

Vaccination coverage survey after mass vaccination campaign against Measles in Bentiu IDP camp, Rubkona County, Unity State, South Sudan

Study proposal

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***Study design*** Retrospective cross-sectional survey based on the Standardised Monitoring and Assessment of Relief and Transitions (SMART) methodology

***Study subjects*** Children between 6 months up to under 15 years of age, residing at Bentiu IDP camp, Bentiu, Unity State, South Sudan

***Study period*** November – December 2022

***Study site*** *Bentiu IDP Camp, unity state, south Sudan*

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# List of abbreviations

CFR Case Fatality Ratio

EPI Extended Programme of Immunization

IDP Internally Displaced People

IOM International Organisation for Migration

95% CI 95% confidence interval

MVC Mass Vaccination Campaign

MoH Ministry of Health

MSF Médecins sans Frontières

MSF-OCA Médecins sans Frontières – Operational Centre Amsterdam

POC Protection of Civilians

SIA Supplementary Immunization Activities

UNMISS United Nations Mission in South Sudan

VCS Vaccination coverage survey

WHO World Health Organization

# Introduction

## Country Information

The Bentiu Protection of Civilians (PoC) site was established in December 2013 by the United Nations Mission in South Sudan (UNMISS) in the Rubkona county of Unity state, South Sudan. Following the eruption of the civil war in December 2013 between Government and opposition forces, South Sudanese civilians residing in Bentiu town and other nearby areas sought safety and protection in the peacekeeping base, resulting in overcrowded makeshift camp conditions. Bentiu PoC camp continues to serve as a place of refuge having undergone extensive expansion and maintenance since 2013. However, the status of the camp was changed to Internally Displaced Population (IDP) camp in March 2021 after negotiations between UNMISS and the government of South Sudan.

Since establishment, the camp population increased significantly with 114,330 individuals recorded in December 2018, according to the International Organisation of Migration (IOM). The population is dynamic and significant population movements have occurred, including a decrease of over 13,000 individuals between January and March 2019 (IOM, 2019b). As of July 2022, an IOM headcount estimated the camp population to be approximately 104,581 individuals 17,412 households, in 11,765 inhabited shelters. of which 24.6% are children aged under 5 years and 52% male (IOM, 2022).

Bentiu IDP (previously known as PoC) is structured into five Sectors which are further divided into approximately 64 Blocks, housing from less than 1,000 individuals to greater than 2,500 individuals (Figure 1) (IOM, 2022). Multiple humanitarian partners support Bentiu IDP. Médecins Sans Frontières-Operational Centre Amsterdam (MSF-OCA) operates a secondary care hospital including surgical services within the camp serving the IDP population and patients referred from the surrounding area since the camp was established in 2013.

**Figure 1. Aerial view of the Bentiu IDP Camp, Bentiu, Rubkona County, Unity State, South Sudan**

**

## Measles in Bentiu IDP CAMP SOUTH SUDAN

South Sudan has a routine immunisation programme, which provides routine immunisation for all children free of charge. According to the country EPI programme children are eligible for their first vaccination dose at 9 months of age and for their second dose at age of 1 year. Children up to 5 years of age are eligible to receive their routine immunisation through EPI programme. However, the availability and utilisation rates for the EPI programme are not well understood on the most granular geographical level, but are estimated to be at 59% (IOM, 2019a). The potential reasons for low immunisation rates is associated with access due to seasonal floods, security and disruptions in services, along with healthcare seeking behaviour.

The country has reported measles outbreaks over the years, and the persistent occurrence of sporadic outbreaks is largely due to the low immunisation rates across the country (IOM, 2019a). In 2020, the MOH vaccinated 690,000 children in (WHO, 2021) as a response to increase in measles cases across the country. In 2020, MSF OCA conducted a mass measles vaccination campaign in Bentiu IDP, and Rubkona.

* 1. **Measles outbreaks in 2022**

Since the beginning of 2022, the country has started to see increase in measles outbreaks, and most recently the MOH has responded to an outbreak in Juba, Western Equatoria State in August 2022 (WHO,2022).

In Rubkona, the first case was reported on 26 September 2022, the patient arrived from Uganda. Within 14 days, MSF OCA Hospital in Bentiu IDP Camp started reporting further cases. As of 26 November, 2 confirmed cases have been reported in MSF facility, and further confirmed cases have been reported elsewhere in Rubkona. As of 26 November 2022, the cumulative number of measles cases (suspected or confirmed) in MSF Bentiu Hospital stood at 96 cases. The case fatality rate so far has been 1.5%.

The reactive mass vaccination campaign was launched on the 22 November in Bentiu IDP camp.

# Rationale

A vaccine coverage survey is proposed to document the impact of the mass vaccination campaign for measles in 22 – 28 November 2022 in Bentiu IDP camp.

Given the dynamic nature of the population movement in Bentiu, and in particular the IDP camp, it is likely that the population count information used for estimation of the target population in the IDP Camp are not entirely accurate. Hence, the estimated coverage is going to be either an over- or under-estimation, yet it is impossible to determine this without a systematic study that allows a more precise estimation of the coverage.

Accurate vaccination coverage is needed to measure the likely impact of such interventions on the epidemic and to allow for appropriate calculation of vaccine effectiveness in post-vaccination cases. Furthermore, it will provide invaluable information on future public health action for measles.

# Objectives

## Primary objectives

1. To describe the vaccine coverage by age group 6 – 59 months and five to under 15 years of age after the MVC conducted by MSF for 6 months to under 15 years of age in Bentiu IDP Camp between 22 - 28 November 2022

## Secondary objectives

* To provide recommendations for vaccination strategies and surveillance in this
 context and similar ones
* To describe the reasons for non-vaccination during the vaccination campaign
* To estimate number of doses received per child

# Survey Design

Vaccination coverage survey using simple random sampling, a method by which households are selected by chance using randomly GPS points

This survey protocol is an adaptation of a pre-approved research protocol template for retrospective vaccination coverage surveys where ethical approval of the MSF Ethics Review Board was granted on 18 November 2022.

Determination of vaccine status will be done by interview, examination of individual vaccination cards which record EPI vaccinations for those under 5 years of age*,* recent vaccine ink markings of fingers (if evidence of marking persists), and verbal reporting of vaccination status.

# Study Population

All children between 6 months up to under 15 years of age living in Bentiu IDP camp during the time of the survey will be candidates to be included.

## Inclusion and exclusion criteria

Persons will be included in the survey if they satisfy all of the following criteria:

* Living in the randomly selected household (see chapter 5.1. for the definition of a household)

 *and*

* Informed consent has been given by the persons themselves or their parents/guardians/caretakers (see chapter 9.1. for details on the informed consent)

*and*

* Is between 6 months and <15 years of age

Persons will be excluded from the survey if they satisfy one of the following criteria:

* Refusal to participate in the survey (persons themselves or their parent/guardian/caretaker)

*or*

* Inability to locate the selected participant after two attempts to trace them

*or*

* Person under 6 months or 15 years and above

# Definitions

## Household Definitions

*Definition of household*

A household will be defined as a group of people who commonly live together and are under the responsibility of one person or head of household.

*Definition of head of household*

The head of household is defined as follows:

* Adult household member *and*
* Can give accurate information on all demographic issues in his/her
household *and*
* Is present at the time of the survey

A household will be excluded from the survey if none of the household members fulfil all these criteria.

## Vaccination definitions

MVC (Mass Vaccination Campaign)

* MVC-Vaccinated by card
	+ An individual who received one dose of measles containing vaccine during the MVC. This is confirmed on interview by a marked finger or presentation of a vaccination card.
* MVC-Vaccinated by verbal confirmation
	+ An individual who received one dose of measles containing vaccine during the MVC. This is confirmed on interview by verbal history of the participant or his/her parents/guardians/caretakers, but without verification using marked finger or vaccination card.
* MVC-Not vaccinated
	+ An individual who had no written vaccination record. This is confirmed on interview by the participant or his/her parents/guardians/caretakers stating that no measles vaccination was received.
* MVC-Unknown
	+ An individual or his/her parents/guardians/caretakers do not recall if the survey subject was vaccinated during the MVC AND there is no marking of the finger suggesting that the vaccination took place nor any other available proof (i.e. health passport).

Routine Vaccination

* Routine vaccination by card
	+ An individual with vaccination registered on a routine vaccination card.
* Routine vaccination by verbal confirmation
	+ An individual who him/herself or his/her parents/guardians/caretakers reported that the child received the “9 months vaccine” by verbal history only.
* Routine vaccination not done
	+ An individual without vaccination registered on a routine vaccination card. This is confirmed on interview by the participant or his/her parents/guardians/ caretakers stating that the “9 months vaccine” was not received.
* Routine vaccination –Unknown
	+ An individual or his/her parents/guardians/caretakers do not recall if the survey subject was routinely vaccinated AND there is no proof suggesting that routine vaccination took place (i.e. vaccination card).

# Sample Size and Sampling Plan

##  Sample size Calculation

**Sample size**

The sample size was calculated using ENA SMART software (SMART, 2015) based on the following inputs:

* Average household size of 7
* 45% of children aged 6 months to 15 years
* Estimated coverage of 85%
* Confidence intervals of 95%
* Precision of 5%
* Design effect of 1
* Non-response rate of 10%

This returns a sample size of **265 children** in **96 households**.

## Sampling PLAN

We will use simple random spatial sampling to select participants in the IDP camp. As vaccination status is likely to be clustered at the household level and the number of households in the sample is low due to the large household size and high proportion of the target age group in the population, we will use the number of children to be included to guide the number of households to be chosen and randomly choose 1 child in each household. This means sampling of **265 households**, instead of 96 (as seen in calculations above).

The 265 households will be selected using simple random sampling, using randomly generated GPS points (created using QGIS/R) imported into smartphones. Probability proportional to size will be used to ensure that the households are allocated proportionally to the population of the sectors.

# Data collection

Selected sectors and blocks according to the sampling (see chapter 6.2.) will be informed before the survey teams will visit them. The heads of the Bentiu IDP camp Sectors and blocks will be visited the 2 days before the survey and the purpose of the survey will be explained in detail before conducting interviews in their villages. Furthermore, it will be clearly explained to the Block leaders that they are freely allowed to decline the participation of their village without any consequences or penalty.

In the households randomly selected according to the above methodology, the purpose of the survey will be explained to the survey participant or the parents/guardians/caretakers in the language he or she is familiar with, and verbal consent obtained to conduct the interviews and documented on the questionnaire. All refusals will be recorded, and those forms retained to document participation rate.

## Data variables

Main outcomes are measles vaccination status by oral history or card. If the child is not vaccinated reasons for non-vaccination will be asked. Variables collected on household level: the total number of persons in the household aged between 6 months to < 15 years (eligible for inclusion). Variables collected for 1 child 6 months to <15 years chosen in the household: age, sex, vaccination status, previous measles diagnosis and reasons for non-vaccination if applicable.

A questionnaire template is provided in the annexe part of this document, which needs to be adapted to the context of the survey.

# Data and Analysis

## Data sources and collection

Data collectors will use *KoboCollect* software on smart phones or tablets during face-to-face interviews with household heads. Paper questionnaires will be available as backups. To ensure data quality, intense training and close supervision of data collectors will be assured. For data security and integrity, smart phones or tablets and paper questionnaires will be kept in a locked box in the project and later in MSF offices (locked), databases will be password protected, and only study research team will have access. No personal identifiable information will be collected as part of this study.

## Data analysis

Data cleaning will be done to check for inconsistencies in data entry and responses. Data analysis will be conducted using R 4.2.2. All indicators (e.g., sex and age of the survey population) will be calculated as proportions with 95% confidence intervals.Where appropriate, differences in proportions will be measured using Pearson χ2 test and p-values (p) will be presented. Weights based on the total number of children in the eligible range in each selected household will be applied.

The main outcome of the analysis will be the overall vaccination coverage stratified by age groups. Secondary outcomes will be the percentage of people in the target age group vaccinated by each vaccination campaign and reasons for non-vaccination.

# Ethical Principles

The survey will be conducted in accordance with the World Medical Assembly Medical Assembly (WMA) Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects[[1]](#footnote-1).

Authorities and communities (such as village heads, religious leaders, opinion makers) in the survey area Bentiu IDP) will be informed about the purpose of the survey, an information sheet will be provided and their endorsement will be sought.

MSF-OCA commits to sharing survey results with everybody who has participated in the survey. The local community will be involved and informed through distributing posters that show the survey results in the health clinics. Furthermore, the results will be shared with the MoH and other health partners. The MSF medical team, alongside the advocacy department will decide about the best venues to display the results.

## Verbal consent form

Verbal consent will be sought from every participant or his/her parents/guardians/caretakers.

Privacy and confidentiality in the data collected from the participants will be ensured both during and after the conduct of the survey. All data will remain anonymous throughout the data entry and analysis process. Individually identifiable data will not be distributed outside the survey location, or appear in any report or publication. All subjects included in the survey will have the survey activity explained to them in a language with which they are familiar. Everyone will be offered the opportunity to refuse participation in the survey at any time without penalty and no incentives or inducements will be provided to any respondents. Everyone approached for the survey is completely free to participate or not.

## Risks and benefits of the study and contingency plans

 There is no risk to the survey participants as no identifying data are collected and the GPS coordinates are not retained with the survey data. However, there is some intrusion on the privacy of the household, which some households may find uncomfortable. Our interviewers will be trained to ensure privacy and help people feel comfortable.

However, benefits can be seen both at the study participant level and at the community level. A better understanding of the vaccination coverage ratios and causes of non-vaccination in the area will allow better tailored programming and more efficient use of resources. Accurate data on vaccination status are of tremendous importance for advocacy on national and international level.

# Collaboration

This survey will be carried out by MSF OCA with endorsement and support from the MoH of South Sudan.

MSF-OCA is the study sponsor and is responsible for the funding. It is in charge of the field part of the survey, the analysis and report writing. Permission for publication must be obtained from MSF-OCA and the MoH.

If necessary, a Data Sharing Agreement should be signed between MSF and the collaboration partners. This is necessary if the collaboration partners will have access to the individual participant data. A Data Sharing Agreement template is provided in the annex part of this document.

Survey results will belong to MSF-OCAand the MoH of South Sudan the country where the survey will be conducted. If there are any further collaborating partners they have to be listed in this chapter and their tasks and responsibilities in the survey explained.

# Implementation of the survey in the field

## Selection and tasks of the survey teams

The task of the interviewers will be to collect the necessary data for the survey. Each survey team is composed of two interviewers. To finalise the field part in a reasonable time we need 6 survey teams of two people each (see also chapter 12.5.).

Usually 1 survey team can complete 10-15 households per day, however this also depends on the availability of transport in the field and security constraints in the survey area. From experience, if survey teams work more than 6 days in a row they will need a break in order not to lower the quality of the interview work.

General selection criteria for all interviewers:

* Able to read and write in English *and*
* Fluent in the local language (Nuer) *and*
* Available for the ENTIRE time of the survey (training and interview days), *and*
* If necessary: Willing and able to work on Saturdays and Sundays during the survey time (see chapter 11.5. for a possible timeframe in the field), *and*
* Motivated to participate in the survey, *and*
* Not biased in expectations of the outcome of the survey
* Experience with interviews in difficult settings and survey populations would be an advantage

## Supervision

The principal investigator is the overall responsible for the final version of the protocol, the quality of the research, the data analysis and report writing.

The principal investigator will ensure that the following tasks are performed:

* Preparation of all necessary documents (protocol, questionnaires) for the survey
* Preparation of the field component of the survey (training of the study teams, logistics, materials) together with the MSF team in the field
* Follow-up of the field component of the survey
* Data entry or training of a data entry clerk
* Data quality checking and analysis
* Report writing

## Suggested MSF support in the field

* Administrative support for survey preparation at the field level and during field part, such as support to the primary investigator for daily preparation of GPS sheets and checking team backpacks are ready for the next day.
* Human resources support, namely HP team members being available to support the survey data collection and/or supervision of the team(s).
* Logistic support for survey preparation at the field level and during field part, such as organizing sufficient cars including drivers for the field part of the survey, providing communication tools in the teams, stationary, printing the back-up paper questionnaires, facilities for training days, arranging water and lunch if relevant – this can ensure efficient use of time and appropriate rest of teams.

## Training of the survey team and pre-testing of the questionnaires

Two days training will be given to all interviewers to familiarise them with the background of the survey, the questionnaires, and the information to be given to the survey participants or their parents/guardians/caretakers. The training will be given in English (and if needed, translated into Nuer) by the principal investigator. It consists of an intensive review of the questionnaire, the use of KoBoCollect and OSMand, and the information to be given to the survey participants or their parents/guardians/caretakers and will include role-plays. As the interviews will be held in the local language, the principal investigator will ensure that all interviewers are using the same and correct wording for providing information to the households and for the interviews.

The 2-days training will be finished with a pilot survey in a place which is outside of the survey area. The pilot survey allows for the testing and possible final adjustment of the questionnaires to field conditions. A 2-day training agenda template is provided in the annexes of this document. Ideally the survey area for the pilot survey should be easily accessible by all interviewers by foot. This allows the principal investigator to supervise all survey teams by visiting all teams at least once during the pilot. Printing of the study questionnaires should ideally be done after the training and pilot study.

## Timeframe in the field

See table 2 for a preliminary plan of the field part of the survey.

 **Table 1.** Preliminary plan of the field part of the vaccination coverage survey, MSF OCA Bentiu Project, 2022

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task** | **24-Nov** | **25-Nov** | **26-Nov** | **27-Nov** | **28-Nov** | **29-Nov** | **30-Nov** | **1-Dec** | **2-Dec** | **3-Dec** | **4-Dec** | **5-Dec** | **6-Dec** | **7-Dec** |
| HR planning |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Survey programming |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Training preparation |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Training and pilot survey |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Supply sourcing |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Adjustment and last minute changes |   |   |   |   |   |   |   |   |  |   |   |   |   |   |
| Buffer day |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Data collection |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Data analysis |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Write up |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Dissemination |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **Task** | **8-Dec** | **9-Dec** | **10-Dec** | **11-Dec** | **12-Dec** | **13-Dec** | **14-Dec** | **15-Dec** | **16-Dec** | **17-Dec** | **18-Dec** | **19-Dec** | **20-Dec** | **21-Dec** |
| HR planning |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Survey programming |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Training preparation |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Training and pilot survey |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Supply sourcing |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Adjustment and last minute changes |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Data collection |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Buffer day |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Data analysis |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Write up |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Dissemination |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

# Logistics

## Supply needed

Supplies for the conduct of the survey will be purchased via supply team in Bentiu project level. The required smartphones are already available in the mission and ready to be used so this will yield no extra cost. See table 3 for a list of required supplies.

Vaccination coverage questionnaires will be developed by the principal investigator. Photocopies of all necessary documents will be done in Bentiu, and these are only for back-up, as the primary data collection tool will be KoboCollect that is used on smartphones. The phones will automatically sync the data onto the Kobo database once connected to Wifi.

**Table 3** Supplies needed for the field part of the vaccination coverage survey, MSF OCA Bentiu project, Rubkona, Unity State, South Sudan, 2022

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item/Resource** | **No. needed per team** | **No. needed for 6 teams** | **Available/need to source?**  | **Total estimated cost (USD)** |
| Back pack | 1 | 6 | Available | NA |
| Clipboard | 1 | 6 | Need to source | 10 |
| Pencil | 3 | 18 | Need to source | 5 |
| Eraser | 2 | 12 | Need to source | 5 |
| Marker | 1 | 6 | Need to source | 5 |
| Pencil sharpener | 2 | 12 | Need to source | 5 |
| Vest/bib with MSF logo/visibility | 2 | 12 | Available | NA |
| Plastic folder (for protection of questionnaires against rain and dust) | 3 | 18 | Need to source | 10 |
| Radio | 1 | 6 | Available from Bentiu? | NA |
| Printing of questionnaire | 50 | 300 | Printing available in Bentiu | 50 |
| Printed forms (information sheets, missed household report sheet) | 10 | 60 | Printing available in Bentiu | 10 |
| GPS locations sheets printed daily | 10 | 60 | Printing available in Bentiu | 10 |
| Smartphone | 1 | 6 +4 (extra 4 for back up) | Need to be sent from EPREP stock in Juba | No cost |
| Training cost |   |   |   | 150 |
| HUMAN RESOURCE |
| Data collectors | 2 | 6 | Available | NA |
| Supervisors | 0.5 (1 per 2 teams) | 3 | Available | NA |
| **TOTAL ESTIMATED COST:** | **260** |

## Transport needed

Without security constraints, 2-3 survey teams working the same day on the same geographical axis can use the same car. The survey teams will be dropped in their respective sectors in the morning to work for the day, and collected in the evening.

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# Appendices

## A1. INFORMATION SHEET

December 2022

Measles vaccination coverage survey in the MSF catchment area in Bentiu IDP camp, Unity state, south Sudan

MSF and the purpose of the survey

Thank you for taking the time to listen to our information about this study. As you might already know Médecins sans Frontières (MSF), jointly with is running health care projects in this area. Today we are carrying out a survey to understand the measles vaccination coveragein Bentiu IDP camp, following the mass vaccination campaign conducted recently.

**Why is this survey important?**

With this survey, we hope to improve our work as a medical organisation, and determine whether there is sufficient measles vaccination coverage for measles to prevent further outbreaks from occurring.

The main outcome of the study is the estimated percentage of population in Bentiu IDP camp who are vaccinated against measles. This information will inform us what the risk of future measles outbreaks is, and allow MSF and other health partners to take appropriate public health action in order to best protect the population in this community against measles.

MSF’s intention is to use the outcome of the survey to advocate on behalf of the population at regional, national or international level, to raise awareness about the situation in your community.

**How are we selecting participants?**

We do not need to speak to every household in your Sector/Block, so we try to select only a few households in each village in a ‘random’ way, which means that they are selected by chance or coincidentally. In the randomly selected household of your Block, we will further select 1 child at random to collect their vaccination history data using a standard questionnaire to calculate the measles vaccination coverage of children under fifteen-years-old.

If you agree to participate, I will ask you some questions about your family, number of children between 6 months and 14 years and vaccination history of one child in your house.

**How will your information be used, accessed, and stored**

Information collected will be kept confidential and used only for the survey. This means we will not ask you for your name and we will not record the location of your house, so after the survey the indication on this device of your house will be destroyed as soon we have finished the interview. The questionnaires and consent forms will not be shown to anybody other than the study team. After the field part of the study, we will lock the results in a safe place either in the capital city or in Europe at MSF’s headquarters, for five years, after which time the paper copies of all the questionnaires will be destroyed.

**Will the information given be identifiable in the final reports and results?**

The survey location of *Bentiu IDP camp* may be used in advocacy reports. Details of individual households will not be disclosed and information from individual households will not be identifiable in the final results, that means that from the final results it will be impossible to identify what each household reports in the survey. The estimated coverage for measles vaccination at Bentiu IDP camp, potentially at Sector level.

The data that we collect (except your names and identifying information) may be shared with other organisations, but only if they use the data for the benefit of your community. MSF has developed strict rules for data protection.

**Do I have to participate, and will I receive anything if I do?**

Your participation in this study is voluntary and you are free to refuse to answer any or all survey questions. No person or your family will receive any direct benefit, such as food or payment, as a reward for participating in this study. However, if we find anyone who is sick in your household they will be referred to MSF Hospital in the IDP camp.

**How will I hear about the results of this study?**

Once we have the results of this study, we will distribute posters that show the study results in the health clinics. If you have any questions, please do not hesitate to ask us.

In case you have any questions after we have completed the interviews in this block, please contact the survey supervisor at the information below:

*Iina Hiironen*

*tel: 0921295612*

Thank you for your time and participation.

## A2. VERBAL CONSENT FORM

#### VERBAL CONSENT FORM

Participant study code [\_\_\_\_\_\_/\_\_\_\_\_\_/\_\_\_\_\_\_]camp/child/HH

Vaccination Coverage survey in the MSF catchment area Bentiu IDP Camp, Unity State South Sudan.

*Read the information sheet before seeking verbal consent*

Do you have any questions? You can also call *Iina Hiironen* at *+211921295612* with questions about how the research and information we take from you will be used.

Do I have your permission to begin asking you questions?

Do I have your permission to include the children under your care in the survey?

Date: ¦\_\_¦ ¦\_\_¦ / *MM/YY*

Interviewer’s name:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Interviewer’s signature:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 *Iina Hiironen, tel : 0921295612*

*Alyson Froud, tel: 0929828413*

## A3. QUESTIONNAIRE

***Measles Vaccination Coverage Survey in Bentiu IDP camp, Unity State South Sudan ;***

**Date** ¦\_\_\_\_¦\_\_\_\_¦\_\_\_\_ *DD* / *MM* / *YY*

**Sector name** \_\_\_\_\_\_\_\_\_ Block Name : \_\_\_\_\_\_\_\_\_\_

**Team no.** ¦\_\_¦

**Household number :** \_\_\_\_\_\_\_\_

CONSENT :

Do you consent to take part in this survey?

YES \_\_\_ NO\_\_\_\_\_

If NO, an you please let me know why you do not want to participate?:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **QUESTIONNAIRE**

1. HOUSEHOLD INFORMATION :
	1. How many children between 6 months and 14 years are in the household?:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. How many households are in this building/compound ? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. CHILD DEMOGRAPHICS :
	1. Child number : \_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Sex : \_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Age in years : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. If less than 1 year old, put the age in months:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. IMMUNISATION HISTORY :

**Routine vaccination**

* 1. Child vaccinated through Routine Vaccination – at 9 months vaccine :

YES : \_\_\_\_ NO : \_\_\_\_\_

* 1. Age of child at the time of vaccination (months) : \_\_\_\_\_\_\_\_\_\_\_
	2. Place of routine vaccination : \_\_\_\_\_\_\_\_\_\_\_\_
	3. IF NO : Reason for non routine vaccination : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**MSF vaccination**

* 1. MSF Vaccination Campaign - 6 months to 15 years : YES : \_\_\_\_\_\_ NO : \_\_\_\_\_
	2. Age of child at the time of vaccination (months) :\_\_\_\_\_\_\_\_\_
	3. Place of MSF vaccination :\_\_\_\_\_\_\_\_\_
	4. IF NO, Reason for non MSF vaccination : \_\_\_\_\_\_\_\_\_
1. PREVIOUS ILLNESS WITH MEASLES
	1. Did the child previously have measles? YES :\_\_\_\_ NO :\_\_\_\_\_
	2. If YES, please provide the age of child when they had measles (months)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Thank you for participating this survey.*

## A4. Household log

Sector\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Location/Block\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Team Number \_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(dd/mm/yyyy)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Household number visited** | **Someone present whocan consent?****(Visit 1)** | **Someone present who can consent?****(Visit 2)** | **Consented?** | **Household size** | **Notes** | **Interviewcompleted?** | **Number of householdscompleted (interviewed or refused)** |
| 1 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 2 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 3 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 4 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 5 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 6 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 7 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 8 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 9 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 10 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 11 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 12 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 13 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 14 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 15 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 16 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 17 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 18 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 19 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 20 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 21 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 22 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 23 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 24 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 25 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 26 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 27 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 28 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 29 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 30 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 31 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |
| 32 | □Y/ □N | □Y/ □N | □Y/ □N |   |   | □Y/ □N |   |

## A5. TRAINING SCHEDULE

MEASLES VACCINATION COVERAGE SURVEY TRAINING AGENDA

**Wed 30 November**

8.00-9.00 Measles, outbreak response and the purpose of coverage survey

9.15- 10.15 coverage survey, pilot survey, and the structure of a typical day

10.30 – 11.00 KoBo - what is it and how it works

11.00 – 11.30 OSMand – what is it and how it works

11.40-12.00 Q&A

**12.00- 13.00 LUNCH**

13.00 -14.00 Survey template and role play 1

14.00 – 14.45 role play 2

14.45-15.00 Break

15.00 – 15.45 Role Play 3

15.45 – 17.00 Q&A, information about the pilot survey, next steps + any admin

**Thu 01 December – simulation/pilot survey day**

08:00 All teams meeting at training Tukul

08.30 Teams go out

09:00 – 11:30 Data collection (5 households per team)

11:45 teams to report at Base

**12:00 – 13:00 LUNCH**

13:00 -14:00 Debriefing – what worked what did not work

14:00 – 16:00 Q&A, further role plays, admin, organisation for the next field day

*(Teams may be free by 3pm, but if more training is needed it will be facilitated this afternoon depending on the needs identified through the pilot survey)*

1. http://www.wma.net/en/30publications/10policies/b3/ (accessed: 25 November 2022) [↑](#footnote-ref-1)