaccination services] |
| <p>What do you find works in helping families stay up to date with immunisation?</p> <p>Probe:</p> <ul style="list-style-type: none"> - What helps them not miss doses or appointments? [Note: this is to probe for practical issues] - What helps those who are hesitant about getting their children vaccinated? | <ul style="list-style-type: none"> - This question is designed to find out what, in the participant’s experience, helps keep families up to date with immunizations for their children - [Note: the question is intentionally broad and open-ended so that all possible answers are gathered]. |
| <p>What do you find difficult when it comes to helping families stay up to date with immunisation?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Which part of the process you described before do you find the hardest to complete? Why is that? | <ul style="list-style-type: none"> - This question is designed to help identify and understand difficulties the participant faces in helping families to keep up to date with vaccinations. - [Note: The suggested probes are to help separate differences between difficulties in the process they |

| Question / [Instruction] | Rationale |
|--|--|
| <ul style="list-style-type: none"> - Can you give some examples of reasons people give when their child has fallen behind the vaccination schedule? - Can you give some examples of reasons that people give for refusing vaccines for their children? | describe above, and difficulties they think families experience.] |
| If you had the chance, what would you do to improve immunisation services in your area? | <ul style="list-style-type: none"> - Aim to identify any other issues or suggestions not identified in the previous line of questioning - Closing question |

Community Influencers

| Question / [Instruction] | Rationale |
|---|---|
| <p><i>Introduction: Hello, I am [INTERVIEWER'S NAME] with [INSTITUTION OR ORGANIZATION NAME]. We are interviewing people to help improve vaccination services in [NAME OF COUNTRY].</i></p> <p><i>The interview is expected to take ___ minutes. Your participation is completely voluntary and anonymous. The answers you give will be completely confidential. If you do not want to answer a question or wish to stop the interview, just let me know. Would you be willing to take part in an interview with me? [if audio recording the interview] Would you be happy for me to record our conversation?</i></p> | <ul style="list-style-type: none"> - Clear introduction to ensure true informed consent for participation is obtained before proceeding |
| <p>Tell me a little about yourself and your role here in the community</p> <p>Probe:</p> <ul style="list-style-type: none"> - To what extent does your work involve immunization? - Can you tell me more about that? - Who do you work with to do that work? | <ul style="list-style-type: none"> - Warm-up question - Enables understanding of the participant's role in the community - Understanding of the breadth of the participant's responsibilities |
| <p>Can you take me through the process you follow when you work in a community?</p> <p>Probe:</p> <ul style="list-style-type: none"> - [Note this probe is for participants who work with families] When you visit a family, <ul style="list-style-type: none"> o What do you talk about? | <ul style="list-style-type: none"> - To understand the details of the participant's immunization-related activities - [Note: some participants may work directly with families, others work with NGO's and other agencies. The suggested probe questions should be adjusted to suit the participant's setting and role] |

| Question / [Instruction] | Rationale |
|--|--|
| <ul style="list-style-type: none"> ○ What information can you not leave without saying? ○ Do you follow up with the families afterward? How do you do that? - [Note: this question is for participants who work with other people and organizations, use as appropriate for the participant] <ul style="list-style-type: none"> ○ How do you help the front-line health workers in working with families? ○ How do you help with routine immunization? | |
| <p>What do you find works in helping families stay up to date with their children’s immunizations?</p> <p>Probe:</p> <ul style="list-style-type: none"> - What helps them not miss doses or appointments? [Note: this is to probe for practical issues] - What helps those who are hesitant about getting their children vaccinated? | <ul style="list-style-type: none"> - This question is designed to find out what, in the participant’s experience, helps keep families up to date with immunizations for their children - [Note: the question is intentionally broad and open-ended so that all possible answers are gathered]. |
| <p>What makes it difficult for families stay up to date with immunization?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Can you give some examples of reasons people give when their child has fallen behind the vaccination schedule? - Can you give some examples of reasons that people give for refusing vaccines for their children? - Are you able to overcome these challenges? How? | <ul style="list-style-type: none"> - This question is designed to help identify and understand difficulties the participant sees for families to keep up to date with vaccinations in their community. |
| <p>If you had the chance, what would you do to improve immunisation services in your area?</p> | <ul style="list-style-type: none"> - Aim to identify any other issues or suggestions not identified in the previous line of questioning - Closing question |

Programme managers

| Question / [Instruction] | Rationale |
|--|--|
| <p><i>Introduction: Hello, I am [INTERVIEWER’S NAME] with [INSTITUTION OR ORGANIZATION NAME]. We are interviewing people to help improve vaccination</i></p> | <ul style="list-style-type: none"> - Clear introduction to ensure true informed consent for participation is obtained before proceeding |

| Question / [Instruction] | Rationale |
|--|---|
| <p><i>services in [NAME OF COUNTRY]. We're seeking input from people like you who know the processes and the work well. Your views are crucial and very valuable.</i></p> <p><i>The interview is expected to take __ minutes. Your participation is completely voluntary and anonymous. The answers you give will be completely confidential. If you do not want to answer a question or wish to stop the interview, just let me know. Would you be willing to take part in an interview with me? [if audio recording the interview] Would you be happy for me to record our conversation?</i></p> | |
| <p>Tell me a little about yourself and your current role</p> <p>Probe:</p> <ul style="list-style-type: none"> - To what extent does your work involve childhood immunization? - What kinds of immunization-related activities are you responsible for (e.g. surveillance, campaigns, communications etc)? - Can you tell me more about those? | <ul style="list-style-type: none"> - Warm-up question - Enables understanding of the participant's overall current role - Understanding of the breadth of the participant's responsibilities - Understanding the extent of their immunization-related activities and what those entail. |
| <p>What makes the provision of childhood immunization a success in your area?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Are there specific examples you can describe? | <ul style="list-style-type: none"> - This question is designed to find out what, in the participant's experience, helps keep families up to date with immunizations for their children - [Note: the question is intentionally broad and open-ended so that all possible answers are gathered]. |
| <p>What do you think are the difficulties when it comes to providing childhood immunization in your area?</p> <p>Probe:</p> <ul style="list-style-type: none"> - Do you face difficulties with children falling behind the vaccination schedule in your area? Can you describe them? - Do you face difficulties with parents refusing vaccines for their children? - Are you able to overcome these challenges? How? | <ul style="list-style-type: none"> - This question is designed to help identify and understand difficulties the participant sees for families to keep up to date with vaccinations in their jurisdiction. |
| <p>If you had the chance, what would you do to improve the childhood immunization situation in your area?</p> | <ul style="list-style-type: none"> - Aim to identify any other issues or suggestions not identified in the previous line of questioning - Closing question |

Qualitative framework analysis template for caregivers, health workers, community influencers and programme managers



BeSD Childhood
Qualitative Framewc

Annex 2: BeSD tools for COVID-19 vaccination

COVID-19 vaccination survey core indicators

The table below highlights the core indicators for tracking the drivers of childhood vaccination. If it is not possible to implement the childhoods vaccination survey in full, measure at least the items that correspond with the indicators below.

| DOMAIN | CONSTRUCT | QUESTION & RESPONSE OPTIONS | INDICATOR |
|----------------------|---|---|--|
| Thinking and feeling | Confidence in COVID-19 vaccine benefits | How important do you think getting a COVID-19 vaccine will be for your health? Would you say... - Not at all important - A little important - Moderately important - Very important | % of adults / health workers who think a COVID-19 vaccine is “moderately or “very” important for their health |
| Motivation | Intention to get vaccinated | If a COVID-19 vaccine is available to you, will you get it? - No - Yes - Not sure | % of adults / health workers who will get a COVID-19 vaccine if it is available to them |
| Social processes | Family norms | Do you think most of your close family and friends would want you to get a COVID-19 vaccine? - No - Yes | % of adults / health worker who think most of their close family and friends would want them to get a COVID-19 vaccine |
| Practical issues | Know where to get vaccination | Do you know where to go to get a COVID-19 vaccine for yourself? - No - Yes | % of adults / health workers who know where to get a COVID-19 vaccine for themselves |

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| Practical issues | Affordability | How easy is it to pay for vaccination? When you think about the cost, please consider any payments to the clinic, the cost of getting there, plus the cost of taking time away from work. Would you say... - Not at all easy - A little easy - Moderately easy - Very easy | % of adults / health workers who say vaccination is “not at all” or “a little” easy to pay |
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COVID-19 vaccination survey for adults and health workers

The table below compiles survey items for both adults and health workers. Table cell colours are indicative of the domain (**thinking and feeling**, **social processes**, **motivation** and **practical issues**).

A total of 21 BeSD items apply to adults, and up to 28 BeSD items can apply to respondents who are health workers. To supplement the BeSD COVID-19 items, included below are also recommended consent script (S0) with adaptable fields for countries to modify and use as appropriate, and six socio-demographic items (S1–S6) for country adaptation. These supplementary items (S0–S6) are considered the minimum necessary for quality data collection and analysis. These can be used and adapted as needed to support the research objectives.

Researchers may also carefully choose to add specific new socio-demographic items to support more granular interpretation of the data. The survey flow adopts the logic of “facts” before “attitudes”, and “attitudes” before “intentions”, and moves from general immunization items to COVID-19 vaccine specific items. The column “item rationale” contains important information for translation and local adaption of items, including how to adapt items for post-vaccine introduction.

Wording in [square brackets] is to indicate terminology that will likely need to be locally adapted. Countries may also adapt the term “COVID-19” throughout the survey where a colloquial term is better understood, such as “corona virus”.

Text all in CAPITALS is an instruction for the interviewer and must not be read aloud for participants.

| | Construct and indicator | Item rationale | Adult item | Health worker item |
|----|-------------------------|--|--|--------------------|
| S0 | Consent | <p>This item serves as an example of text to be included to capture respondent's informed consent to their participation in the study.</p> <p>The wording in [square brackets] can be adapted at the local level to reflect accurate information in the relevant fields.</p> <p>Text in ALL CAPITALS is an instruction for the interviewer and must not be read aloud for participants.</p> | <p>Hello, I am [INTERVIEWER'S NAME] with [INSTITUTION OR ORGANIZATION NAME]. We are interviewing people to help improve vaccination services in [NAME OF COUNTRY].</p> <p>I will be asking you questions about COVID-19.</p> <p>I know you are busy, so this will take only a few minutes. Your participation is completely voluntary and anonymous. If you do not want to answer a question or wish to stop the interview, just let me know.</p> <p>Would you be willing to take the survey?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>IF "YES" TO S0: Thank you very much. Do you have any questions for me before we begin? PROCEED TO SURVEY SCREENER AFTER ADDRESSING ANY QUESTIONS.</p> <p>IF "NO" TO S0: Thank you very much. END INTERVIEW.</p> | [same as Adult] |
| S1 | Age | Item collects age in number of completed years, this will allow for stratified analysis by age of respondents. This item can also serve to screen in or screen out participants for inclusion based on the study sampling methodology. | <p>How old are you?</p> <p>_____ years</p> | [same as Adult] |
| S2 | Gender | <p>Item collects gender identity of respondents to allow for stratified analysis. The third response option can be included in contexts where specific third gender categories are culturally recognized; this response option can be adapted as appropriate based on in-country considerations or consultation.</p> <p>For in-person interviews the question should be rephrased to: "This may seem obvious, but I have to ask, what is your gender?"</p> | <p>What is your gender?</p> <p><input type="checkbox"/> Woman <input type="checkbox"/> Man <input type="checkbox"/> Nonbinary <input type="checkbox"/> Prefer not to say</p> | [same as Adult] |

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| S3 | Occupation | <p>This item enables sorting of respondents for the right survey as needed. Inclusion of this item will allow analysis for intentions to be stratified by whether someone is a priority occupational group or not.</p> <p>This item can also serve to screen in or screen out participants for inclusion based on the study sampling methodology.</p> <p>“Essential services worker” refers to other non-health frontline workers (e.g. police, transport service workers, grocery store staff, etc.). The categories may be locally adapted to ensure they are appropriate to the specific context and allow for disaggregated data as needed. Some countries may choose to delineate between frontline and non-frontline health workers.</p> | <p>Which of the following best describes your work during the COVID-19 pandemic?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Health worker <input type="checkbox"/> Essential services worker <input type="checkbox"/> Educator <input type="checkbox"/> Other worker <p>ROUTE TO HW SURVEY IF “Health worker” SELECTED, OTHERWISE ADULT SURVEY.</p> | [same as Adult] |
| S4 | Health worker | <p>This item allows for categorization of health workers into common roles or functions within the health system. If included, this item enables more detailed analysis of health worker role and stratification of results.</p> <p>The response options offered should be adapted in-country at national or even subnational level to reflect the most appropriate role categorizations based on the types of health workers most likely to be at risk of COVID-19 infection/most exposed to COVID-19.</p> | N/A | <p>What is your current role?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Doctor <input type="checkbox"/> Nurse <input type="checkbox"/> Paramedic/first responder <input type="checkbox"/> Allied health <input type="checkbox"/> Community health worker <input type="checkbox"/> Traditional healer <input type="checkbox"/> Other health worker |
| S5 | COVID-19 risk | <p>This item assesses whether the respondent has any underlying illness, comorbidities or health conditions that make the respondent a higher priority for vaccination. Inclusion of this item would allow for stratification of results by comorbidities.</p> <p>This item can also serve to screen in or screen out participants for inclusion based on the study sampling methodology.</p> | <p>Do you have a chronic illness? This could include for example obesity, diabetes, lung disease, or another long-term illness?</p> <ul style="list-style-type: none"> <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not sure | [same as Adult] |

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| S6 | COVID-19 diagnosis | <p>Previous infection with COVID-19 can be perceived as a reason to not vaccinate, and countries may want to stratify data on intentions to be vaccinated according this. This item can also serve to screen in or screen out participants for inclusion based on the study sampling methodology.</p> <p>When a COVID-19 vaccine becomes available in-country, researchers may choose to include an item to assess whether the respondent has received a COVID-19 vaccine. If several are available in the country, an item to ask which vaccine the respondent received may also be added.</p> | <p>To your knowledge, are you, or have you been, infected with COVID-19?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes</p> <p>IF "YES": Was it mild or severe?</p> <p><input type="checkbox"/> Mild <input type="checkbox"/> Severe</p> <p>Was it confirmed by a test?</p> <p><input type="checkbox"/> Confirmed by a test <input type="checkbox"/> Not confirmed by a test</p> | [same as Adult] |
| 1 | <p>Past vaccination</p> <p>% of adults / health workers who received adult vaccines (answered "yes")</p> | <p>This item assesses whether the respondent has ever received any vaccine (including e.g. seasonal influenza vaccine) as an adult. This refers to existing vaccines, already on the immunization programme schedule in countries where a life course approach is taken. A "not sure" response option is included here as it is likely some older adults may not easily be able to recall such information.</p> <p>In some contexts, it may be helpful to add the following text: "In case you are not aware, vaccines prevent people from getting diseases like COVID-19 or tetanus. Vaccines are usually given by a needle or orally."</p> | <p>Have you ever received a vaccine as an adult?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not sure</p> | [same as Adult] |
| | | <p>This is text to introduce the next set of questions and facilitate the flow of the survey. Countries may choose the list the names of the COVID-19 vaccines available If COVID-19 vaccines are not yet available in your country this prime should be removed.</p> | <p>The next questions are about COVID-19 vaccines.</p> | [same as Adult] |
| 2 | <p>Know where to get vaccination</p> <p>CORE ITEM</p> <p>% of adults / health workers who know</p> | <p>This item assesses whether the respondent knows where to go for vaccination. The item is about knowing that the facility or vaccine provider exists and where it is located. The item is not about ability to access or use the services.</p> | <p>Do you know where to go to get a COVID-19 vaccine for yourself?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes</p> | [same as Adult] |

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| | where to get a COVID-19 vaccine for themselves | If COVID-19 vaccines are not yet available in your country, adapt the item to: Do you know where to go to get yourself vaccinated? <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| 3 | COVID-19 vaccine uptake % of adults / health workers who received a COVID-19 vaccine (answered “yes”) | This item assesses whether the respondent has ever received any dose of a COVID-19 vaccine. A “not sure” response option is included here as it is likely some older adults may not easily be able to recall such information. | Have you received a COVID-19 vaccine? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not sure | [same as Adult] |
| 4 | COVID-19 vaccine series completion % of adults / health workers who are fully vaccinated | This item assesses whether the respondent has completed their COVID-19 vaccination schedule in full. | IF “YES” HAS RECEIVED COVID-19 VACCINE, ASK: Do you still need another dose of COVID-19 vaccine or are you fully vaccinated? <input type="checkbox"/> Fully vaccinated <input type="checkbox"/> Need another dose | [same as Adult] |
| 5 | Reminder <i>OPTIONAL ITEM</i> % of adults / health workers who have been contacted about being due for a COVID-19 vaccine (answered “yes”) | This item assesses mechanisms in place to reach and remind adults due for vaccination. If these systems/mechanisms are not in place in country, we recommend that this item not be included. | Have you ever been contacted about being due for a COVID-19 vaccine? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not sure | [same as Adult] |
| 6 | Recall <i>OPTIONAL ITEM</i> % of adults / health workers who have been contacted about missed COVID-19 vaccination | This item assesses mechanisms in place to recall adults who may have missed a COVID-19 vaccine. If these systems/mechanisms are not in place in country, we recommend that this item not be included. | Have you ever been contacted about a <i>missed</i> COVID-19 vaccination? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not sure | [same as Adult] |
| 7 | Service satisfaction % of adults / health workers who were | This item assesses satisfaction with vaccination services received during the last visit. “Satisfied” refers to how good the services and experience was for the parent, how pleased or | ASK IF RECEIVED AT LEAST ONE DOSE OF COVID-19 VACCINE, OTHERWISE SKIP: | [same as Adult] |

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| | <p>“very” or “moderately” satisfied with the COVID-19 vaccination services (answered “yes”)</p> | <p>happy they felt about the visit and the interactions that took place. “Vaccination services” refers to work done by vaccination clinic staff who greet the patient, handle paperwork and payment, and administer the vaccine. “Not at all” is bad and not acceptable. “Not very” is okay, adequate, and not bad. “Somewhat” is positive but not the best possible. “Very” is great, fantastic and outstanding.</p> | <p>How satisfied were you with the COVID-19 vaccination services?</p> <p><input type="checkbox"/> Not at all satisfied <input type="checkbox"/> A little satisfied <input type="checkbox"/> Moderately satisfied <input type="checkbox"/> Very satisfied</p> | |
| 8 | <p>Service quality</p> <p>% of adults / health workers who say vaccine was not available</p> <p>% of adults / health workers who say the vaccination site did not open one time</p> <p>% of adults / health workers who say they waited a long time</p> <p>% of adults / health workers who say the vaccination site was not clean</p> <p>% of adults / health workers who say staff seemed poorly trained</p> <p>% of adults / health workers who say staff were not respectful</p> <p>% of adults / health workers who say staff</p> | <p>This item assesses reasons why the parent was not satisfied with their last vaccination visit.</p> <p>“site did not open on time” means that the service operating hours were not functioning as scheduled or advertised.</p> <p>“I waited a long time” is the perception that the service was poorly organised for time, staff unable to prioritize efficient, quick service.</p> <p>“the clinic was not clean” refers to any complaint about the place where vaccines are given; including location and building structure. This includes lack of cleanliness, poor maintenance. This could include vaccine vials, needles, fridges for storing vaccines but also furniture in the clinic, reception and waiting rooms, or even appearance of personnel, such as appropriate attire, clean appearance, and uniforms.</p> <p>“Staff seemed poorly trained” is the perception that the service received is not as promised, the quality of service is not reliable or consistent. The perception that staff did not fulfil their role very well, that the staff is not well trained or prepared for their responsibilities, lacked confidence or skill to deliver the service expected.</p> <p>“Staff were not respectful” is inability to inspire confidence, put parents at ease and</p> | <p>ASK IF “NOT AT ALL” OR “A LITTLE” SATISFIED WITH SERVICES DURING LAST VISIT, OTHERWISE SKIP:</p> <p>What was not satisfactory about the vaccination services? Check all that apply.</p> <p><input type="checkbox"/> Vaccine was not available <input type="checkbox"/> The vaccination site did not open on time <input type="checkbox"/> I waited a long time <input type="checkbox"/> The vaccination site was not clean <input type="checkbox"/> Staff seemed poorly trained <input type="checkbox"/> Staff were not respectful <input type="checkbox"/> Staff did not spend enough time with me <input type="checkbox"/> Something else, please specify: _____</p> | [same as Adult] |

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| | did not spend enough time with them | <p>communicate competence. It includes staff being discourteous, impolite and unable to reassure parents. Staff can show respect in verbal and non-verbal ways.</p> <p>“Staff did not spend enough time with me” is the perceived lack of empathy a parent may experience from vaccination clinic staff, and perception of a rushed service or lack of time dedicated to reassuring parents and or answer any of their questions.</p> | | |
| 9 | <p>On-site vaccination</p> <p>% of adults / health workers who have access to a COVID-19 vaccine at their place of work (answered “yes”)</p> | <p>This item assesses availability or existence of vaccination services at work (on site) for health workers only. This item can also be applied to adults in countries where it is not uncommon to offer adult vaccines in workplaces. A “not sure” response option is included here as some may not be aware of the presence of any on-site vaccination in their place of work.</p> <p>If COVID-19 vaccines are not yet available in your country, adapt the item to:</p> <p>Have any vaccines ever been available for you to get at your place of work?</p> <p>Yes No Not sure</p> | <p>Is a COVID-19 vaccine available for you to get at your place of work?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not sure</p> | [same as Adult] |
| 10 | <p>Ease of access</p> <p>% of adults / health workers who say getting COVID-19 vaccination is “moderately” or “very” easy</p> | <p>This item assesses the degree to which vaccination is easy to get for themselves. The item looks at ease of access in general and leads into the next question.</p> <p>“Easy” refers to achievable, possible without great effort, not hard, and not difficult.</p> <p>“Vaccination services” refers to access to vaccination.</p> <p>If COVID-19 vaccines are not yet available in your country, adapt the item to:</p> <p>How easy is it to get vaccination services for yourself?</p> | <p>How easy is it to get a COVID-19 vaccine for yourself? Would you say...</p> <p><input type="checkbox"/> Not at all easy <input type="checkbox"/> A little easy <input type="checkbox"/> Moderately easy <input type="checkbox"/> Very easy</p> | [same as Adult] |

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| | | <p>Not at all easy A little easy Moderately easy Very easy</p> | | |
| 11 | <p>Reasons for low ease of access</p> <p>% of adults / health workers who say COVID-19 vaccination is not yet available for them</p> <p>% of adults / health workers who say making an appointment is hard</p> <p>% of adults / health workers who say they can't go on their own</p> <p>% of adults / health workers who say the vaccination site is hard to get to</p> <p>% of adults / health workers who say vaccination opening times are inconvenient</p> <p>% of adults / health workers who say sometimes people are turned away without vaccination</p> | <p>This item assesses the reasons why vaccination is difficult to get. Respondents can choose multiple response options here. There is no skip logic for this item, it must be asked of all respondents.</p> <p>Response options explained:</p> <ul style="list-style-type: none"> ▪ "I can't go on my own" is to capture people with mobility impairment who cannot travel without assistance. ▪ "Too far away" refers to geographical distance. ▪ "Inconvenient" refers to opening hours that do not suit the respondent. ▪ "Turns people away" refers to sending people, who came specifically for vaccination, home without vaccination. ▪ "Takes too long" refers to the waiting times at the place of vaccination. ▪ "Costs too much" refers to the cost of the vaccine as well as any additional costs associated with vaccination (transport, the cost of taking time away from work, or payments to the vaccine provider/clinic). ▪ "Unable to leave work duties" refers to the health worker being unable to make time for vaccination along their work responsibilities. <ul style="list-style-type: none"> ▪ "No on-site vaccine" addressed here as a barrier to vaccination to allow for discrete analysis within this item. ▪ "Mobile vaccination" refers to outreach immunization services for health workers in the community. | <p>What makes it hard for you to get a COVID-19 vaccine? Check all that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> COVID-19 vaccination is not yet available for me <input type="checkbox"/> Making an appointment is hard <input type="checkbox"/> I can't go on my own (I have a physical limitation) <input type="checkbox"/> The vaccination site is hard to get to <input type="checkbox"/> The opening times are inconvenient <input type="checkbox"/> Sometimes people are turned away without vaccination <input type="checkbox"/> The waiting time takes too long <input type="checkbox"/> Something else, please specify: _____ <input type="checkbox"/> Nothing. It's not hard | <p>What makes it hard for you to get vaccines? Check all that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Nothing. It's not hard <input type="checkbox"/> Making an appointment is hard <input type="checkbox"/> The opening times are inconvenient <input type="checkbox"/> I am unable to leave work duties <input type="checkbox"/> There is no on-site vaccination at my place of work <input type="checkbox"/> Mobile vaccination is not available <input type="checkbox"/> The waiting time is too long <input type="checkbox"/> Something else, please specify: _____ |

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| | % of adults / health workers who say the waiting time takes too long | If COVID-19 vaccines are not yet available in your country, adapt the item to: What makes it hard for you to get vaccines? Choose all that apply. REMOVE THE RESPONSE OPTION: COVID-19 vaccination is not yet available for me | | |
| 12 | Affordability <i>CORE ITEM</i> % of adults / health workers who say vaccination is “moderately” or “very” easy to pay for. | This item assesses the perceived cost of vaccination. Cost is the monetary value associated with vaccination. “easy to pay” refers to the total costs associated with vaccinating being something the parent can pay for, costing an amount the parent can pay for, and being within the parent’s means. | How easy it to pay for vaccination? When you think about the cost, please consider any payments to the clinic, the cost of getting there, and plus the cost of taking time away from work. Would you say... Not at all easy A little easy Moderately easy Very easy | [same as Adult] |
| 13 | Perceived risk – self <i>OPTIONAL ITEM</i> % of adults / health workers who are “moderately” or “very” concerned about getting COVID-19 | This item assesses the degree to which the respondent perceives a risk of getting COVID-19 themselves. “Concern” is similar to worry or thinking about a problem; it is not directly about fear or anxiety or emotion. | How concerned are you about getting COVID-19? Not at all concerned A little concerned Moderately concerned Very concerned | [same as Adult] |
| 14 | Perceived risk – family and friends % of adults / health workers who are “moderately” or “very” concerned about their close family and friends getting COVID-19 from them | This item assesses the degree to which the respondent perceives a risk of giving COVID-19 to their close family and friends; the people in their immediate social circles, with whom they have frequent and close contact. This item only applies to health care workers. “Concern” is similar to worry or thinking about a problem; it is not directly about fear or anxiety or emotion. | How concerned are you about your close family and friends getting COVID-19 from you? Not at all concerned A little concerned Moderately concerned Very concerned | [same as Adult] |
| 15 | Perceived risk – patients % of health workers who are “moderately” or “very” concerned about patients getting COVID-19 from them | This item assesses the degree to which the respondent perceives a risk of giving COVID-19 to their patients. This item only applied to health care workers. “Concern” is similar to worry or thinking about a problem; it is not directly about fear or anxiety or emotion. | N/A | How concerned are you about patients getting COVID-19 from you? <input type="checkbox"/> Not at all concerned <input type="checkbox"/> A little concerned <input type="checkbox"/> Moderately concerned <input type="checkbox"/> Very concerned |

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| 16 | COVID-19 stigma % of health workers who have been treated poorly during the COVID-19 pandemic because of their work | This item assesses whether a health worker believes they have been treated negatively, discriminated against, or stigmatized because of their job as a health worker during the COVID-19 pandemic. This could include treatment such as harassment or even social exclusion (the belief that others avoid them because they are at risk of getting and infecting others with COVID-19). | N/A | Have you been treated poorly during the COVID-19 pandemic because you are a health worker? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not sure |
| 17 | Confidence in COVID-19 vaccine benefits CORE ITEM “moderately or “very”% of adults / health workers who think a COVID-19 vaccine is “moderately” or “very” important for their health | This item assesses positive attitude toward COVID-19 vaccination. The main idea is that vaccination is good, important and valuable. A related idea is that vaccination is effective, prevents disease, saves lives and protects those vaccinated. | How important do you think getting a COVID-19 vaccine will be for your health? Would you say... <input type="checkbox"/> Not at all important <input type="checkbox"/> A little important <input type="checkbox"/> Moderately important <input type="checkbox"/> Very important | [same as Adult] |
| 19 | Confidence in COVID-19 vaccine safety | This item assesses negative attitude toward COVID-19 vaccination for themselves. The main idea is the belief that the vaccine is safe and is not dangerous or harmful. BeSD offers two items (19&20) that assess this general concept, acknowledging that the word “safety” may not translate well across all languages. Countries should choose whether they want to include one or both. If the concept “safety” translates satisfactorily we recommend use of this question (19) over question 20. | How safe do you think a COVID-19 vaccine will be for you? Would you say... <input type="checkbox"/> Not at all safe <input type="checkbox"/> A little safe <input type="checkbox"/> Moderately safe <input type="checkbox"/> Very safe | [same as Adult] |
| 21 | Intention to get vaccinated CORE ITEM % of adults/HWs who will get a COVID-19 vaccine if it is available to them | This item assesses intention to receive a COVID-19 vaccine, if a medical professional advises them to do so. Countries can choose to add an open text follow up question for those who answer “no”: What is the main reason you would not get a COVID-19 vaccine if it were available to you?? | ASK ONLY IF NOT ALREADY RECEIVED A COVID-19 VACCINE If a COVID-19 vaccine is available to you, will you get it? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not sure | [same as Adult] |

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| | | [OPEN TEXT RESPONSE] | | |
| 23 | Vaccine confidence – brand % of adults / health workers who will take a COVID-19 vaccine recommended to them regardless of brand | This item assess whether the availability of particular vaccine brands make a difference to the individual's willingness to accept COVID-19 vaccines. Where only one brand is available in the country, we recommend countries do not include this item as it may cause confusion or misleading perceptions. | Does the brand of vaccine matter to you? <input type="checkbox"/> No, I will take the COVID-19 vaccine recommended to me regardless of brand. <input type="checkbox"/> No, I don't plan to have a COVID-19 vaccine at all. <input type="checkbox"/> Yes, I plan to only accept a specific brand of vaccine. | [same as Adult] |
| 24 | Willingness to recommend vaccine to others % of health workers who would recommending a COVID-19 vaccine to eligible individuals (answered "yes") | This item assesses health workers' willingness to recommend or promote a COVID-19 vaccine to persons who are eligible candidates for COVID-19 vaccines. If COVID-19 vaccines are not yet available in your country, adapt the item to: Would you recommend a COVID-19 vaccine to eligible individuals, when it becomes available? Yes No Not sure | N/A | Would you recommend a COVID-19 vaccine to eligible individuals? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not sure |
| 25 | Preferred site for vaccination % of adults / health workers who would prefer to get a COVID-19 vaccine at a hospital % of adults / health workers who would prefer to get a COVID-19 vaccine at a health centre / clinic % of adults / health workers who would prefer to get a | This item assesses respondents' preferred location to receive a COVID-19 vaccine. There is no skip logic for this item, it must be asked of all respondents. Response options must be locally adapted to reflect the sites or locations most likely to be considered for the administration or delivery of a COVID-19 vaccine. | Where would you prefer to get a COVID-19 vaccine? Check all that apply. <input type="checkbox"/> Hospital <input type="checkbox"/> Health centre/clinic <input type="checkbox"/> Workplace <input type="checkbox"/> Pharmacy <input type="checkbox"/> Community centre, meeting hall, or local shop <input type="checkbox"/> School <input type="checkbox"/> Somewhere else, please specify: _____ <input type="checkbox"/> I don't want the vaccine | [same as Adult] |

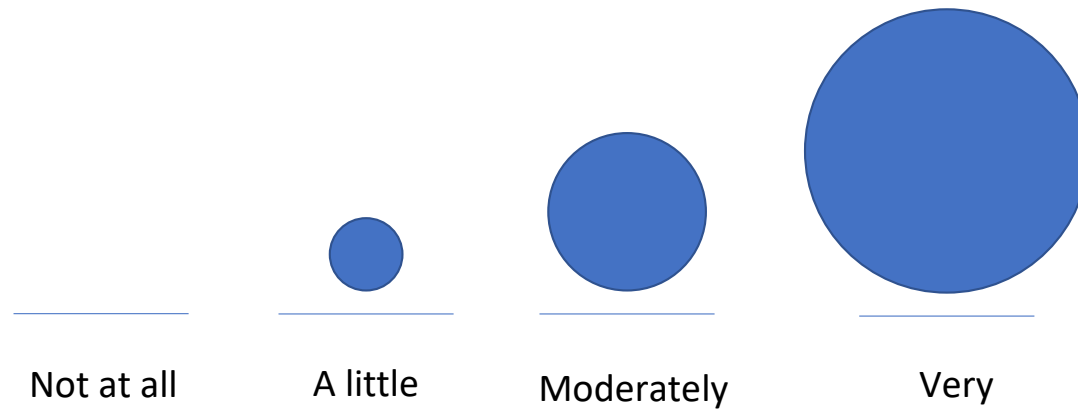
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| | <p>COVID-19 vaccine at their workplace</p> <p>% of adults / health workers who would prefer to get a COVID-19 vaccine at a pharmacy</p> <p>% of adults / health workers who would prefer to get a COVID-19 vaccine at a community centre, meeting hall or local shop</p> <p>% of adults / health workers who would prefer to get a COVID-19 vaccine at a school</p> | | | |
| 26 | <p>Ability to answer patient questions</p> <p>% of health workers who are “moderately” or “very” confident they could answer patient questions about getting a COVID-19 vaccine</p> | <p>This item measures positive attitude of health workers’ capacity to support patients with their information needs about a COVID-19 vaccine once it becomes available.</p> <p>If COVID-19 vaccines are not yet available in your country, adapt the item to:</p> <p>How confident are you that you could answer patient questions about getting a COVID-19 vaccine, once it is available?</p> <p>Not at all confident A little confident Moderately confident Very confident</p> | N/A | <p>How confident are you that you could answer patient questions about getting a COVID-19 vaccine?</p> <p><input type="checkbox"/> Not at all confident <input type="checkbox"/> A little confident <input type="checkbox"/> Moderately confident <input type="checkbox"/> Very confident</p> |
| 27 | <p>Gender equity – decision autonomy</p> <p>% of adults who have decision making autonomy about</p> | <p>This item assesses whether respondents have autonomy or joint decision-making abilities for COVID-19 vaccination. “Final say” refers to the last word, the main decider, a decision that no one else in the family can easily override.</p> | <p>In your family, who makes the decision about whether you get a COVID-19 vaccine?</p> <p><input type="checkbox"/> Me <input type="checkbox"/> My spouse/partner <input type="checkbox"/> My mother <input type="checkbox"/> My father</p> | N/A |

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|----|--|---|--|-----------------|
| | whether they get a COVID-19 vaccine | Data can be stratified by gender to assesses women's role in decisions about vaccination. | <input type="checkbox"/> My mother-in-law <input type="checkbox"/> My father-in-law <input type="checkbox"/> My daughter(s) <input type="checkbox"/> My son(s) <input type="checkbox"/> Someone else, please specify: _____ | |
| 28 | Gender equity – travel autonomy % of adults who do not need permission to go and get a COVID-19 vaccine | This item assesses freedom of the respondent to leave the home to get a COVID-19 vaccine. Data can be stratified by gender to assesses women's travel autonomy. | If it was time for you to get a COVID-19 vaccine, would you need permission to go and get it? <input type="checkbox"/> No <input type="checkbox"/> Yes | N/A |
| | Prime | This is text to introduce the next set of questions and facilitate the flow of the survey. | For the next questions, imagine that a COVID-19 vaccine is recommended for you. | [same as Adult] |
| 29 | Family norms CORE ITEM % of adults/HWs who think most of their close family and friends would want them to get a COVID-19 vaccine | This item assesses injunctive social norms—beliefs about what close social contacts want the respondent to do. “Close family and friends” include people with opinions the respondent would listen to or feel some degree of pressure to heed. | Do you think most of your close family and friends would want you to get a COVID-19 vaccine? No Yes Not sure | [same as Adult] |
| 30 | Religious leader norms % of adults / health workers who think their religious leaders would want them to get a COVID-19 vaccine (answered “yes” or “not sure”) | This item assesses injunctive social norms—beliefs about what opinion leaders want the respondent to do. “Religious leader” includes priests, clerics, imams, rabbis and others in similar roles. | Do you think your religious leaders would want you to get a COVID-19 vaccine? No Yes Not sure | [same as Adult] |
| 31 | Community leader norms % of adults / health workers who think their community | This item assesses injunctive social norms—beliefs about what opinion leaders want the respondent to do. “Community” may refer to a neighbourhood or region or a social group defined by a characteristic such as race or national origin. | Do you think other community leaders would want you to get a COVID-19 vaccine? No Yes Not sure | [same as Adult] |

| | | | | |
|----|--|---|---|---|
| | leaders would want them to get a COVID-19 vaccine (answered “yes” or “not sure”) | “Community leader” includes people who represent a neighbourhood, region or subgroup of people. | | |
| 32 | Descriptive social norms % of adults who think most adults they know will get a COVID-19 vaccine (answered “yes”) | This item assesses descriptive social norms—beliefs about what other people are doing. “Most adults you know” includes friends, people at work, and people in the neighbourhood who they may not have close social ties to. It does not include people they have never met. This item does <u>not</u> apply to health workers, a specific health worker item is offered below to correspond. | Do you think most adults you know will get a COVID-19 vaccine, if it is recommended to them? No Yes Not sure | N/A |
| 33 | Workplace norms % of health workers who think most of the people they work with will get a COVID-19 vaccine | This item assesses descriptive social norms—beliefs about what other people are doing. “Most people you work with” includes all colleagues and people at their place of work who could be eligible for a COVID-19 vaccine. This item does <u>not</u> apply to adults, a specific adult item is offered above to correspond. | N/A | Do you think most of the people you work with will get a COVID-19 vaccine? No Yes Not sure I am not currently working |
| 35 | Confidence in providers <i>OPTIONAL ITEM</i> % of adults / health workers who trust the health care providers who give COVID-19 vaccines “moderately” or “very” | This item assesses confidence in the people responsible for recommending and administering vaccines. “Trust” refers to belief that the provider will be competent, reliable and give good health care. “Health care provider” will need local adaptation to indicate the medical professionals responsible for recommending and/or administering adult vaccination (i.e. general practitioner, or primary health care physician and assisting nurses or vaccinators). | How much do you trust the health care providers who would give you a COVID-19 vaccine? Would you say you trust them... <input type="checkbox"/> Not at all <input type="checkbox"/> A little <input type="checkbox"/> Moderately <input type="checkbox"/> Very much | [same as Adult] |

Visual survey response scale

The following visual response scale may also be useful in certain settings to facilitate understanding of the four-point response options. We recommend providing all participants with the below visual scale to support their answering of BeSD survey items. If you choose to deploy the survey together with this visual scale, it will be important to ensure all participants are offered it.



COVID-19 vaccination in-depth interview guides for Adults and Health workers

The questions below are designed to be asked in a context where a COVID-19 vaccine is available. In contexts where multiple vaccines are available for use, questions should be modified and refer to “the COVID-19 vaccines” accordingly. In this instance it may be useful to understand whether perceptions, norms and willingness to accept a COVID-19 vaccine is dependent on which vaccine is being offered; interviewers should use probes for all vaccines available in the local context.

If these questions are to be used in a context where a COVID-19 vaccine is not yet available, then the questions will need to be modified accordingly. For example, the COVID-19 vaccine confidence question, “How do you feel about the COVID-19 vaccine” would be modified for a pre-vaccine rollout context by adjusting the wording to, “How do you think you’ll feel about the COVID-19 vaccine when it becomes available?”.

Some questions will be worded differently, depending on whether the interviewee has had the vaccine or not. In these questions wording for both scenarios is included. Choose the wording that is appropriate for the interviewee.

Table cell colours are indicative of the domain (**thinking and feeling**, **social processes**, **motivation** and **practical issues**).

| Construct | Adult | Health worker | Rationale |
|--------------------------------|--|--|---|
| General | Tell me a little about yourself | Tell me a little about yourself Tell me a little about your role | <ul style="list-style-type: none"> – Warm-up question – Orients interviewer to participant’s situation |
| Thoughts and feelings | | | |
| Perceived COVID-19 risk – self | Tell me, how concerned are you about getting COVID-19? Probe: <ul style="list-style-type: none"> – Why do you feel that way? – How likely do you think it is? – How severe do you think it would be? | Tell me, how concerned are you about getting COVID-19? Probe: <ul style="list-style-type: none"> – Why do you feel that way? – How likely do you think it is? – How severe do you think it would be? | <ul style="list-style-type: none"> – Understand the participant’s perceived risk due to COVID-19 (disease, not vaccine) – Will tie in with later question about getting COVID-19 vaccine when available |

| | | | |
|------------------------------------|--|---|--|
| Perceived risk – to patients | n/a | Tell me what you think about the risk that you could give COVID-19 to your patients? | – Understand participant's perceived risk of infecting others |
| COVID-19 stigma (social pressures) | n/a | Being a health care worker, how are you usually treated by others in the community? Probe: - Have you noticed anything different in how you're treated since the pandemic? | – Enables probing for the presence of/experience of stigma, which will tie in with vaccine question below |
| COVID-19 vaccine information | What have you heard about the COVID-19 vaccine(s)? Probe: – Have you heard anything that worries you? – Who did you hear this from? – Do you think it's true? Why? – Have you heard anything that makes you feel positive about the vaccines that are being developed? | What have you heard about the COVID-19 vaccine(s)? Probe: – Have you heard anything that worries you? – Who did you hear this from? – Have you heard anything that makes you feel positive about the vaccines that are being developed? | – Ask what they know about the vaccine – enables probing for positive or negative information |
| COVID-19 vaccine confidence | How do you feel about the COVID-19 vaccine(s)? Probes: – If multiple vaccines available, what are the perceptions of each? – Relate back to perceived COVID-19 risk, and how important it is – Importance in protecting others – Alignment with spiritual or religious beliefs (ask for all COVID-19 vaccines available) – What are your thoughts about the safety of the vaccine? (ask for all COVID-19 vaccines available) | How do you feel about the COVID-19 vaccine(s)? Probes: – If multiple vaccines available, what are the perceptions of each? – Relate back to perceived COVID-19 risk, and how important it is – Importance in protecting others – Alignment with spiritual or religious beliefs (ask for all COVID-19 vaccines available) | – Elicits the participant's confidence in the vaccine, probe questions will cover the different aspects, such as safety, importance etc. |

| | | | |
|--|--|--|--|
| | <ul style="list-style-type: none"> – Newness – Thoughts on whether it works (ask for all COVID-19 vaccines available) | <ul style="list-style-type: none"> – What are your thoughts about the safety of the vaccine? (ask for all COVID-19 vaccines available) – Newness – Thoughts on whether it works (ask for all COVID-19 vaccines available) | |
| COVID-19 vaccine confidence in providers | n/a | n/a | Trust in health providers will be covered in service satisfaction below |
| Motivation | | | |
| COVID-19 vaccine intention | Have you thought about getting a COVID-19 vaccine? What did you decide? (Why?) <i>Follow on to next question (combine)</i> | Have you thought about getting a COVID-19 vaccine? What did you decide?? (Why?) <i>Follow on to next question (combine)</i> | <ul style="list-style-type: none"> – Elicits what their intentions and decisions are towards the vaccine. “Why” probe may be repetitive of questions answered above, might be a good point to triangulate their responses |
| Social processes | | | |
| COVID-19 vaccine – decision process | <p>Take me through how you will or have decided whether to get a COVID-19 vaccine</p> <p>Probe:</p> <ul style="list-style-type: none"> – Was there anyone else involved in the decision? – Who else did you discuss it with? | <p>Take me through how you will or have decided whether to get a COVID-19 vaccine</p> <p>Probe:</p> <ul style="list-style-type: none"> – Was there anyone else involved in the decision? – Who did you discuss it with? – Is it a requirement from your employer? | <ul style="list-style-type: none"> – Covers decision autonomy, but also the decision-making process more broadly, with a view to understanding what kinds of social processes might be involved |

| | | | |
|--|--|---|--|
| COVID-19 vaccine – safe to see family and friends | (if already had the vaccine) Has getting a COVID-19 vaccine changed things for you? (If haven't had the vaccine) How do you think getting a COVID-19 vaccine might change things for you? Probe: – See family and friends – going out in public – Going back to work | (if already had the vaccine) Has getting a COVID-19 vaccine changed things for you? (If haven't had the vaccine) How do you think getting a COVID-19 vaccine might change things for you? Probe: – See family and friends – Going out in public | – This covers the item in the survey, but has been expanded to look for unexpected ways a COVID-19 vaccine might impact people |
| COVID-19 vaccine stigma | n/a | (If they answered in the affirmative to the stigma question above): Do you think having the COVID-19 vaccine will help / has helped with the stigma we spoke about earlier? Why? | This question is really only relevant if the participant describes any kind of stigma in the question above. Suggest not asking if they don't report having experienced or heard of it happening |
| COVID-19 vaccine – travel autonomy | n/a | n/a | Travel autonomy covered in practical factors below |
| COVID vaccine – Descriptive social norms – Family norms – Religious leader norms – Workplace norms | If a COVID-19 vaccine is recommended by health care workers, what do you think other people will do? Probe: – Family and friends – Religious or community leaders recommend? – If more than one vaccine available; is this true for all COVID-19 vaccines or does it depend on which vaccine is recommended? | If a COVID-19 vaccine is recommended by health care workers, what do you think other people will do? Probe: – Family and friends – Religious or community leaders recommend? – What do you think your work colleagues will do? – If more than one vaccine available; is this true for all COVID-19 vaccines or does it depend on which vaccine is recommended? | – Elicits what they anticipate will be the social norms regarding uptake of COVID-19 vaccination |

| | | | |
|---|--|---|---|
| Provider recommendation | What do you think your health care provider's recommendation will be to you about the COVID-19 vaccine(s)? | What do you think your health care provider's recommendation will be to you about the COVID-19 vaccine(s)? | — Anticipated recommendations |
| General provider recommendation (any adult vaccine) | n/a | n/a | General provider recommendation covered in practical issues below |
| Practical issues | | | |
| Ever gone to get vaccines | <p>Did you have any vaccines as a child? What do you remember about it?</p> <p>Probe:</p> <ul style="list-style-type: none"> — Experiences, good and bad <p>Have you ever had a vaccine as an adult? Have you ever had one recommended to you by a health care worker?</p> <p>(If previously vaccinated as an adult): Thinking about when you got that vaccine, what did you think was good about what happened in the clinic? Was there anything that wasn't good?</p> | <p>Have you ever had a vaccine as an adult? Have you ever had one recommended to you by a health care worker? What about your employer?</p> <p>(If previously vaccinated as an adult):</p> <p>When you got that vaccine, what did you think was good about what happened in the clinic? Was there anything that wasn't good? What do you think might work better for you next time?</p> | — Start with past general vaccination experiences, including, if applicable, service satisfaction in past experiences |

| | | | |
|--|---|--|--|
| <p>COVID-19 vaccine –</p> <ul style="list-style-type: none"> – On-site vaccine availability – access – General vaccination – know where to get vaccines – Vaccination availability – General vaccine – affordability – General vaccine – service satisfaction – General vaccine – service quality | <p>Can you take me through how you would get / how you got a COVID-19 vaccine? Start at the beginning</p> <p>Probe:</p> <ul style="list-style-type: none"> – Would / did you need to ask permission? – Where would / did you go to get it? – How would / did you get there? – What other things would / did you need to do (e.g. find care for young children, find someone to take care of livelihood/get up earlier to take care of household duties) – Would there be / was there any cost involved for you (not just for vaccine, but things like transport) – How much do you trust the health care worker who will give you the vaccine? <p>What would make it easy for you to get a COVID-19 vaccine if it was recommended and available? / What would make it easier for you to get a COVID-19 vaccine?</p> | <p>Can you take me through how you would get / how you got a COVID-19 vaccine? Start at the beginning</p> <p>Probe:</p> <ul style="list-style-type: none"> – Would / did you need to ask permission? – Where would / did you go to get it? (Is the vaccine available at your workplace?) – How would / did you get there? – Would / did you have to do it in your own time (not while you're on duty)? – Would there be / was there any cost involved for you (not just for vaccine, but things like transport) – How much do you trust the health care worker who will give you the vaccine? <p>What would make it easy for you to get a COVID-19 vaccine if it was recommended and available? / What would make it easier for you to get a COVID-19 vaccine?</p> | <ul style="list-style-type: none"> – Ask for a narrative of how they might access the vaccine, covering things like cost, missed workdays, transport, any permissions needed etc. – Also cover what they feel might make accessing the vaccine easier for them |
| <p>Close</p> | <p>Is there anything else you'd like to say?</p> | <p>Is there anything else you'd like to say?</p> | <p>Leave option for unexpected findings, or elaboration on things expressed previously.</p> |

Qualitative framework analysis template for BeSD COVID interviews



BeSD COVID
Qualitative Framework

Annex 3: Guidance for adapting the BeSD tools

Adapting the BeSD surveys

For the BeSD survey, a process of cognitive interviewing is recommended to improve the quality of translations and support careful adaptation to survey items.

How to carry out cognitive interviewing to test and locally adapt the survey?

This is a brief guide to using cognitive interviewing to improve BeSD surveys. **Cognitive interviewing is a process for improving the quality of a survey**, to ensure questions and response options are understood as intended, are well-adapted to a local context, and measure what they are designed to measure. **Recruit participants for cognitive interviewing from the target population.** In this case, this will be parents or caregivers to one or more children under the age of five.

Schedule separate interviews with participants and follow the steps below for each survey item (each survey question and its corresponding response options), one item at a time. Assume 2–3 minutes' interview length per item. Where possible, aim to conduct two rounds of interviews with four to eight respondents per round. However, conducting even one round of interviews with as few as four people can offer meaningful insights to improve the survey significantly.

1. Ask the respondent the question (including response options) and allow them to answer.
2. Ask the respondent about the question they just answered, using probes to understand if...
 - **The question is easy to understand, and it makes sense:**
"In your own words, what is this question asking?" or "What does this question mean to you?" to check the item was well understood.
 - **The ideas or words in the question and response options are easy to understand:**
Ask generally, *"Did this question make sense to you? Why/why not?"* or probe around specific words or concepts that may be difficult to understand. *"What do you think of when you hear the phrase 'getting vaccines'?"*
 - **The response options make sense and allow for meaningful answers:**
"Do the response options fit in with the sort of answer you want to give?"
 - **There are any response options that are missing:**
"Was there anything missing from the list of response options?" to check the options are adequate.
 - **The question and response options are relevant in the country or region:**
Ask generally, *"Did the response options offered make sense to you? Why/why not?"* or probe around specific words or concepts that could be interpreted differently *"What do you think of when you hear the phrase 'vaccination clinic'?"*

If using **the visual response scale**, if questions are being asked in-person (not self-administered), the interviewer should point to the corresponding part of the visual analogue scale when that response option is being verbalized. This helps respondents understand the meaning and the connection with the circles.

After conducting the first round of cognitive interviews, review the feedback from participants. Were the items understood as intended? Did the response options allow them to answer meaningfully? Are the items appropriate in the local setting? If needed, adapt questions and response options using the insights. Table A2.1 below offers an example for organizing items and cognitive interview insights when considering revisions. Document the findings and recommendations or adaptations made.

Table A2.1 Example cognitive interview probes, findings and recommendations

| Survey item | Probes | Findings | Recommendations |
|--|--|---|--|
| <p>How safe do you think vaccines are for your child? Would you say...</p> <p>Not at all safe A little safe Moderately safe Very safe</p> | <p>- What does the word 'safe' mean to you? - Did the response options offered make sense to you? Why/why not?</p> | <p>- 'Safe' did not translate so well; respondent 3: "I think it is totally harmless – 100% good" - Respondents not sure of the degree of difference on the response scale - Visual scale helpful</p> | <p>- Be sure interviewers have a printed visual scale to use at <u>every</u> interview - Wording to clarify that 'vaccines' is general, and item is not about any one specific vaccine.</p> |
| <p>How much do you trust the [health care providers] who would give your child vaccines? Would you say you trust them...</p> <p>Not at all A little Moderately Very much</p> | <p>- What does the term 'health care provider' mean to you? - Who would normally give you your vaccines?</p> | <p>- 'Health care provider' associated with clinic management; not those responsible for administering vaccine - "Vaccinator" suggested by ¾ respondents as more appropriate term</p> | <p>- Rephrase item: How much do you trust the vaccinators who would give your child vaccines? Would you say you trust them...</p> <p>Not at all A little Moderately Very much</p> |

To ensure the intended meanings are maintained in the process of translation and item adaptation, please refer to the item rationale provided with the BeSD Childhood vaccination survey. The rationale provides a description of the item to clarify its intended meaning and item specific recommendations for local adaptations.

It is also essential to test the modified questions and responses by conducting another round of cognitive interviews with a new group of participants, repeating the process until the questions and response options are understood as intended.

Adapting the BeSD interview guides

The series of questions offered in the BeSD in-depth interview guides are designed as menu for researchers to choose from, depending on what topics require in-depth understanding. Using all of the

questions listed in the guide will result in an interview that may be almost 2 hours in length, resulting in a significant time commitment from participants and large amounts of data to analyse. Choose questions that will best answer the specific research question for the project.

Questions should be ordered in such a way that the interview flows more like a conversation than a survey. The order of questions in the suggested interview guide results in a fairly conversational interview in English, and follows a general order of starting with a “warm-up” question, followed by thoughts and feelings, what they think they will do, the social processes involved, and practical factors. This will change, depending on the language and cultural setting.

Once a draft qualitative interview guide is developed, pilot test it with two or three people who are fluent in the language that the interview will be conducted in. During these pilot interviews be mindful of whether the interview flows well (like a conversation) and adjust the order of questions if needed.

More information on interview guide development can be found in:

- Roberts RE (2020). Qualitative interview questions: guidance for novice researchers. *The Qualitative Report*. 25(9):3185–3203.
- Kvale S & Brinkmann S (2015). *Interviews: learning the craft of qualitative research interviewing* (third edition). Thousand Oaks (CA): Sage.

Annex 4: Guidance for collecting coverage status

To capture routine immunization coverage, and in order to standardize procedures across surveys, WHO recommends the following hierarchy of evidence of vaccination:

1. **Home-based records** (vaccination cards). The best evidence is a legible date of vaccination on the home-based record (vaccination card) with a day, a month, and a year.
2. **Health centre records.** It will be necessary to search for evidence of vaccination status in health facility records for children in the cluster whose caretaker says that they received some routine vaccinations locally, and if:
 - the caretaker does not show interviewers the vaccination card, or
 - the card indicates some doses with a tick mark, but no date, or
 - the caretaker says that the child received some routine doses that are not recorded on the card.
3. **Recall, or verbal history of vaccination.** If there is no home-based record of vaccination, or if it is incomplete, the next level of evidence is a verbal *history* of vaccination by the caretaker (vaccination recall). Start by asking the caretaker the place of the injection (on the body) for injectable vaccines or act out putting drops in the mouth to ask about oral polio vaccine or rotavirus vaccines. Ask when the vaccine was received in relation to other documented vaccinations. Plan to use helpful visual aids matching the national vaccination practices when asking this question. Also ask the caretaker where the person went to receive the vaccination (for example, clinic, outreach site, hospital, school, home). A child might have been vaccinated in a health centre different from the nearest one. In such case it will not be possible to look for the record at the closest health centre.

For the complete WHO Vaccination Cluster Surveys Reference Manual, please see:

https://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index2.html

For further recommendations on harmonization vaccination coverage measures in household surveys, please see:

https://www.who.int/immunization/monitoring_surveillance/Surveys_White_Paper_immunization_2019.pdf?ua=1

Annex 5: Example visualisations and reporting of findings

Below we offer templates and examples for reporting on and visualising BeSD data. These resources are non-prescriptive and aim to offer a helpful starting point for users of the BeSD tools.

Example table: Intention to accept vaccine across socio-demographic characteristics

| | Total n= (%) | Intention to get the recommended vaccine n (%) | P value |
|---|-----------------|--|---------|
| Gender Woman Man Non-binary Declined to respond | | | |
| Age (years) of caregiver 18–29 30–49 50–69 70+ | | | |
| District D 1 D 2 | | | |
| Employment Health worker Essential services worker Other | | | |
| Completed years of education 0 1-5 6-12 12+ | | | |

Example table: Univariate analysis and multivariate logistic regression model of vaccine acceptance and demographic variables

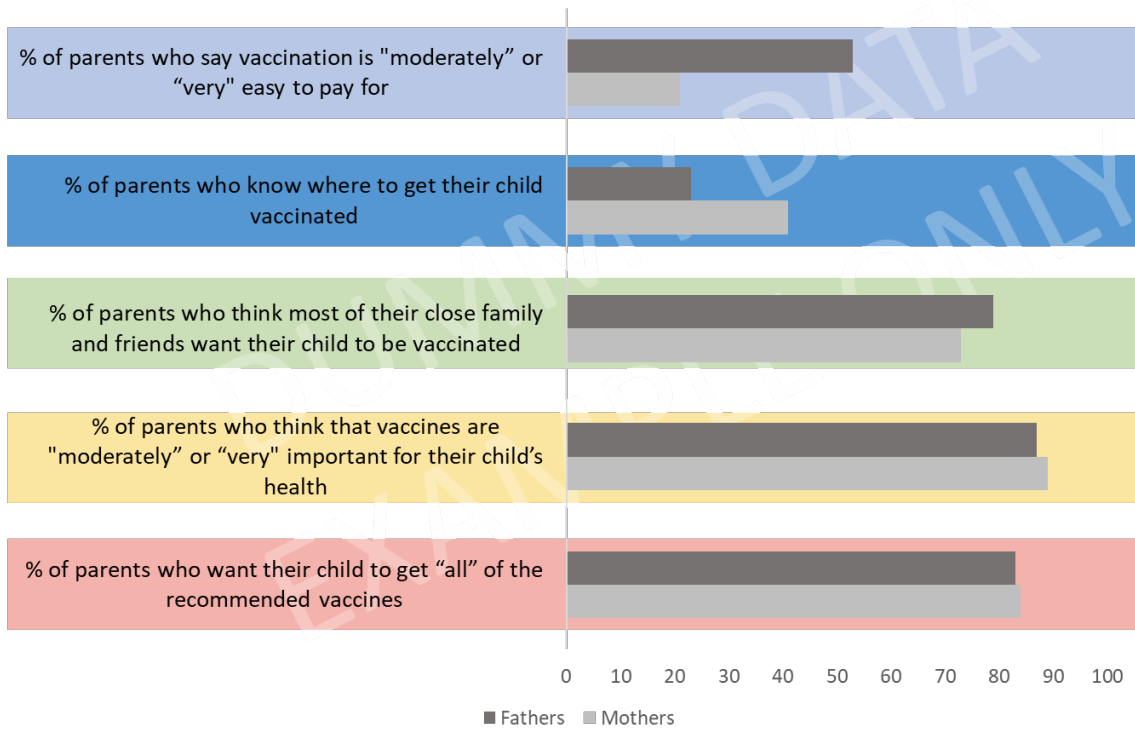
| | vaccine acceptance n (%) | Unadjusted ORs (95% CI) | P value | Adjusted ORs (95% CI) | P value |
|--|-----------------------------|----------------------------|---------|--------------------------|---------|
| Gender of caregiver Woman Man Non-binary Declined to respond | | | | | |
| Age (years) 18–29 30–49 50–64 65+ | | | | | |
| District D 1 | | | | | |

| | | | | | |
|------------------------------|--|--|--|--|--|
| D 2 | | | | | |
| Completed years of education | | | | | |
| 0 | | | | | |
| 1-5 | | | | | |
| 6-12 | | | | | |
| 12+ | | | | | |

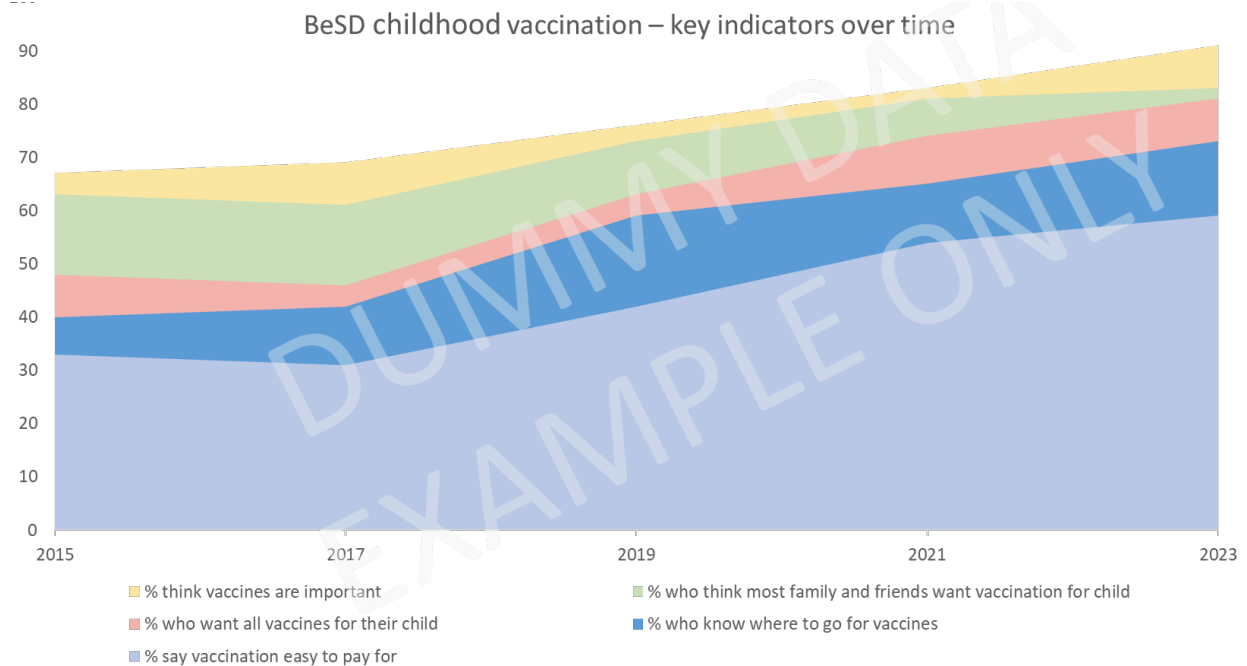
BeSD data visualisations

The charts below offer some initial examples of ways in which data may be represented visually. (Each visualization would also have a sample size indicated.)

BeSD childhood vaccination key indicators by gender

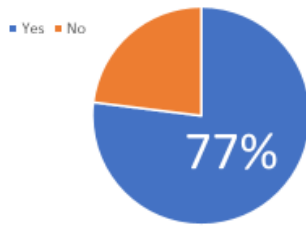


BeSD childhood vaccination survey key indicators. (All respondents n=330; male n=155, Female n=175)

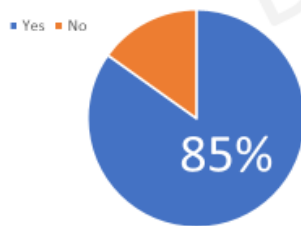


BeSD childhood vaccination survey key indicators from 2015-2023

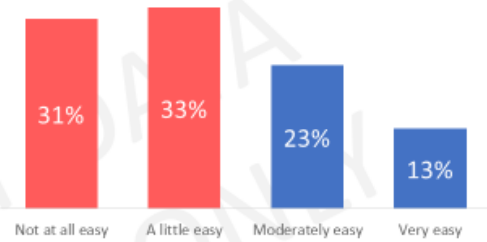
More than ¾ respondents have **previously received** adult vaccination



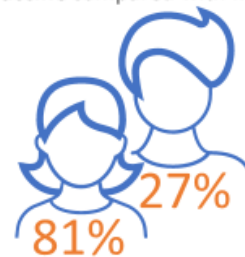
The majority of adults **know where to go to get vaccines** for themselves



Almost 2/3 adults say it is **not easy to get vaccination services** for themselves

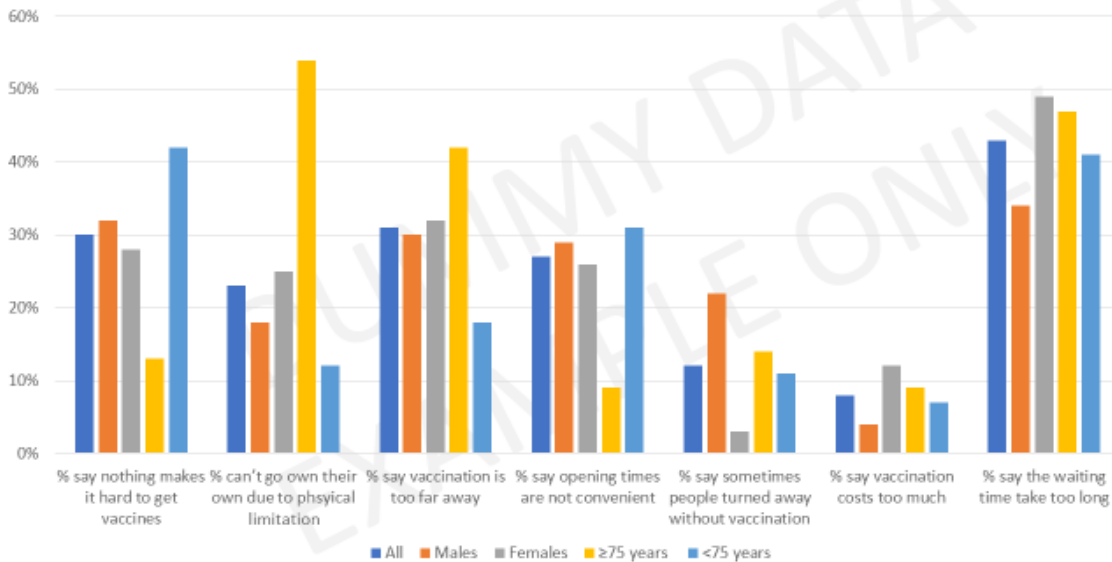


Women are 3x more likely to **accept a Covid-19 vaccine** compared with men



BeSD COVID-19 vaccination survey for adults. (All respondents n=330; male n=155, Female n=175)

Reasons for low access to vaccination



BeSD COVID-19 vaccination survey for adults. Q5: What makes it hard for you to get vaccines? Check all that apply. (All respondents n=330; male n=155, Female n=175, ≥75 years n= 82, <75 years n= 248)

BeSD reporting template

The below adaptable template offers an initial example for how to report on BeSD findings. Where preferable, BeSD also offers a MS PowerPoint Template for presentation of reports and case studies.



BeSD%20case%20study%20template.ppt

Instructions for use:

- Please fill in the following fields based on the guidance provided for each section. Either enter text directly or copy and paste from another document.
- Please provide full source citation and URLs; where relevant, include data visualizations, and good quality photographs.

| |
|--|
| Country: |
| Date of investigation (months and year): |
| Focus area: e.g. childhood vaccination among migrant communities in... |
| Title: |
| Principle investigator full name and contact information: RO focal points full name and contact information: CO focal points full name and contact information: |
| Abstract: <i>Please provide 1-2 short paragraphs abstract/summary of the data gathering activities adding contextual relevance. Describe what the study was about, and briefly how it was carried out. Describe in a few sentences the main findings and recommendations or next steps.</i> |
| Introduction: a) <u>Problem & situation analysis.</u> <i>What triggered an investigation of the behavioural and social drivers of uptake? Briefly describe the initial <u>situation or challenge</u> that was the basis of this work. Cite any comparative statistics or other sources to support this contextualization.</i> |
| Plan: b) <u>Research methods.</u> <i>How did you plan to assess and address the problem? Briefly describe the methods used and research plan developed, including any rationale for decisions made on tools uses, sampling, mode of implementation etc. If the group had a working hypothesis, state this up front and clarify how the hypothesis would be tested.</i> |
| Be sure to include: <ul style="list-style-type: none">• Overall research design, and sampling approach with justification |

- Recruitment methods
- How the data were handled, including how missing or incomplete data were dealt with
- What analysis was done and why
- How the interviews were conducted and recorded
- Ethical considerations and approval.

Investigate:

c) **Evidence and analysis.**

What did the research reveal, and was this different from what you had expected to find? Describe the findings resulting from the BeSD surveys or interviews.

For BeSD surveys report:

- The response rate of the survey
- Characteristics of the sample (e.g. age, gender, geographic location)
- The percentage of respondents who report willingness or intention to accept vaccines
- The BeSD core indicators
- Association of vaccine uptake with core indicators (and other BeSD survey constructs if measured) and demographics

For BeSD in-depth interviews or focus group studies report:

- Start by describing how many interviews were undertaken and over what time period.
- Tell the story of the results, and how they relate to the research questions.
- Focus on the concepts and themes, and how they relate to the research questions.
- If links between the themes and concepts were identified, describe these links also, but take care to justify how and why these links were made, using the data as evidence.

Act:

What did you do with the findings? Describe the intervention or strategy, how it was selected and developed, and who was involved in the process. Describe how the intervention contributes to the overall outcomes. How were planning and preparation undertaken collaboratively with communities?

This section could include the following topics as relevant:

a) **Intervention.**

What is the intervention? What or who does it involve? How was it decided on? Include any visuals to support a description of the intervention.

b) **Partnerships, local structures, services and resources.**

Describe the partnerships and collaboration mechanisms, the local structures, services, initiatives and resources that are available/unavailable to support implementation of the intervention. To what extent have stakeholders been involved?

c) **Monitoring and evaluation.**

What is the plan for tracking progress and impact of the intervention selected? What measures, tools and procedures are being considered to gather feedback, monitor progress and evaluate results based on baselines?

d) Describe **key successes and challenges** during implementation. What is the potential for **replication and scaling up**? (Optional)

e) **Progress and results:**

APPLICABLE ONLY WHERE AN INTERVENTION HAS ALREADY BEEN IMPLEMENTED. In summary (3-4 paragraphs) describe the current situation in terms of progress so far? Provide (quantitative and qualitative) evidence from monitoring and evaluations used to validate results (see hierarchy of results below) and conclusions. What were the outcomes? What were the lessons learned in seeking to achieve the outcomes and how can we factor these into the next programming cycle to ensure sustainability and scale up?

- Behaviour and social change
- Policy change
- Institutional /structural change
- Improved (access and quality) service delivery

Next steps:

Describe any planned next steps in implementation or any challenges in strategy as a result of this good practice to date. (2-3 paragraphs)

Attachments:

- Provide related data tables, charts, visualizations as available
- Provide a list of available related literature about the situation/issue (with links, if possible)
- Provide any relevant high-quality photos
- You are welcome to include quotes from staff, partners or members of the community
- You are welcome to suggest additional persons to contact for more information

Annex 6: WHO policy on use and sharing of data

Policy on use and sharing of data collected in Member States by the WHO outside the context of public health emergencies

Data are the basis for all sound public health actions and the benefits of data sharing are widely recognized, including scientific and public health benefits. Whenever possible, WHO wishes to promote the sharing of health data, including but not restricted to surveillance and epidemiological data.

In this connection, and without prejudice to information sharing and publication pursuant to legally binding instruments, by providing data to WHO, the Ministry of Health of your Country confirms that all data to be supplied to WHO have been collected in accordance with applicable national laws, including data protection laws aimed at protecting the confidentiality of identifiable persons;

Agrees that WHO shall be entitled, subject always to measures to ensure the ethical and secure use of the data, and subject always to an appropriate acknowledgement of your Country:

- To publish the data, stripped of any personal identifiers (such data without personal identifiers being hereinafter referred to as “the Data”) and make the Data available to any interested party on request (to the extent they have not, or not yet, been published by WHO) on terms that allow non-commercial, not-for-profit use of the Data for public health purposes (provided always that publication of the Data shall remain under the control of WHO);
- To use, compile, aggregate, evaluate and analyse the Data and publish and disseminate the results thereof in conjunction with WHO’s work and in accordance with the Organization’s policies and practices.

Except where data sharing and publication is required under legally binding instruments (IHR, WHO Nomenclature Regulations 1967, etc.), the Ministry of Health of your Country may in respect of certain data opt out of (any part of) the above, by notifying WHO thereof, provided that any such notification shall clearly identify the data in question and clearly indicate the scope of the opt-out (in reference to the above), and provided that specific reasons shall be given for the opt out.